

New Jersey's Training for Residential Energy Contractors (BPU-TREC) and BILT-1 Goals

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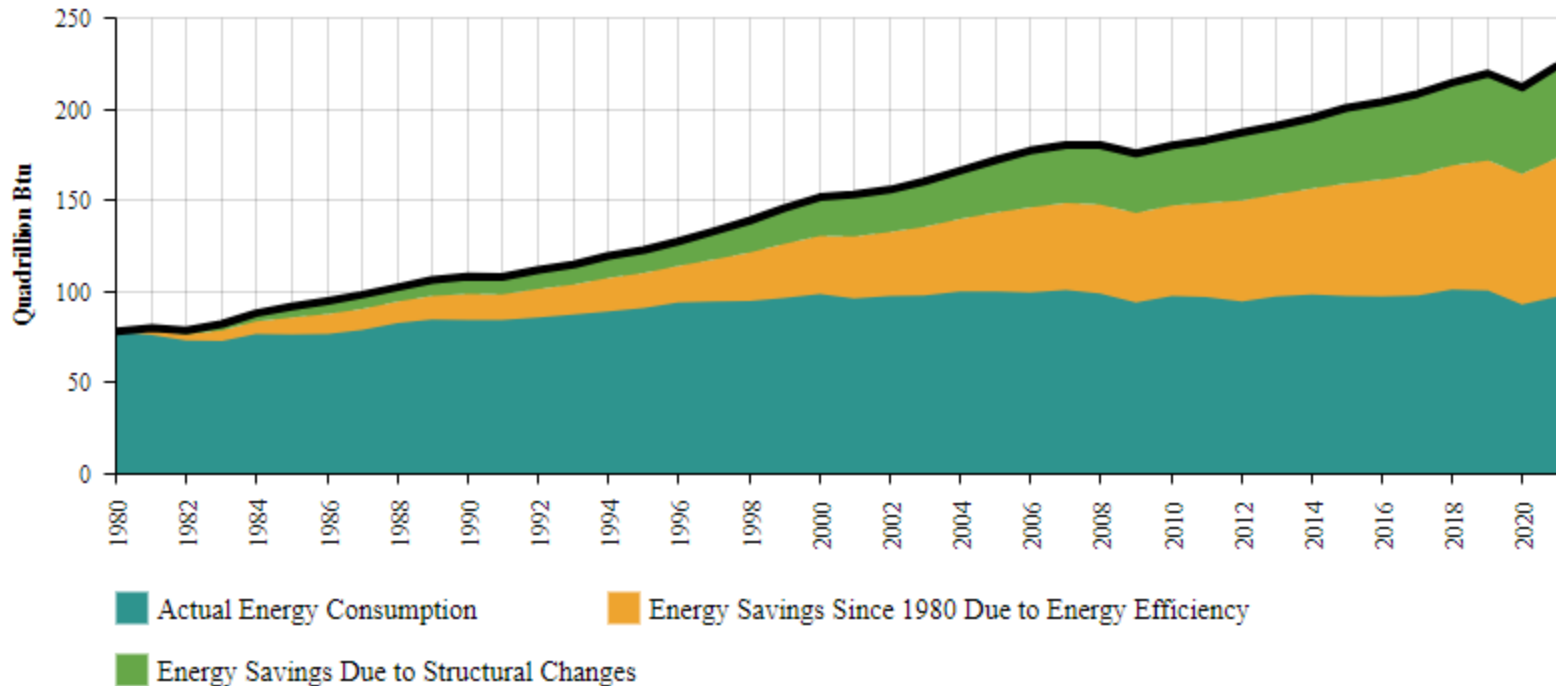
June 20, 2024



The Rising Demand for Energy Efficiency

"More benefits are possible in an Efficient World (IEA)"

Projected Total Energy Consumption at Energy Productivity of 1980



- Energy consumption (and carbon emissions) would be 78% higher without EE investments.

The Rising Trends in Energy Efficiency Jobs (U.S.)

ENERGY EFFICIENCY



The Energy Efficiency
sector employed

2.2 MILLION

a gain of

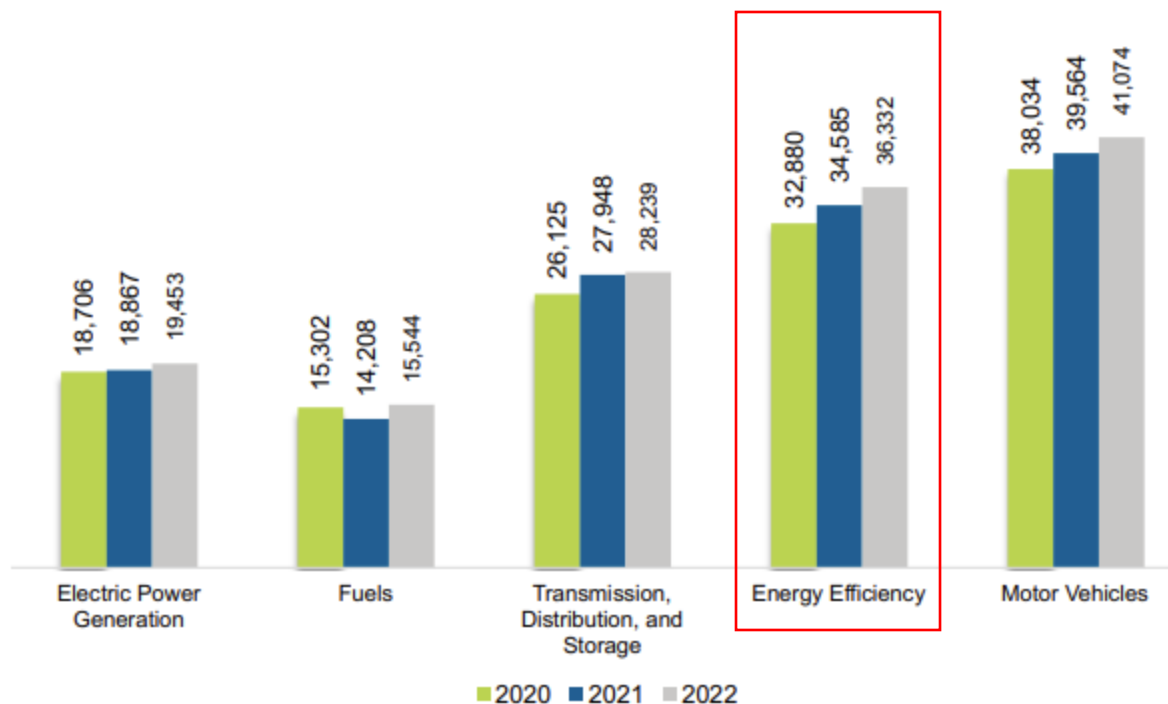
50,500 JOBS

+2.3%

Nationally, the **Energy Efficiency (EE)** sector is one of the **largest energy technology** sectors (~40% of all energy jobs, with over **50% of those jobs being in construction**, and 70% employed in **small businesses**. Traditional HVAC firms added the highest number of EE jobs in 2022 (2.8%).

The Rising Trends in Energy Efficiency Jobs in NJ

Figure NJ-1. Employment by Major Energy Technology Application

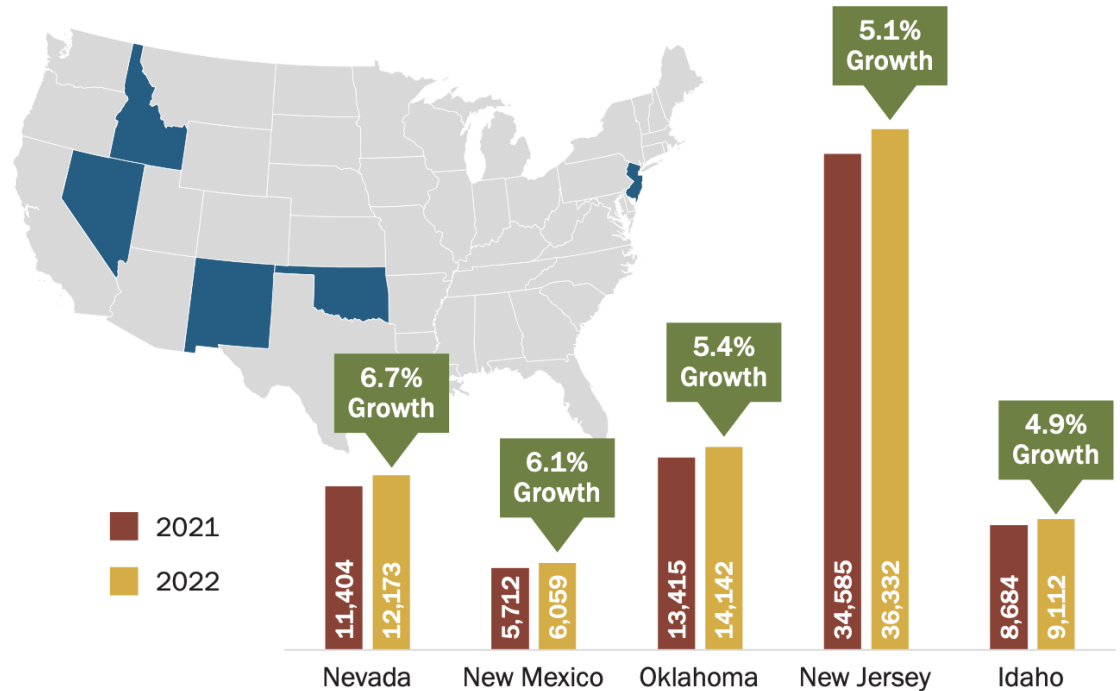


New Jersey had 140,643 energy workers statewide in 2022, representing 1.7% of all U.S. energy jobs. Of these energy jobs, **36,332 in energy efficiency, 1.6% of the national EE total.**

The Rising Trends in Energy Efficiency Jobs in NJ

36,332
Total Jobs

For two consecutive years Nevada, New Mexico, Oklahoma, and New Jersey experienced the highest percentage growth among all states.



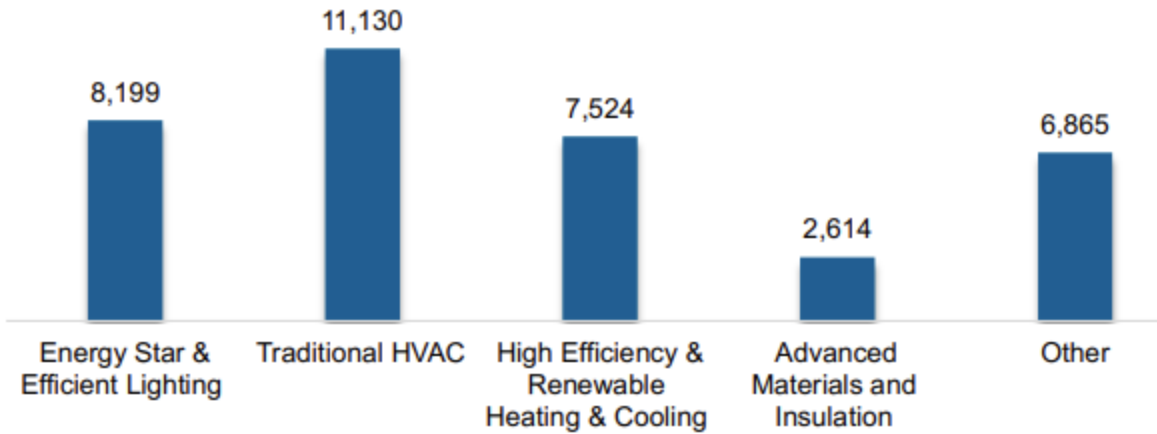
For two consecutive years, New Jersey has been one of the top five U.S. states for growth in the EE sector, adding 1,748 jobs and increased 5.1% from 2021 to 2022.



Source: Energy Efficiency Jobs in America National Summary, 2023

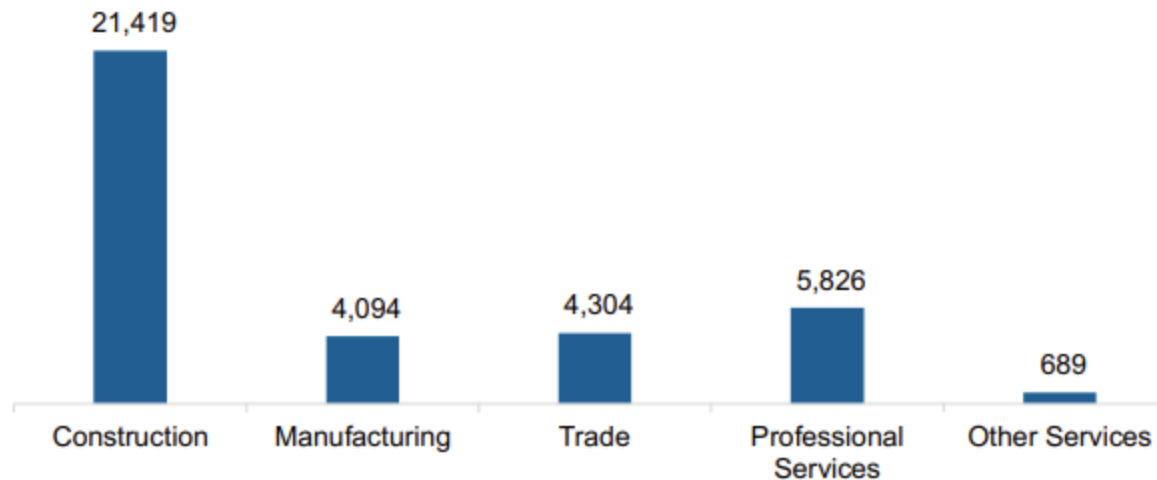
The Landscape of Energy Efficiency Jobs in NJ

Figure NJ-8. Energy Efficiency Employment by Detailed Technology Application



Energy efficiency employment was primarily found in the construction industry

Figure NJ-9. Energy Efficiency Employment by Industry Sector



Source: 2023 USEER States Report



Projected Employment Growth in the U.S. and New Jersey from 2022 to 2023

- "Employers in New Jersey were more optimistic than their peers across the country about energy sector job growth"*

Table NJ-1 Expected Growth by Major Technology Application

Technology	State Expected Growth Next 12 Months (percent)	U.S. Expected Growth Next 12 Months (percent)
Electric Power Generation	7.1	6.0
Electric Power Transmission, Distribution, and Storage	6.1	3.9
Energy Efficiency	7.3	6.4
Fuels	4.9	1.6
Motor Vehicles	6.9	5.5



New Jersey Energy Efficiency Employment Projections (job-years), 2022-2031

- Energy Efficiency (buildings) -> ~70,000 job-years (net growth)
- Note: *"This forecast for job creation does not include the impacts from either the **Infrastructure Investment and Jobs Act (IIJA)** or the **Inflation Reduction Act (IRA)** which is likely to be a significant driver of future job creation" in the state*


































Expected Energy Efficiency Jobs in NJ Due to IRA

- U.S. Department of Energy (USDOE) IRA Home Energy Performance-Based Whole-House Rebates Program (HOMES) and the High-Efficiency Electric Home Rebate Program (HEEHR) alone are **expected to create 881 direct jobs*** between 2025 - 2031.
- **Expanding and adapting existing training programs will be crucial to meet the anticipated demand in the near term.**



Source: NASEO WF TREC needs assessment *This estimate, though not including utility jobs nor occupation-specific jobs, gives a rough idea of the direct job creation potential for energy efficiency and electrification from the rebate investment in NJ.

NJ EE Workers: Where do they work?

<p>Stephen Berkeley, KOV Building Consultants, Little Silver, NJ</p> 	<p>Achyut Patel, Patnam USA, LLC, Fairfield, NJ</p> 	<p>I conduct research and evaluation to achieve greater savings per dollar spent.</p>  <p>Jacqueline Berger, Applied Public Policy Research Institute for Study and Evaluation, Princeton, NJ</p> 	<p>Jeffrey Kiley, KOV Building Consultants, Parasitpany, NJ</p> 	<p>Jerry Rizzello, State of New Jersey Department of Community Affairs, Hamilton, NJ</p> 	<p>I am the executive director. [We] provide weatherization & LIHEAP services.</p>  <p>Xiomara Guevara, Morris County Organization for Hispanic Affairs, Ridgefield, NJ</p> 
<p>Kimberly Gharrh, CLEARresult, Eatontown, NJ</p> 	<p>Joe Heaton, Polyurethane Machinery Company, Jackson, NJ</p> 	<p>Brittany Storm, CodeGreen Solutions, Jersey City, NJ</p> 	<p>Kristen Thoff, Kristen Thoff Architecture, Princeton, NJ</p> 	<p>Darshan Larderi, Kymene, Point Pleasant Beach, NJ</p> 	<p>Leonardo Moreno, NJ Department of Community Affairs, South Amboy, NJ</p> 
<p>Kyle Haddock, CLEARresult, Randolph, NJ</p> 	<p>Michael Botolico, New Jersey Natural Gas, Cherry Hill, NJ</p> 	<p>John Chusster, New Jersey Natural Gas, Brick, NJ</p> 	<p>Greg O'Brien, New Jersey Natural Gas, Hazlet, NJ</p> 	<p>Gerardo Melendez, Popco Holdings, Egg Harbor Township, NJ</p> 	<p>Jorge Mancilla, APPRISE, Ewing, NJ</p> 
<p>I am the weatherization director.</p>  <p>Francis Rodriguez, Association for Energy Affordability, Bergenfield, NJ</p> 	<p>Susan Eilman, New Jersey Natural Gas, Red Bank, NJ</p> 	<p>I benchmark more than 1000 commercial properties for energy consumption.</p>  <p>Michele Le Goff Reid, PGIM Real Estate, Metuchen, NJ</p> 	<p>Kevin McGrath, APPRISE, Princeton, NJ</p> 	<p>Matthew Lyons, APPRISE, East Brunswick, NJ</p> 	
<p>Larry Johnson, New Jersey Natural Gas, Lake Como, NJ</p> 	<p>Timothy Dorrler, New Jersey Natural Gas, Farmingdale, NJ</p> 	<p>Ed Janowski, Eastern Heating & Cooling Council, Manahawkin, NJ</p> 	<p>Andrew Pezanos, Facility Solutions Group, Inc., Toms River, NJ</p> 	<p>Jose Rotana, Morris County Organization for Hispanic Affairs, Dover, NJ</p> 	<p>William Perish, NobleStrategy LLC, Mtlewood, NJ</p>  <p>This sample shows the variety of jobs in the energy efficiency industry and highlights the potential for growth when workforce development and training are prioritized. Note: Some individuals pictured may have changed jobs since they joined the Faces of EE.</p>

New Jersey's Energy Efficiency Workforce Needs, Infrastructure, and Equity Assessment

- *Details will be presented at EE Monthly Stakeholder Meeting TODAY!*



New Jersey's Energy-Efficiency Workforce Needs, Infrastructure, and Equity Assessment

by Brittney Donovan, Grace Maruska, Sahar Sherwani, and Stephanie Walsh, Ph.D.

May 2024



EE WF Status Report (2024) : EE WF Challenges & Strategies to Overcome the Barriers

- Employer-side challenges
 - Hiring difficulty
- Student challenges
 - Low/negative perception of EE sector
 - Lack of knowledge regarding career paths
 - Lack of career-focused learning
 - How to find jobs without skills, etc.
- Training infrastructure challenges
 - Lack of trainers, retainment.



New Jersey's Energy-Efficiency
Workforce Needs, Infrastructure,
and Equity Assessment

by Brittney Donovan, Grace Maruska, Sahar Sherwani,
and Stephanie Walsh, Ph.D.

May 2024



Employer-side Challenges : Employer Perspective on WF Issues in New Jersey

- "Employers reported 55% overall hiring difficulty"

Table NJ-2 Hiring Difficulty by Major Technology Application

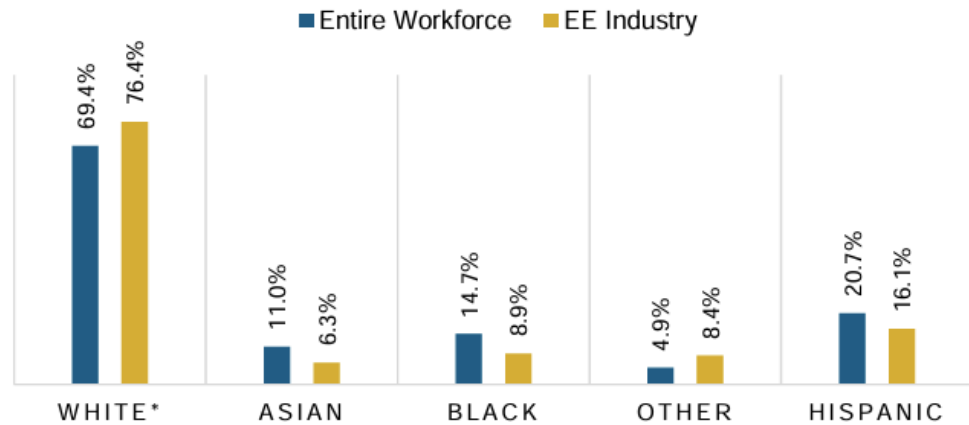
Hiring Difficulty	Very Difficult (percent)	Somewhat Difficult (percent)	Not at All Difficult (percent)	Did not hire (percent)	Overall Hiring Difficulty
Overall	27	28	5	40	55

- Competition/small applicant pool.
- Insufficient skill, qualifications, or training.
- In NJ: workforce engagement and skill gaps, etc.

Diversity in NJ EE Industry

The EE industry needs to do more to prioritize minorities and women for training and support that enables access to employment at EE businesses.

New Jersey EE Industry by Race and Ethnicity



*Includes non-Hispanic and Hispanic whites.

Gender in the New Jersey EE Workforce



Note: The U.S. Bureau of Labor Statistics (BLS) only includes two genders in their survey. Non-binary gender data is missing from this document due to this limitation.



Source: EE Jobs of America, E4TheFuture, 2023

BPU-TREC Program (IRA Funding)

- **USDOE IRA Training for Residential Energy Contractors (TREC) Grant**
 - \$3.51M funding for 4 years (entirety to training providers) [2 years + 2 years]
 - Planned focus: HVAC, Weatherization training
 - 400-600 contractors (2024-2028)

BPU-TREC Program (IRA Funding)

• BPU Grant Application Public Announcement (competitive)

• Eligibility Criteria

- Technical training providers.
- Collaboration with essential support services : Wraparound, mentoring, recruitment and retainment support and plans.
- Mandatory employer connection and plan : jobs pathways plan.

• Funding allowed for:

- Trainer incentives on top of the cost for these instructors.
- Trainee support (income eligible, diversity focused free training and certification)
- Training infrastructure – technology, etc.

• Key Performance Metrics & Evaluation across training centers



BPU-TREC program will

1. Customize Curriculum and Certifications by aligning workforce training with residential energy efficiency career paths more effectively.
2. Collaborate with diverse stakeholders to assess skills / interests to identify students best suited for program success.
3. Prioritize the training and support that enables access to employment for people from disadvantaged communities and underrepresented groups.
4. Train the Trainer, upskilling, reskilling.
5. Support apprenticeship and small contractor business opportunities.
6. Support wraparound services, mentoring.



BILT-1 Key Goals / Deliverables

1. Technical and non-technical skills training for the current and future EE jobs.
2. Quality jobs pipelines after training.
3. Strategies for inclusion and prioritization (e.g., trainee needs, motivation & retainment).
4. Wraparound support services and proposed plans (trainer engagement and training incentives).
5. Further WF data needs.

Business & Industry Leadership Team



June 20, 9-1pm AGENDA

8:30-9:00

Coffee and Networking

9:00 - 9:05

Welcome

9:05-9:15

Keynote Speaker, Dr. Zenon Christodoulou
Commissioner, New Jersey Board of Public Utilities

9:15-9:30

Goals for the Day and TREC Funding
Stacy Richardson
Deputy Director, Division of Clean Energy,
New Jersey Board of Public Utilities

9:30-10:15

Session 1: Energy Efficiency Employer Workforce Needs

10:15-10:30

Coffee Break

10:30-11:15

Session 2: Energy Efficiency Workforce Training Needs and Capacity

11:15-12:00

Session 3: Supporting Trainees in Skill Development:
Wraparound & Support Services

12:00-12:30

Networking Lunch + Sharing Breakout Insights

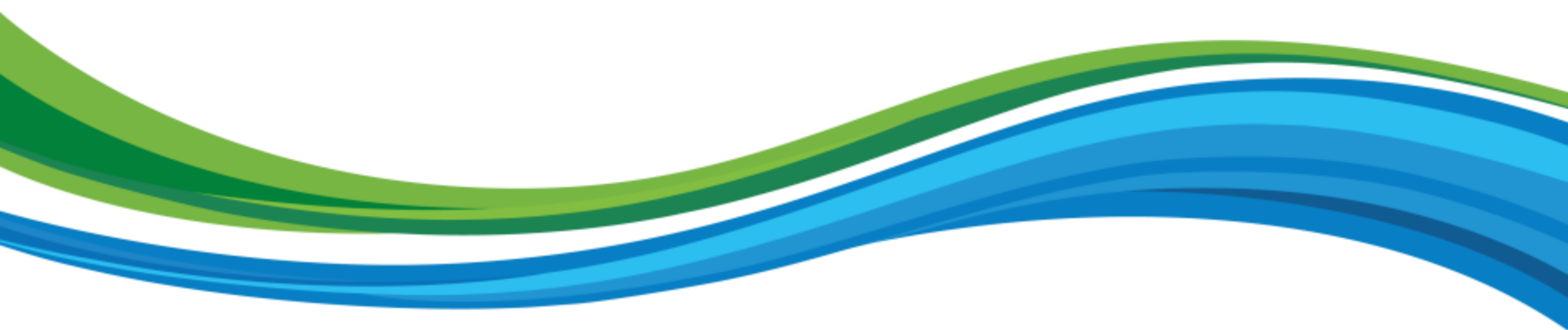
12:30-1:00

Next Steps and Wrap Up

Training for Residential Energy Contractors (TREC)
Meeting hosted by the New Jersey Dept. of Labor
and the New Jersey Institute of Technology



Thank You!



Appendix



The Rising Trends in Energy Efficiency Jobs (U.S.)

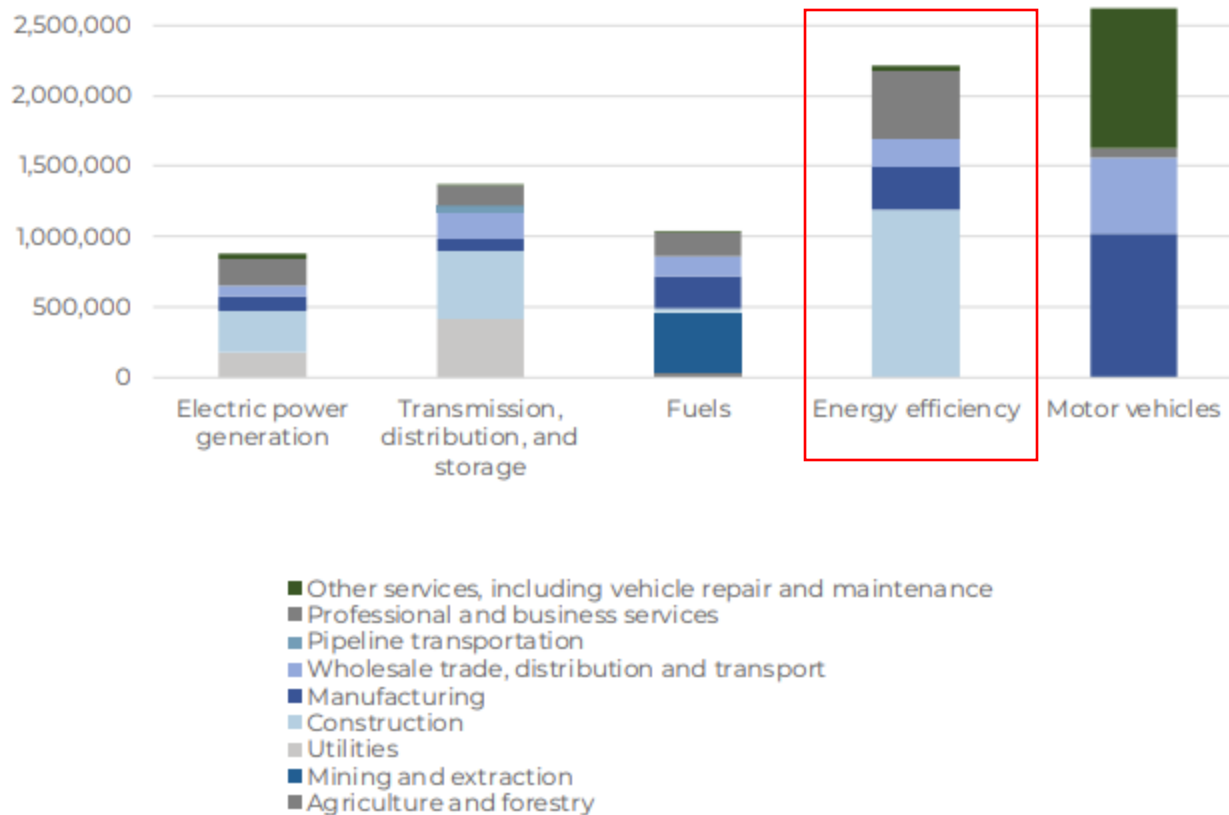


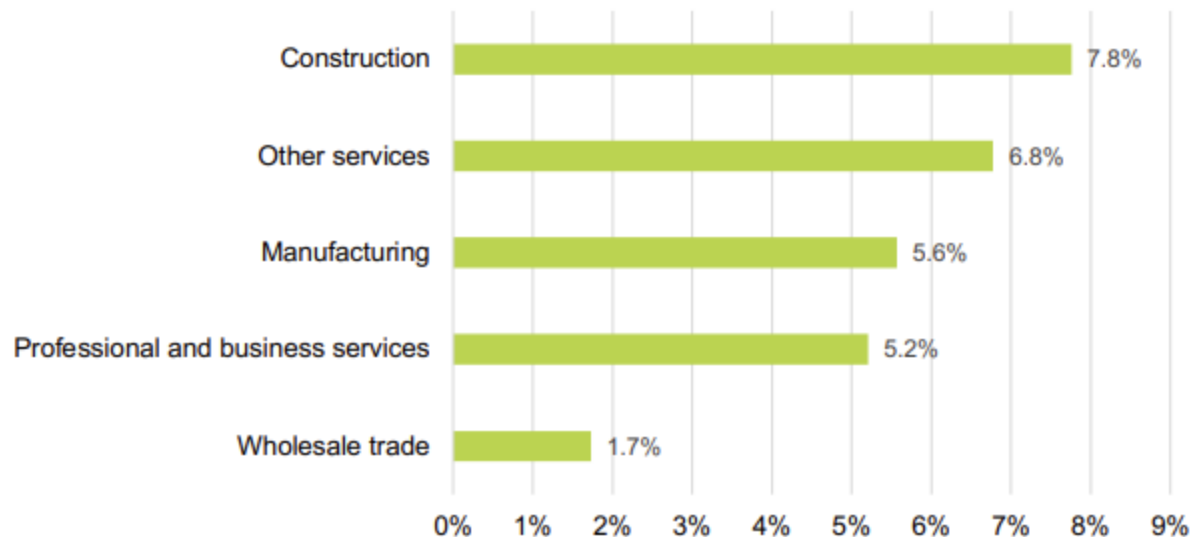
Fig: Energy Employment by Technology Category and Industry, 2022.

"Construction industry jobs grew the second most among industry categories, with most new workers employed within energy efficiency"



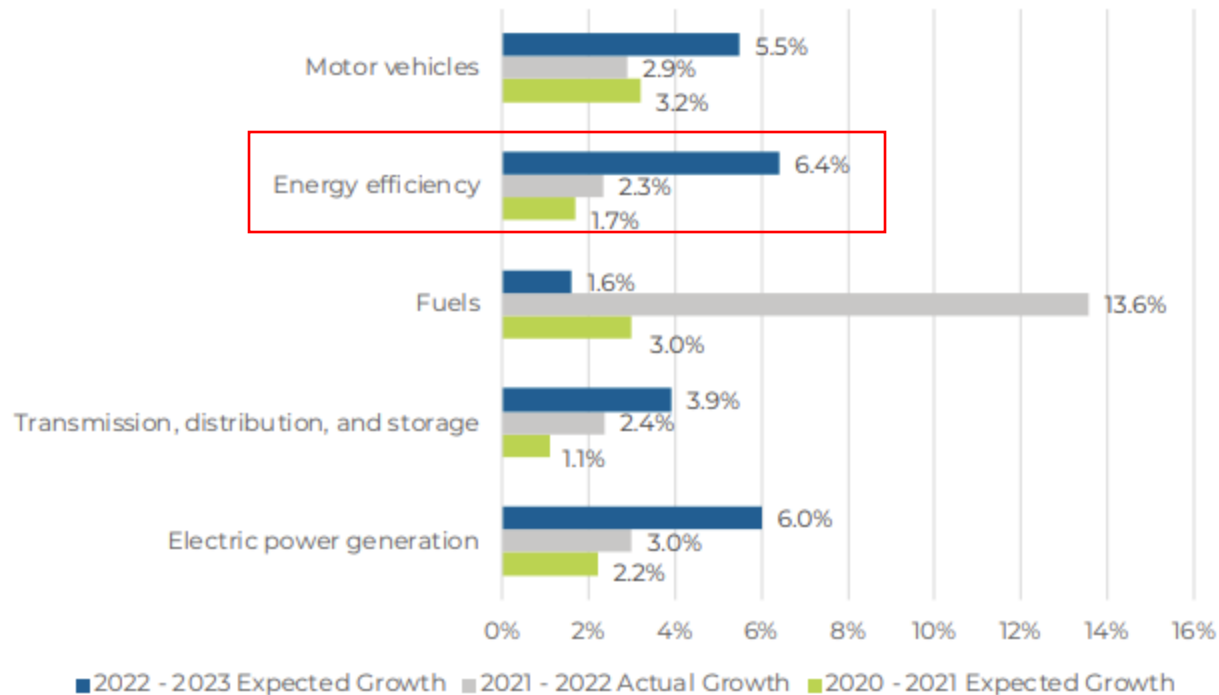
Expected National Employment Growth from 2022 to 2023

Employers in all the five EE industries anticipate growth in 2023, ranging from 1.7% in wholesale trade to 7.8% in construction



Projected National Employment Growth from 2022 to 2023

Surveyed companies in all energy technologies reported that they expect job growth from 2022 to 2023, led by energy efficiency (+6.4% growth expected by employers)



Building a Robust Energy Efficiency Workforce in the State of NJ

- Collaboration between various stakeholders is essential:
 - **Government:** policies and incentives for training and workforce development.
 - **Educational institutions and training providers:** relevant training programs and certifications.
 - **Industry:** partner with educators and training providers to design curriculum and provide job opportunities.
 - **Community**

Essential Skills for the EE Workforce

- **Technical skills:** Building science, renewable energy technology, energy auditing methods
- **Soft skills:** Communication, problem-solving, critical thinking, teamwork
- **Industry-specific certifications** are often required for certain roles.