



# INTRODUCTION

## DELAWARE'S STATE ENERGY PLAN

### State Energy Office, Delaware Department of Natural Resources and Environmental Control (DNREC)

DNREC's State Energy Office develops and updates the State Energy Plan. The update is required at least every 5 years.

#### STATE ENERGY OFFICE'S ROLE:

Provide updated plan to the Governor that incorporates GEAC recommendations and public feedback.

### Governor's Energy Advisory Council (GEAC)

25-member council representing business, environmental interests and energy sector experts, environmental equity advocates, state and local government, elected officials and the public.

**GEAC'S ROLE:** Provide recommendations to DNREC's State Energy Office.

### GEAC'S WORKGROUPS

1. Renewable Energy and Clean Technologies
2. Energy Efficiency and Electrification
3. Environmental Justice and Energy Equity
4. Grid Modernization

### OBJECTIVES

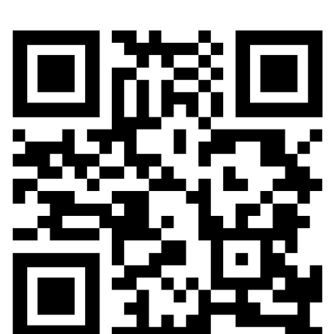
- Ensure historically marginalized communities are included in the energy transition.
- Prepare the grid for increased in-state electricity generation from renewable energy sources such as solar, wind and renewable fuels such as biofuels and hydrogen.
- Enable the transition to zero emission vehicles.
- Enable the transition to electrified heating and cooling in residential and commercial buildings.
- Offset increasing electric demand with energy efficiency and smart grid technologies.
- Create new employment opportunities in high-paying energy sectors.

### CHAPTERS

- Delaware's Energy Profile
- Energy Justice
- Renewable Energy and Clean Technologies
- Maximizing Energy Efficiency and Promoting Beneficial Electrification
- Grid Modernization
- Workforce Development

### REQUIREMENTS

- Protect the health, safety and welfare of the citizens and economy of the State.
- Support the State's greenhouse gas emissions reduction targets.
- Support implementation of the State's Climate Action Plan.



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#### 2023

**June–December**  
25 meetings held by GEAC and its 4 workgroups

**November**  
First round of public engagement meetings held

#### 2024

**January**  
GEAC approves 82 recommendations to send to State Energy Office

**August**  
Second round of public engagement meetings

**Fall**  
Release of the updated State Energy Plan



# ENERGY JUSTICE

## DELAWARE'S STATE ENERGY PLAN

- Energy justice, also referred to as energy equity, accounts for historical causes of current inequalities, remediates social, economic and health burdens from energy production and consumption and establishes the fair distribution of benefits of a clean, energy efficient and modernized grid.

### GOALS

- Ensure that all communities are engaged in and benefit from the energy transition.
- Identify communities in the State that are affected by energy inequities.
- Identify policy gaps and improve existing programming.
- Identify ways to create new opportunities to ensure everyone is benefiting from Delaware's energy system.

#### SECTION

##### Community Engagement

#### STRATEGIES

- Initiate studies to identify energy burdened communities
- Coordinate across sectors to deliver solutions to communities experiencing multiple energy challenges
- Enlist trusted partners from community-based organizations

##### Program Improvements

- Develop program targets and energy justice metrics
- Develop a public-facing database to report energy program metrics
- Establish a new public-facing energy program interface
- Improve information sharing between utilities and program administrators

##### Reduce Costs & Maximize Funding

- Empower underserved communities with access to financing through green banks
- Encourage beneficial fuel-switching in environmental justice communities
- Expand efforts to identify and address Delaware's heat islands
- Assess new rate structure for low-income electric customers
- Address predatory practices related to solar energy marketing



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# RENEWABLE ENERGY AND CLEAN TECHNOLOGIES

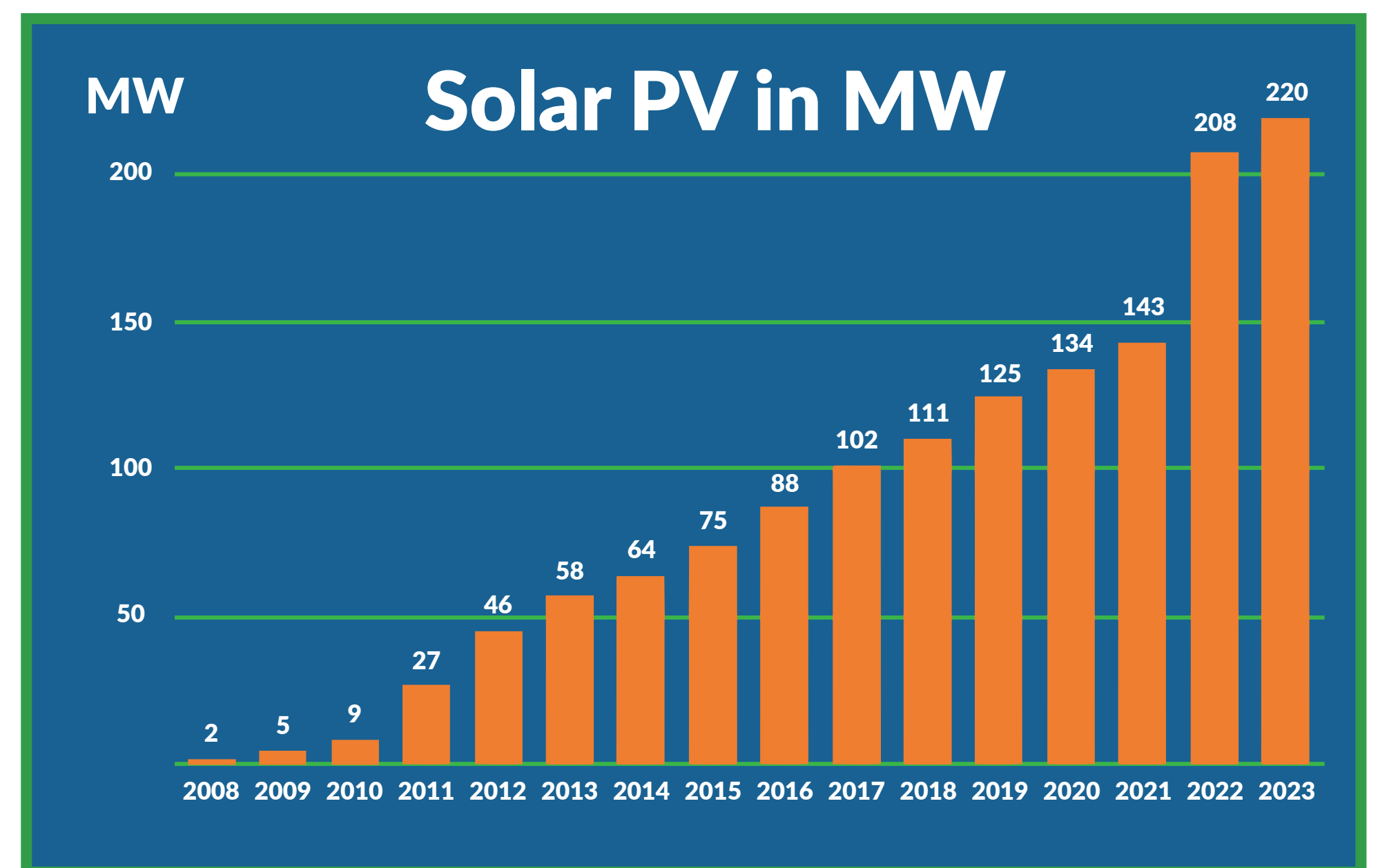
## DELAWARE'S STATE ENERGY PLAN

- The growth of renewable energy and other clean energy technologies will be essential to achieving the goals outlined in the Climate Change Solutions Act.
- Increasing the amount of renewable and clean energy powering Delaware's electric grid has the greatest potential to reduce greenhouse gas emissions in the long term and is critical to achieving the State's objectives.

### GOALS

- Achieve net zero emissions in the energy sector by 2050.
- Expand equitable access to renewable energy.
- Develop and implement an offshore wind strategy that meets Delaware's needs.
- Monitor and benefit from emerging renewable and clean technologies.

### SOLAR GROWTH IN DE



SECTION	STRATEGIES
Renewable Energy Portfolio Standards	<ul style="list-style-type: none"> <li>• Achieve net zero emissions in the energy sector by 2050</li> </ul>
Solar Photovoltaic	<ul style="list-style-type: none"> <li>• Establish statewide goals for distributed solar generation</li> <li>• Expand equitable access to solar</li> <li>• Capitalize on co-location benefits</li> <li>• Lead by example in State and local government</li> </ul>
Offshore Wind	<ul style="list-style-type: none"> <li>• Create an offshore wind procurement process that works for Delaware</li> <li>• Develop partnerships with neighboring states</li> <li>• Participate in regional transmission planning</li> </ul>
Emerging Technologies	<ul style="list-style-type: none"> <li>• Monitor and assess the development of future innovative clean technologies</li> <li>• Prioritize clean hydrogen's deployment to hard-to-carbonize sectors</li> </ul>
Renewable Fuels	<ul style="list-style-type: none"> <li>• Assess the feasibility of a Low-Carbon Fuel Standard</li> <li>• Assess Delaware's potential for renewable natural gas</li> <li>• Assess the feasibility of a Clean Energy Heat Standard</li> </ul>



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# ENERGY EFFICIENCY AND ELECTRIFICATION

## DELAWARE'S STATE ENERGY PLAN

- Improving the energy efficiency of homes and businesses and shifting residential and commercial buildings from fossil fuels to electric power is essential to meeting the State's greenhouse gas reduction goals. A new suite of policies and programs is needed to promote beneficial electrification of Delaware's existing and newly constructed buildings systems and to prepare them for electric heating systems, appliances and charging electric vehicles.

### GOALS

- Improve energy efficiency and electrification programs for residential and commercial buildings.
- Strengthen building energy codes and standards.
- Promote vehicle electrification.
- Establish tracking and reporting mechanisms for program implementation.

SECTION	STRATEGIES
<p><b>Buildings Energy Efficiency &amp; Electrification Programs</b></p>	<ul style="list-style-type: none"> <li>• Incorporate greenhouse gas emissions into energy efficiency potential studies</li> <li>• Ensure the Energy Act is consistent with Climate Change Solution Act of 2023</li> <li>• Develop building decarbonization plans</li> <li>• Support voluntary stretch code adoption</li> <li>• Support net-zero building energy codes in new construction</li> <li>• Assess the benefits of appliance standards</li> <li>• Adopt and work with local governments to support enforcement of stronger State energy codes</li> <li>• Expand education and training opportunities</li> <li>• Improve existing buildings energy performance by developing statewide building performance standards</li> <li>• Lead by example in State and local government</li> </ul>
<p><b>Vehicle Electrification</b></p>	<ul style="list-style-type: none"> <li>• Adopt and work with local governments to support enforcement of Electric Vehicle-Ready residential and commercial building codes</li> <li>• Encourage on-street charging</li> <li>• Ensure electric distribution network is ready for electric vehicles</li> <li>• Reduce barriers for commercial customers</li> <li>• Educate consumers about new programs and incentives</li> </ul>
<p><b>Tracking &amp; Measuring Progress</b></p>	<ul style="list-style-type: none"> <li>• Track and measure progress toward energy efficiency and electrification</li> </ul>



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# GRID MODERNIZATION

## DELAWARE'S STATE ENERGY PLAN

- Energy system infrastructure encompasses the physical and technological equipment that delivers essential services such as electricity and natural gas to homes and businesses. Both systems rely on a complex network of control centers, substations and advanced metering infrastructure to monitor and manage the flow of energy, ensuring that supply meets demand in real time.

### GOALS

- Prepare electric utility transmission substation and distribution networks for a grid powered by renewable and clean energy.
- Maximize resiliency of energy infrastructure to climate change vulnerabilities such as extreme heat and weather events.
- Use non-wires alternatives to meet new electric demand from a decarbonized, energy efficient economy.
- Adopt rate design and utility programs that use smart grid technologies for peak shaving, demand response and to reduce customer energy bills.

SECTION	STRATEGIES
<p><b>Transmission &amp; Substation Infrastructure</b></p>	<ul style="list-style-type: none"> <li>• Deploy grid-forming inverters and controls that integrate inverter-based renewable energy resources</li> <li>• Reduce greenhouse gas emissions from grid technologies</li> <li>• Clarify the Public Service Commission's role as siting and routing authority</li> <li>• Reform transmission permitting in Delaware</li> <li>• Incorporate the social cost of carbon into the cost analysis for utility-scale decarbonization</li> </ul>
<p><b>Distribution Infrastructure &amp; Smart Grid Technology</b></p>	<ul style="list-style-type: none"> <li>• Use Advanced Distribution Management Systems (ADMS) and Distributed Energy Resource Management Systems (DERMS)</li> <li>• Require Integrated Distribution System Planning from electric utilities</li> <li>• Promote microgrid projects in Delaware</li> <li>• Pilot energy storage projects at different scales in Delaware</li> </ul>
<p><b>Rate Design</b></p>	<ul style="list-style-type: none"> <li>• Enable proactive utility investment into smart grid technologies, 'modern' substations, and other critical infrastructure to interconnect DERs and manage two-way power flow</li> <li>• Modify rate design to encourage customer-controlled energy management</li> </ul>



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# WORKFORCE DEVELOPMENT

## DELAWARE'S STATE ENERGY PLAN

- National and regional growth in the clean energy industry presents an opportunity for Delaware to expand its economy.
- The strategies in the energy plan require growing Delaware's clean energy workforce.
- Occupations in construction, professional services, manufacturing, utilities and wholesale trade – among others – are in high demand.
- To meet growing energy needs and achieve greenhouse gas reduction targets, Delaware must improve access to education, training and apprenticeships for current and future clean energy workers.

STRATEGY	DESCRIPTION
<p><b>Complete a Workforce Needs Assessment for the Clean Energy Economy</b></p>	<p>DNREC's Division of Climate, Coastal and Energy is already engaged in a workforce needs assessment. The objectives of the assessment are to baseline existing workforce and workforce development efforts, identify skill gaps and needs and identify State, regional and/or local level resources that are equipped to help address identified workforce shortages.</p>
<p><b>Expand Clean Energy Workforce Development Programs</b></p>	<p>Meeting the current and future employment demands in the energy industry will require significant collaboration among State agencies, institutions, community organizations and the private sector. Drawing from the lessons learned through the needs assessment, close collaboration and partnership with these institutions will ensure that available courses, programs and certificates are aligned with workforce assessment findings.</p>
<p><b>Build Awareness of Clean Energy Jobs and Training Opportunities</b></p>	<p>Delaware should establish a comprehensive clean energy jobs and training effort to raise awareness about both existing and new career and employment prospects within the State. This effort must include partnerships with employers including energy utilities to showcase careers in the energy sector and highlight success stories across Delaware, inspiring youth to pursue careers in the clean energy sector.</p>



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