

MEA Solar Task Force Support

October 11, 2023

Agenda

- Tax Policy Recap
- Findings and Key Takeaways
- Solar Industry Employment
- Quality, Family-Sustaining Jobs in Maryland
- LMI Solar Adoption and Equity
- MBE Requirements
- Questions/Discussion

Tax Policy – Sales Tax Exemption

| State | Summary |
|--------------|--|
| Arizona | For commercial or residential solar, 100% of sales tax |
| California | Exempts 100% of the taxes levied by the State. Local and district sales taxes will still apply. Solar equipment must primarily service farm equipment. |
| Florida | Solar energy systems and all components of such systems are exempt from state 6% sales tax |
| Maryland | Solar energy equipment is exempted from state 6% sales tax |
| New Jersey | Exemption for devices that can provide heating or cooling by harnessing solar energy |
| New York | Retail sales and installations of commercial solar energy equipment are exempt from the 4% New York State sales and use tax rate |
| Rhode Island | Exemption from state 7% sales tax |

- Equipment cost for solar energy is exempted from state tax
- Solar energy equipment may include equipment that uses solar energy to heat or cool a structure, generate electricity to be used in a structure, or provide hot water for use in a structure.

Tax Policy – Solar Property Tax Exemption

| State | Summary |
|----------------|--|
| California | Tax exemption of 100% of system value; 75% of system value exemption for dual-use equipment |
| Florida | Residential: 100% of the added value; Non-Residential: 80% of the added value |
| Maryland | 100% property tax increase exemption, Solar PV and Solar hot water systems installed on structures are exempt from state and local real property taxes |
| New York | 35%, 20%, or 10% of the installed system cost depending on when it is built |
| North Carolina | Residential systems: 100% of the appraised value; All other systems: 80% of the appraised value |
| Ohio | For owners or lessees of renewable energy product-exemption from the public utility tangible personal property tax |
| Rhode Island | Residential 100% exemption from property taxes |

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Tax Policy – Income Tax Credit

| State | Summary |
|----------|--|
| Arizona | For residential solar, tax credit of 25% of installation cost, \$1,000 limit |
| New York | System must be installed at personal residence and is limited to \$5,000 |
| Utah | Credits available to residential and commercial customers based on unit size/price, credit for residential capped at \$1,600 and phases out after 2023, credit for commercial capped at \$50,000 |

- Income tax credits mean that a percentage of the installation cost of solar becomes eligible for a state tax deduction

Findings and Key Takeaways

- High-income households remain about four times more likely to adopt solar PV than low-income households.
- Widespread implementation of LMI-targeted incentives, leasing, and property-assessment based financing alongside falling solar prices could bring solar adoption demographics closer to resembling the broader population.
- California's Supplier Diversity Program requires utilities and covered entities with gross annual revenue of \$25 million to comply with MBE requirements.
- Preliminary findings on the solar workforce in Maryland suggest that the workforce will steadily increase over the next 10 years to accommodate for increased demand.
- Based on extrapolation from national data, Maryland clean energy workers make about \$28 per hour.
- Increasing training programs, collaborating with the private sector, and investing funds in workforce development support both the workforce and employers in creating quality, family sustaining jobs.

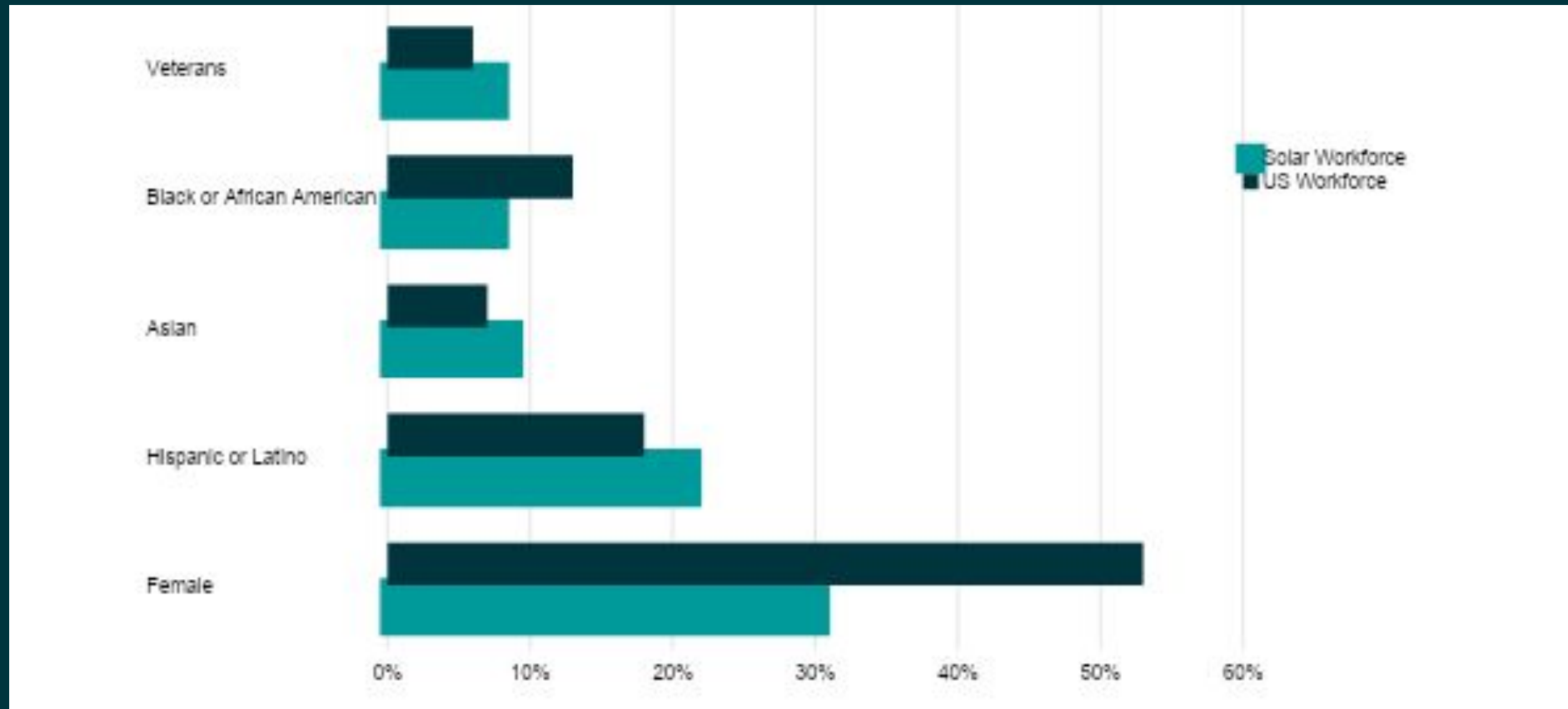


Solar Industry Employment

Projected Job Growth in Comparable States

| State | Top 10 Overall Solar Capacity | Top 10 Solar Capacity Normalized by Solar Potential, Population, and Land Area | PJM RTO States | Baseline Scenario | | High Scenario | |
|----------------|-------------------------------|--|----------------|-----------------------|---------------------------|-----------------------|---------------------------|
| | | | | Job Creation per Year | New Jobs per MW Projected | Job Creation per Year | New Jobs per MW Projected |
| Arizona | X | X | | 613.6 | 0.26 | 1,323.4 | 0.68 |
| California | X | X | | 7,667.8 | 1.53 | 16,538.3 | 3.99 |
| Delaware | | | X | 38.3 | 0.22 | 82.6 | 0.58 |
| Florida | X | | | 764.8 | 0.26 | 1,649.5 | 0.69 |
| Georgia | X | | | 469.7 | 0.56 | 1,013.2 | 1.46 |
| Maryland | | | X | 414.1 | 1.11 | 893.3 | 2.89 |
| Massachusetts | X | X | | 1,024.3 | 2.55 | 2,209.3 | 6.65 |
| Nevada | X | X | | 591.8 | 0.44 | 1,276.4 | 1.15 |
| New Jersey | X | X | X | 536.5 | 0.95 | 1,157.2 | 2.47 |
| New York | X | | | 835.6 | 0.40 | 1,802.2 | 1.04 |
| North Carolina | X | X | | 547.4 | 1.31 | 1,180.7 | 3.43 |
| Ohio | | | X | 518.9 | 0.28 | 1,119.2 | 0.73 |
| Pennsylvania | | | X | 350.0 | 0.58 | 754.8 | 1.52 |
| Rhode Island | | X | | 94.4 | 0.55 | 203.6 | 1.43 |
| Texas | X | | | 799.4 | 0.08 | 1,724.3 | 0.22 |
| Utah | | X | | 477.2 | 0.66 | 1,029.3 | 1.73 |
| Vermont | | X | | 115.4 | 2.84 | 248.9 | 7.42 |
| Virginia | | X | X | 301.5 | 0.19 | 650.3 | 0.49 |
| West Virginia | | | X | 29.2 | 0.19 | 63.0 | 0.51 |

Solar Demographics Compared to Overall US Workforce



EARN Maryland Program

What is EARN Maryland?

State-funded, industry-led competitive workforce development grant program

Provides strategies for helping businesses cultivate the skilled workforce they need to compete

EARN Maryland Goals

Address the demands of businesses by focusing intensively on the workforce needs

Address the needs of workers by creating formal career paths to good jobs

Encourage mobility for Maryland's most hard-to-serve jobseekers

How It Works

Invests in strategic industry partnerships from key economic sectors in every region

Partnerships will develop plans to train and educate workers and place them in meaningful employment



Solar Industry Employment

Quality, Family-Sustaining Jobs in Maryland

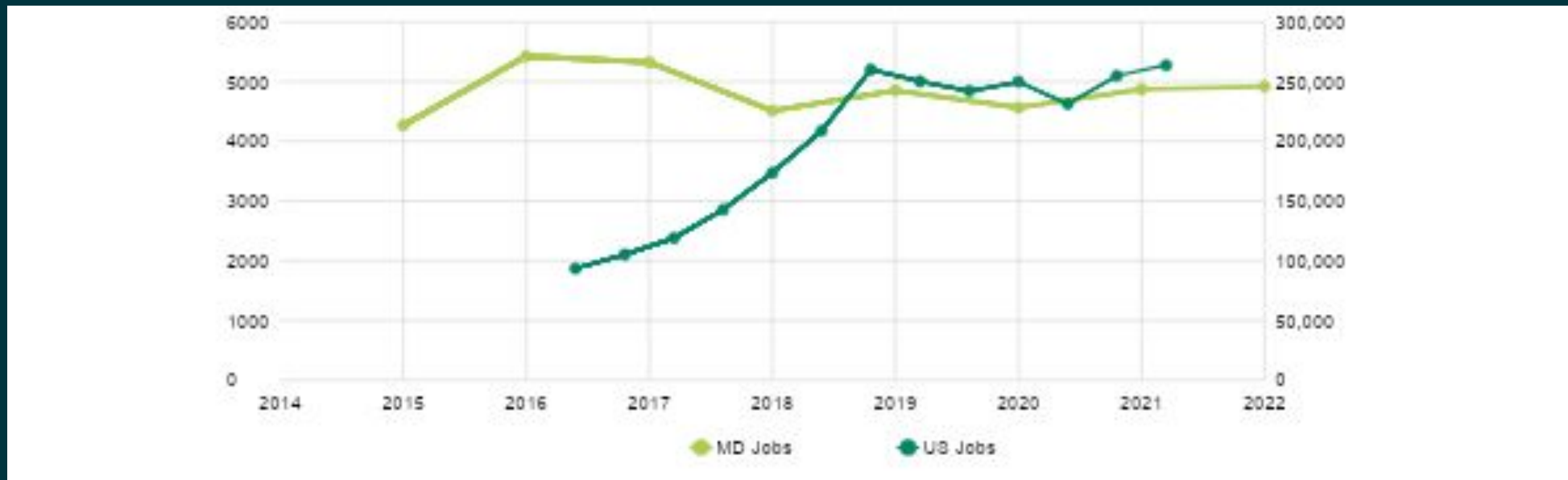
Maryland Solar Industry Employment

- Maryland is ranked 15th in total number of solar jobs and solar jobs per capita with a projected growth of 7.2% in 2023
- According to an E2 report on diversity, Maryland is rated as a top state for Black workers
- Maryland had 4,921 solar jobs in 2022 with 49 of those being added during the year, for 1% industry growth
- According to IREC, 74% of the solar workforce in Maryland is made up of installation and project development jobs

| | Male | Female | Hispanic or Latino | American Indian or Alaska Native | Asian | Black or African American | Native Hawaiian or Other Pacific Islander | Biracial or Multiracial | People of Color | Nonwhite | White |
|-------------------|-------|--------|--------------------|----------------------------------|-------|---------------------------|---|-------------------------|-----------------|----------|-------|
| Maryland | 74.3% | 25.7% | 14.1% | 1.2% | 7.5% | 11.6% | 0.9% | 6.7% | 27.9% | 37.6% | 62.4% |
| Total U.S. | 72.6% | 27.4% | 16.5% | 1.4% | 8.2% | 8.4% | 1.0% | 7.9% | 26.9% | 39.0% | 61.0% |

Solar Jobs in Maryland and U.S. (2015 – 2022)

- Job data follows the trend of solar installations; Maryland installed more solar in 2017 than in the following five years.
- Unlike the national market, the state market has not yet recovered to its pre-2016 trajectory.
- The 2016 to 2017 drop was likely caused by developers fast tracking completions in 2016 in advance of the expected sunset of a Federal Income Tax Credit (FITC).
- FITC was extended, this expectation inflated 2016 numbers and depressed 2017 numbers.
- The drop from 2017 to 2018 likely resulted from the tariff on PV imports.
- The contraction in the jobs and installation data in 2020 reflects the economy-wide contractions seen due to the COVID-19 pandemic.





LMI Solar Adoption and Equity

Top Solar States and Adoption Demographics

| State | Top 10 Overall Solar Capacity | Top 10 Solar Capacity Normalized by Solar Potential, Population, and Land Area | PJM RTO States | Total Installed Solar (MW) | Solar Adopters <80% AMI | Solar Adopters >80%, <120% AMI | Solar Adopters, >120% AMI |
|----------------|-------------------------------|--|----------------|----------------------------|-------------------------|--------------------------------|---------------------------|
| Arizona | X | X | | 6,557 | 20% | 21% | 60% |
| California | X | X | | 41,675 | 21% | 21% | 59% |
| Florida | X | | | 12,612 | 25% | 23% | 53% |
| Georgia | X | | | 5,200 | 23% | 21% | 56% |
| Maryland | | | X | 1,775 | 22% | 21% | 58% |
| Massachusetts | X | X | | 4,294 | 26% | 25% | 49% |
| Nevada | X | X | | 5,926 | 20% | 20% | 61% |
| New Jersey | X | X | X | 4,588 | 24% | 21% | 55% |
| New York | X | | | 4,717 | 22% | 26% | 51% |
| North Carolina | X | X | | 8,459 | 19% | 22% | 59% |
| Ohio | | | X | 1,389 | 27% | 25% | 49% |
| Pennsylvania | | | X | 1,195 | 40% | 25% | 34% |
| Rhode Island | | X | | 721 | 26% | 24% | 50% |
| Texas | X | | | 18,801 | 29% | 21% | 50% |
| Utah | | X | | 2,931 | 17% | 26% | 57% |
| Vermont | | X | | 425 | 18% | 26% | 57% |
| Virginia | | X | X | 4,393 | 17% | 21% | 62% |

Top Solar States – LMI Adoption

Pennsylvania

- Philadelphia's solar rebate program provides residents with \$0.20/W of residential solar generation, reserving 10% of the rebate funds for LMI households

Massachusetts

- Pays owners an incentive for each kWh of electricity produced
- Solar loan program that reduces costs of ownership and provides loan support for LMI residents by reducing:
 - Loan principal by up to 30%
 - Interest rates by up to 1.5%
- Loan loss guarantees to lenders who finance solar systems for residents with poor credit

Rhode Island

- Rhode Island Energy's Renewable Energy Growth program provides homeowners 28.75¢/kWh of energy produced from rooftop solar, 9.75¢ greater than market rate
- Rhode Island's new program will utilize IRA tax credits with RGGI funding to expand renewable energy opportunities for LMI residents

Top Solar States – Equity Considerations

California

- Solar On Multifamily Affordable Housing program offers:
 - Training courses
 - Employment resources
 - Connections to well-paying job opportunities
 - Technical assistance services for property owners, tenants, and contractors
 - Information to develop a robust understanding of energy programs and options
 - Ways to receive assistance leveraging those programs

New York

- The New York Solar Program offers:
 - Technical assistance
 - Funding to address resource gaps
 - Solutions to market barriers preventing the development of solar and energy storage installations benefitting LMI households
- Supports projects to expand solar and storage installation at affordable housing through:
 - Increased incentives
 - Cost offsets



MBE Requirements

MBE Requirements for State Procurement

Many states have procurement goals for state agencies in terms of MBE, but Maryland is one of four states with legally mandated MBE requirements on state level projects.

| State | MBE Mandate | MBE Program Applications | Year Established |
|----------------------|-------------|--|------------------|
| Maryland | 29% | State agencies allocate 29% of total procurement funding to MBE firms | 1978 |
| Ohio | 15% | State agencies allocate 15% of their annual purchases for goods and services from MBEs | 1980 |
| Rhode Island | 10% | Minimum 10% Aggregate Utilization Rate in the state purchase of goods and services and public works projects | 1983 |
| Massachusetts | 10% | State agencies allocate 10% of construction contracts each FY to MBEs and 5% of contract value to supplies and equipment to MBEs | 1984 |

"Minority Business Enterprise (MBE) Program." Procurement & Business Services. <https://purchase.umd.edu/vendors/business-diversity/minority-business-enterprise-mbe-program>.

"State of Ohio Spends Record Amount with MBEs." OhioMBE, August 20, 2015 <https://ohiombe.com/archives/4940>.

220-RICR-80-10-2, <https://dedi.ri.gov/divisions-units/minority-business-enterprise-compliance-office/minority-business-enterprise-mbe-0>

Massachusetts Executive Order No. 237, *Promoting participation by minority businesses in the economy of the Commonwealth*. Michael S. Dukakis, March 19, 1984.

<https://www.mass.gov/executive-orders/no-237-promoting-participation-by-minority-businesses-in-the-economy-of-the-commonwealth>

MBE Requirements Outside State Procurement

Illinois

- Mandates suppliers of wind and solar energy to report on diversity in the supply chain
- Chicago has special conditions in its MBE mandate for small order bids

California

- Required for utilities and covered entities with a gross annual CA revenue exceeding \$25 million
- Encourages smaller generators to participate