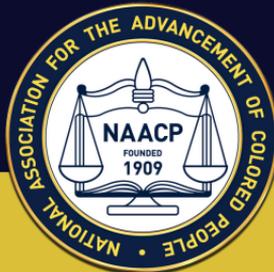


ARIZONA REPORT



JUST ENERGY POLICIES: Reducing Pollution and Creating Jobs

2017



NAACP

Environmental and Climate Justice Program

Just Energy Policies and Practices
Arizona Report on Energy Efficiency and Renewable Energy Policies

National Association for the Advancement of Colored People

4805 Mt. Hope Drive

Baltimore, MD 21215

(410) 580-5777

www.naacp.org

Environmental and Climate Justice Program

410-580-5794

ecjp@naacpnet.org

Lead Author

Jacqui Patterson

Senior Researchers/Authors

Katie Fink, Camille Grant and Sabrina Terry

Assistant Researcher

Rachel Rosenberg and Chris Walker

Content Editing Support

Lisa Hamilton and Rachel Kriegsman

Copy Editors

Carol Ko and Christine Van Dyk

WHY THE NAACP IS STANDING UP FOR JUST ENERGY POLICIES

Since 1909, the NAACP has addressed a vast array of civil rights issues including education, employment, housing, civic engagement, health, and criminal justice. Communities of color nationwide are, and have historically been, beset by human and civil rights violations, including disproportionate exposure to pollution, crime, substandard living conditions and more. African Americans who reside near energy production facilities including coal fired power plants, nuclear power plants, or biomass power plants, are more likely to suffer the negative health impacts of prolonged exposure to smog, lead, asbestos, mercury, arsenic, sulfur dioxide, nitrogen oxide and other toxins than any other group of Americans.¹²³⁴

Prolonged exposure, to toxins from these energy production facilities, is tied to birth defects, heart disease, asthma attacks, lung disease, learning difficulties, and even lower property values. Approximately 68% of African Americans live within 30 miles of a coal-fired power plant, which produces the largest proportion of energy compared to any other energy production type. The health conditions associated with exposure to toxins coming from these plants disproportionately affect African Americans. An African American child is three times as likely to be admitted to the hospital and twice more likely to die from an asthma attack than a white American child. Though African Americans are less likely to smoke, they are more likely to die of lung disease than white Americans are.⁵ A 2010 report by the National Research Council (NRC) calculates that particulate matter pollution from U.S. coal-fired power plants is solely responsible for causing approximately 1,530 excess deaths per year. In addition, properties in close proximity to toxic facilities average 15% lower property values.⁶

At the same time, many of the same polluting facilities that affect the daily health and well-being of host communities are major contributors to the greenhouse gases that are driving climate change. The power sector is responsible for about one third of U.S. greenhouse gas emissions, the largest emitter ahead of transportation.⁷ Not only do low-income neighborhoods and communities of color suffer more of the direct health, educational, and economic consequences of these facilities, but also devastating natural disasters such as Hurricanes Katrina and Sandy, along with rising food prices and water shortages, harm low-income people and people of color disproportionately partly due to pre-existing vulnerabilities.

While African Americans are enduring most of the harmful impacts of energy production, they are reaping few of the benefits from the energy sector. According to a 2010 study by the American Association of Blacks in Energy, while African Americans spent \$41 billion on energy in 2009, they only held 1.1% of energy jobs and only gained .01% of the revenue from the energy sector profits.⁸ Therefore, there is both inequity in the incidence of disease and the economic burden for communities of color that host energy production facilities.

African Americans should no longer abide the millstone of the noxious facilities and continue to be overlooked by the energy industry while living in blight. Given that the unemployment rate for African Americans has consistently been nearly twice that of the national average and the average wealth of white Americans is 20 times that of African Americans, it is past time to revolutionize the relationship communities of color have with this multi-billion dollar industry. Leading in a new energy economy serves as pathway out of poor health, poverty and joblessness while establishing a foundation of energy resources and security for generations to come.

The NAACP will continue to build upon its legacy of advocating for equity, economic justice, and environmental justice within the energy sector, especially in the broader context of climate change. The following diagram outlines the NAACP's recent policy precedence and the foundation for the recommendations we pose to enact change in the energy sector.

NAACP's Most Recent Just Energy Policy Resolutions

"2000-2016"

Environmental Protection Resolution:

calls for state and local branches, as well as the assembly of a task force to examine the impacts of waste disposal policies and facilities in communities of color, such as incinerators.

2001

Jobs vs. The Environment Myth Resolution:

opposes any efforts that promise jobs to a community of color to coerce residents into accepting a polluting industry in their neighborhood and demands that environmentally regulated facilities fulfill job promises.

2003

Fossil Fuel Resolution: calls for President of the United States to roll back cost of fossil fuels and for Congress to enact emergency legislation that halts rising gas costs.

2006

Climate Change and Discriminatory Practices Resolution:

commits to advocating for socially just solutions for the environment and global warming that will reduce racial and ethnic economic disparities.

2007

NAACP Supports Long-Term, Aggressive Energy Policy to Insulate US Against Future Situations Resolutions: calls on all interested parties to develop long-term strategies to reduce the global demand for gasoline.

2008

NAACP Support for Present and Future Green Jobs Appropriations and Policies: advocates for the Green Job Act funding and inclusion of African Americans in emerging green energy sector.

2010

NAACP in Opposition to Expanded Offshore Drilling Without Adequate Safety Technology and Clean Energy Matter in Place:

supports the exploration of clean energy alternative, including wind, solar, hydro, and geothermal solutions, in addition to energy conservation and reduction strategies.

2011

Clean Air Act-Greenhouse

Gases-Coal Fired Power Plants: advocates health and sustainable alternatives to the current overreliance on coal for energy.

2012

Renewable Energy Resolution: commits to increase community involvement in ensuring that energy related policies and practices do no harm.

2014

Promoting Equitable Access to Clean Energy Alternatives: support policies and programs that ensure affordable access to clean energy sources and advocates for sustainable job opportunities for low-to moderate-income communities.

2015

Advancing Clean Energy Resource: commits to support clean energy resources and advocates for affordable access to clean energy options for all.

2016

Resolution Against Natural Gas as a Climate Solution, or a "Bridge" Fuel to a Clean Energy Future: calls for authorities to protect vulnerable families from the pollution of fracking gas and stop the fossil fuel industry from burning natural gas-emitting methane.

WELCOME

In opening this document, you have made a commitment to understand and advance just energy policies and practices. This energy policy compendium will give you the information you need to stand up for a just energy future. The rapid depletion of Earth's non-renewable resources coincides with increased energy consumption in the United States. With a growing understanding of the harmful impact of fossil fuel-based energy production on communities of color and low income communities, it is more important now than ever before that our communities take a stand to move our country to an energy efficient and clean energy future. Our intention in creating this compendium is that it will serve as a resource and will spur states to make sure their energy policies protect communities from harmful energy production processes while simultaneously providing equitable access to economic opportunities in energy efficiency and clean energy.

Focal Policies

The Just Energy Policies Compendium profiles *Renewable Portfolio Standards*, *Energy Efficiency Resource Standards*, and *Net Metering Standards* for each state and also shares detailed information on how to access rebates/loan/grants, etc. for energy efficiency and clean energy.

➤ *Renewable Portfolio Standards*

A Renewable Portfolio Standard (RPS) requires electric utility companies and other retail electric providers to supply a specific minimum amount of customer load with electricity from eligible renewable energy sources. In order to protect community health and well-being, as well as preserve the planet, we must transition to renewable energy. In setting standards for the content of RPS, the NAACP goes further and distinguishes that our sources and processes must be clean energy, recognizing that not all renewable energy has been proven safe with minimal impact on the environment and communities. Under this definition, we focus on efforts on advancing solar, wind, and geothermal energy.

➤ *Energy Efficiency Resource Standards*

Energy Efficiency Resource Standards (EERS) establish a requirement for utility companies to meet annual and cumulative energy savings targets through a portfolio of energy efficiency programs. Given our current dependence on harmful energy production practices, we should to reduce our demand for energy altogether.

➤ *Net Metering Standards*

Net Metering Standards require electric utility companies to provide retail credit for net renewable energy produced by a consumer. Meaning, if the consumer generates more energy from their solar panels or wind turbines than they use, they can sell it back to the utility at the same rate at which they purchase electricity. In order to incentivize clean energy practices at the consumer level, we need to offer the opportunity for revenue-generation for individuals and small businesses that contribute to the grid through their energy production.



Source: cleanchoiceenergy.com

Equity in Energy Enterprise Policies

As stated above, communities of color and low-income communities historically have less access to jobs and business development opportunities. As part of the effort to advance just energy policies and practices, it is essential to review state policy provisions to ensure that they foster economic growth for local communities. Two key provisions that can ensure equity in economic opportunities afforded by state policies are ‘*Local Hire*’ and ‘*Minority Business Enterprise*.’

➤ *Local Hire*

Local Hire is a goal or requirement to hire people who live near their place of work. States achieve this goal by requiring contractors with publicly funded projects to recruit a specified proportion of local residents as workers on the project. This provision: 1) ensures that tax dollars are invested back into the local economy; 2) reduces the environmental impact of commuting; 3) fosters community involvement; and 4) preserves local employment opportunities in construction.

➤ *Minority Business Enterprise*

Minority Business Enterprise is defined as a business that is at least 51% owner- operated and controlled on a daily basis by people who identify with specific ethnic minority classifications, including African American, Asian American, Hispanic American, and Native American. MBEs can be self-identified, but are typically certified by a city, state, or federal agency. The predominant certifier for minority businesses is the National Minority Supplier Development Council. Often publically funded projects set a requirement or goal to source MBEs as suppliers.

Financial Incentives for Energy Efficiency and Renewable Energy

Tables listing each state’s incentives and rebates for energy efficiency and renewable energy are included in each state profile in the compendium. Each incentive has a short description and a hyperlink to more information.

➤ *Statewide Incentives*

Statewide incentives are generally rebates and loan programs that individuals and businesses may claim according to the provisions of state law. Incentives may also include Local Options enacted by municipal governments.

➤ *Utility-Specific Incentives*

This section relates to the incentives offered by specific utilities in each state, and in some cases interstate utilities. Some programs are only available to either electric or gas customers of a certain utility. Different programs are available for residential and commercial customers.

➤ *Local Incentives*

Local incentives are those offered by counties, cities, and towns. Not all states have local incentives.

➤ *Non-Profit Incentives*

Non-profit incentives are offered by non-profit organizations. These are only available in some states.



ENERGY EFFICIENCY AND CLEAN ENERGY POTENTIAL

To effectively promote just energy efficiency and clean energy policies in any state, we must know the potential for energy efficiency and clean energy. Energy efficiency potential has been studied across the United States. However, while some states have conducted studies about energy efficiency potential, there is not a collection of studies completed for every state. Clean energy potential is available through state by state analysis done by the National Renewable Energy Lab.

Energy Efficiency Potential

Energy Efficiency Potential (EEP) is the amount of energy savings possible from implementing energy efficiency programs and policies. Despite evidence that clearly shows there is potential for all states in America to become more energy efficient, there is no national energy efficiency standard or policy. If the United States implements nationwide energy efficiency measures, there can be a range of benefits and savings by 2020 through a variety of sectors.

Renewable Energy Potential

Renewable Energy Potential (REP) is the estimated annual generating capacity of renewable energy technologies that can be provided for a given region. The NAACP is committed to advancing sources of renewable energy that have been proven to be clean and contribute minimal harm to our communities and environment. These specific types of renewable energy include solar, wind and geothermal energy. U.S. electricity generation in 2012 consisted of only 12% from renewable energy sources (only 32% of this total is from solar, wind and geothermal sources).

From 2007 to 2012, electricity from renewable sources such as wind, solar and geothermal nearly quadrupled nationally. The wind power market has expanded very quickly over a short period of time. Usage has tripled from 2007 to 2012. In 2012, the nation broke a record by installing more than 13,000 megawatts of wind power capacity and investing \$25 billion into the U.S. economy. Wind power is now the leading source of new capacity in the country and represents 42% of total power capacity and surpasses new natural gas capacity. Wind energy will be the leader in renewable electricity generation capacity, followed by solar energy and then geothermal energy by 2040. The current installed capacity of geothermal energy in the United States is 3,187 megawatts (MW). In the next 50 years, there is potential in the United States to have geothermal energy installed capacity of 10,000 MW.



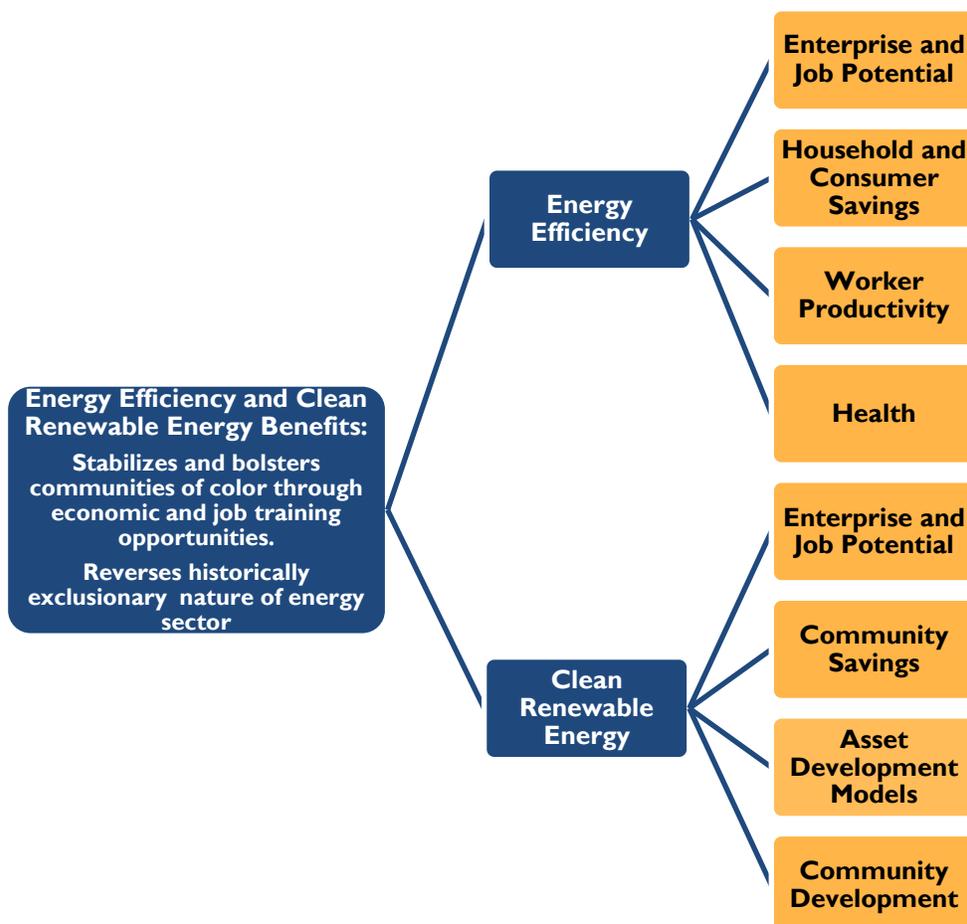
Source: energy.utah.gov

BENEFITS OF ENERGY EFFICIENCY AND CLEAN RENEWABLE ENERGY POLICIES AND PRACTICES

There are countless benefits that accompany the potential for energy efficiency and clean renewable energy in the United States. These technologies are transforming the energy sector and providing more opportunities for communities of color to become leaders in a sector where there has been scarce participation to date. Energy efficiency and clean renewable energy benefits are both macro and micro -- they bolster and sustain our domestic economy, as well as strengthen local communities, households and businesses. Energy efficiency produces a host of economic benefits, including household and consumer savings, worker productivity, and more. Better building materials associated with energy efficiency generate health benefits by improving indoor air quality and creating safeguards for people who are most susceptible to respiratory illnesses. Clean renewable energy benefits similarly increase community savings in the long-term and they offer a tremendous opportunity to develop assets within communities that can be leveraged for more economic and social benefits.

If electric utilities fulfill merely 20% of their electric sales through renewable energy by 2020, 1.9 million jobs can be created across the United States.⁹ By 2030, an estimated 20% of U.S. electricity will be provided by wind power. The solar power industry is projected to become a \$15 billion industry by 2020.

The following diagram further details the benefits of energy efficiency and clean renewable energy as described in this section:



RECOMMENDED ENERGY POLICY STANDARDS

The NAACP has established recommendations for Renewable Portfolio Standards, Energy Efficiency Resource Standards, and Net Metering Standards to provide guidelines for state energy policies. Based on sector analysis, these standards are attainable. If adopted nationwide, these policies will protect the well-being of communities as well as help to prevent climate change. Also, as part of its economic equity and justice agenda, the NAACP advocates for Local Hire and Minority Business Enterprise provisions to better support economic opportunities for African American entrepreneurs, businesses, and communities in the energy sector.

Renewable Portfolio Standards

A *Renewable Portfolio Standard (RPS)* requires electric utility companies and other retail electric providers to supply a specific minimum amount of customer load with electricity from eligible renewable energy sources.

Recommended Standard

Minimally 25% renewable by 2025

Mandatory/Voluntary

Mandatory

Allowable Sources

Definition includes renewable electric energy sources, which naturally replenish over a human, rather than geological, period. The clean energy sources the NAACP supports are wind, solar, and geothermal.

Energy Efficiency Resource Standards

Energy Efficiency Resource Standards (EERS) establish a requirement for utility companies to meet annual and cumulative energy savings targets through a portfolio of energy efficiency programs.

Recommended Standard

Minimally 2% annual reduction of each previous year's retail electricity sales

Mandatory/Voluntary

Mandatory

Net Metering Standards

Net Metering Standards require electric utility companies to provide retail credit for net renewable energy produced by a consumer.

Capacity Limit Recommendation

Per System: 2,000 kW (minimally)

Mandatory/Voluntary

Mandatory

Allowable Sources

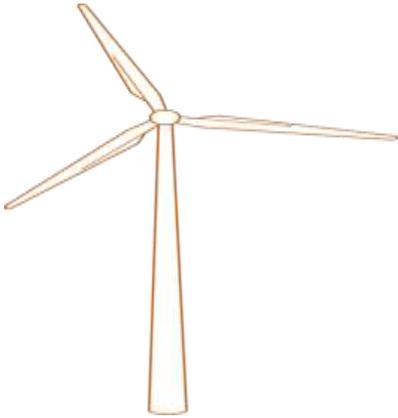
Definition includes renewable electric energy sources, which naturally replenish over a human, rather than geological, period. The sources the NAACP supports are wind, solar, and geothermal.



Source: votesolar.org

Local Hire

Local Hire is a goal or requirement to hire people who live near their place of work. States achieve this goal by requiring contractors with publicly funded projects to recruit a specified proportion of local residents as workers on the project. *The practice ensures that tax dollars are invested back into the local economy, reduces the environmental impact of commuting, fosters community involvement, and preserves local employment opportunities in construction.*



Components of Provision

- Extra renewable energy credit multipliers for in-state installation and in-state manufactured content;
- Renewable energy credits for a utility providing incentives to build a plant in-state;
- Renewable energy credits for a utility that makes an investment in a plant located in-state;
- Quota for government assisted construction project employers to hire a percentage of workers locally;
- Bidding preferences for companies that hire a percentage of their employees in-state for state-funded public works projects and service contracts.

Minority Business Enterprise

A Minority Business Enterprise is a business that is at least 51% owned, operated, and controlled on a daily basis by people who identify with specific ethnic minority classifications, including African American, Asian American, Hispanic American, and Native American. MBEs can be self-identified, but are typically certified by a city, state, or federal agency. The predominant certifier for minority businesses is the National Minority Supplier Development Council. Often publically funded projects set a requirement or goal to source MBEs as suppliers.

Components of Provision/Certification

The MBE certification process is administered at the state level and may include the following:

- Provide training opportunities;
- Notify MBEs of state business opportunities;
- Set-aside funds for MBEs.

This provision establishes requirements for a certain percentage of the dollar amount spent on construction, professional services, materials, supplies, equipment, alteration, repair, or improvement by a state governmental entity to go toward MBEs.



Recent studies indicate that when combined with energy efficiency measures, the typical residential solar array would be able to generate more than half of a typical low-income household's energy needs.

SUMMARY OF FINDINGS

In studying the Renewable Portfolio Standards of the 50 states, we found the following:

- 28 states, plus the District of Columbia have Mandatory Renewable Portfolio Standards, while 10 states have Voluntary Renewable Energy Portfolio Goals.
 - The states with mandatory standards include: Arizona, California, Colorado, Connecticut, Delaware, District of Columbia, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Washington, and Wisconsin.
 - Out of these 29 states and the District of Columbia, the states that meet or exceed the NAACP recommended standard of 25% by 2025 are: California, Colorado, Connecticut, Hawaii, Illinois, Maine, Minnesota, Nevada, New York, and Oregon.
- The states that have Voluntary Renewable Portfolio Goals are: Alaska, Indiana, Kansas, North Dakota, Oklahoma, South Dakota, Utah, Vermont, Virginia, and West Virginia.
- Each state could tighten up on their definitions of renewable energy to comply with the NAACP recommended energy sources which are wind, solar, and geothermal, as all state RPS's include sources that are potentially harmful.

In examining the Energy Efficiency Resource Standards of the 50 states, we found the following:

- Eighteen states have Mandatory Energy Efficiency Resource Standards, and 8 states have Voluntary Energy Efficiency Resource Standards.
 - The states with mandatory goals are: Arizona, California, Colorado, Connecticut, Hawaii, Illinois, Indiana, Iowa, Maryland, Massachusetts, Minnesota, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Washington, and Wisconsin.
 - The states with Voluntary Energy Efficiency Resource Goals are: Arkansas, Delaware, Maine, Missouri, Oregon, Texas, Vermont, and Virginia.
- The state standards that are comparable to the NAACP Recommended Standard of 2% annual reduction of previous year retail electricity sales are: Arizona, Delaware, Illinois, Indiana, Massachusetts, New York, and Vermont.

In reviewing the Net Metering Standards of the 50 states, we found the following:

- Net Metering Standards are the most pervasive standards in the United States with 43 states plus the District of Columbia having Mandatory Net Metering Standards, while 3 states have Voluntary Net Metering Goals.
 - The states with Net Metering Standards are: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.
- The states with Voluntary Net Metering Goals are: Idaho, South Carolina, and Texas.
- States that meet or exceed the NAACP recommended standard for Net Metering with a maximum of 2,000 kW or more are: Arizona, California, Colorado, Connecticut, Delaware, Florida, Maryland, Massachusetts, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, and West Virginia.

In investigating the economic opportunity provisions for local workers and MBEs in energy policies for the 50 states, we found the following:

- Only 9 states had explicit Local Hire provisions within the Renewable Portfolio Standards, Energy Efficiency Resource Standards, and Net Metering Standards.
 - The states with Local Hire Provisions are: Arizona, California, Delaware, District of Columbia, Maine, Massachusetts, Michigan, Minnesota, and Montana.
- There were no states with Minority Business Enterprise provisions specific to energy policies.



ARIZONA ENERGY EFFICIENCY AND RENEWABLE ENERGY POLICY PROFILE

A REVIEW OF ARIZONA'S STATE POLICIES

Current Status and Recommendations

Renewable Portfolio Standards

Arizona has a mandatory renewable energy standard of 15% by 2025. Therefore, in order to reach the recommended mandatory goal of 25% renewable energy by 2025, Arizona must raise the standard by 10% at least.

Energy Efficiency Resource Standards

Arizona has a mandatory energy efficiency standard which averages a 2% annual reduction in each previous year's retail electricity sales through 2020. This standard meets the NAACP recommendation so ideally Arizona will increase its ambition.

Net Metering Standards

In December 2016, the Arizona Corporation Commission voted to replace net metering with "net billing." This significant policy-change dramatically shifted distributed generation rate design and effectively ended the state's retail-rate net metering policy. The new rate structure assigns export credits based on short-term valuation methods. As of December 2016, new customer-generators will receive "an avoided cost rate" for energy exported to the grid. Initial compensation rates are currently being decided in each utility's pending rate case. This new policy does not meet NAACP definitions of net metering, which requires electric utility companies to provide retail credit for net renewable energy produced by a consumer.

Local Hire

Arizona has a local procurement provision that provides incentives to contractors who utilize in-state solar installation and in-state manufactured content. This is somewhat exceptional as few states have local hire provisions that apply to energy projects at all. Expanding this provision to include wind and geothermal, as well as establishing a Local Hire Provision that encompasses all energy projects, would significantly increase the amount of tax dollars Arizona reinvests in the local economy and provide local jobs so people can work near where they live.

Minority Business Enterprise

Arizona has a Minority Business Enterprise certification process and therefore partially meets the NAACP's recommendations. Including a procurement provision with funding set aside, integrating a training program, and instituting a notification system to inform MBEs of opportunities, are all critical components in ensuring that MBEs have the tools needed to access contracting opportunities. Additionally, the expansion of the program to include women-owned business enterprises could further spur economic development for traditionally disenfranchised businesses.

Utility Disconnection Policies	
Notice	Written notice must be provided five days prior to scheduled disconnection.
Date Based Protection	None
Temperature Based Protection	Yes; disconnections may not take place on a day when the forecasted temperature for the following day does not exceed 32 degrees Fahrenheit. The commission may determine the other weather conditions are especially dangerous to health as the need arises.
Payment Plan	Each utility may, prior to termination, offer to qualifying residential customers a deferred payment plan for the customer to retire unpaid bills for utility service.
Reconnection Fee	Yes
Disconnection Limitations	Utilities are advised not to terminate residential service when the customer has an inability to pay and where weather will be especially dangerous to health as determined by the Commission. There are also rules prohibiting disconnection of service for certain medical reasons. Several of Arizona's energy vendors enforce moratoriums with varying criteria.

President Trump's 2018 budget proposal cut funding to the Low Income Home Energy Assistance Program (LIHEAP). In 2016 these federal funds helped 34,745 people in Arizona pay their utility bills.



ARIZONA

The Grand Canyon State

Arizona at a Glance:

- ✓ Renewable Portfolio Standards
- ✓ Energy Efficiency Resource Standards
- X Net Metering Standards

Renewable Portfolio Standards

Policy Name and Date

AAC R14-2-1801, 14 November 2006

Standard

15% renewable by 2025

Mandatory/Voluntary

Mandatory

Allowable Sources

Solar Water Heat, Solar Space Heat, Geothermal Electric, Solar Thermal Electric, Solar Thermal Process Heat, Solar Photovoltaics, Wind (All), Biomass, Hydroelectric, Geothermal Heat Pumps, Combined Heat & Power, Landfill Gas, Wind (Small), Hydroelectric (Small), Geothermal Direct-Use, Anaerobic Digestion, Fuel Cells using Renewable Fuels

Energy Efficiency Resource Standards

Policy Name and Date

AAC - R-14-2-2401, August 2010

Standard

In 2009, the Arizona Corporation Commission (ACC) ordered that all investor-owned utilities must achieve 1.25% annual electricity savings starting in 2011, ramping up to 2% beginning in 2013. This energy efficiency resource standard, (EERS), will ultimately result in 22% cumulative savings by 2020.

Mandatory/Voluntary

Mandatory

Net Metering Standards

Policy Name and Date

ACC Decision No. 75859 -- alternative rate structure, not net metering (see page 13)

Capacity Limit

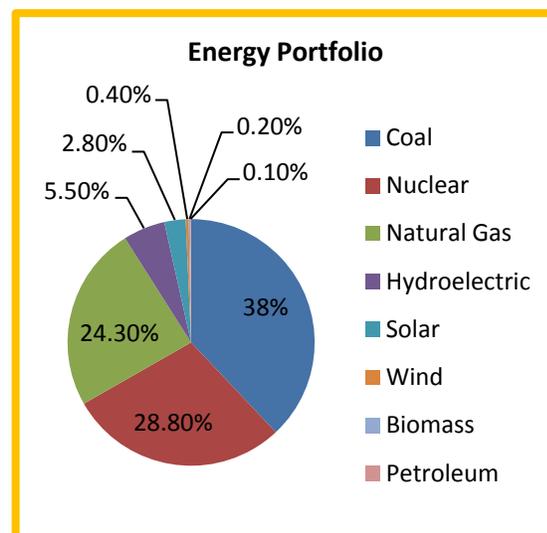
May not exceed 125% of customer's total connected load

Mandatory/Voluntary

Mandatory

Allowable Sources

Geothermal Electric, Solar Thermal Electric, Solar Photovoltaics, Wind (All), Biomass, Hydroelectric, Hydrogen, Municipal Solid Waste, Combined Heat & Power, Landfill Gas, Wind (Small), Hydroelectric (Small), Anaerobic Digestion, Fuel Cells using Renewable Fuels



Source: <http://spotforcleanenergy.org/state/arizona/>

Economic Opportunities

Local Hire Provision: Yes

Extra credit multipliers may be earned for in-state solar installation and in-state manufactured content. If a utility makes an investment in a solar electric manufacturing plant located in-state or provides incentives for a plant to locate in the state, the utility can acquire RECs for the main RPS tier equal to the capacity of the panels produced multiplied by 2,190 hours.

MBE Provision/Certification: Yes

The Arizona Department of Transportation, City of Phoenix, and the City of Tucson certify DBE firms.

Clean Energy Potential in Arizona

Arizona has consistently sunny skies for solar power, wind-blown plains and deserts for turbines, and underground heat that is desirable for geothermal energy.¹⁰ Arizona utilities are currently engaging in groundbreaking experimentation in storing solar energy during the day to be used at night.



Solar: Arizona has urban utility-scale PV potential of producing 121,306 GWh (1.08% of total net generation), rural utility-scale PV potential of producing 11,867,694 GWh (over 100% of total net generation), rooftop PV potential of producing 22,736 GWh (29.34% of total net generation) and concentrated solar power of producing 12,544,334 GWh (over 100% of total net generation).

Wind: Onshore wind power potential in the state is 26,036 GWh (23.3% of total net generation).

Geothermal: Hydrothermal power potential in Arizona is 8,330 GWh (7.4% of total net generation) and enhanced geothermal systems potential is 1,239,148 GWh (over 100% total net generation).¹¹

Incentives in Arizona

Incentive Type	Incentive	Description
Statewide	Energy Equipment Property Tax Exemption	Arizona's property tax exemption was established in June 2006 (HB 2429) and originally applied only to "solar energy devices and any other device or system designed for the production of solar energy for on-site consumption." HB 2332, signed in July of 2009, expanded the exemption to include other renewable energy technologies, as well as combined heat and power systems, and energy efficient building components.
	Non-Residential Solar & Wind Tax Credit (Corporate)	The tax credit, which may be applied against corporate or personal taxes, is equal to 10% of the installed cost of qualified "solar energy devices" and applies to taxable years beginning January 1, 2006 and extending through December 31, 2018.
	Non-Residential Solar & Wind Tax Credit (Personal)	The tax credit, which may be applied against corporate or personal taxes, is equal to 10% of the installed cost of qualified "solar energy devices" and applies to taxable years beginning January 1, 2006 and extending through December 31, 2018.
	Property Tax Assessment for Renewable Energy Equipment	Renewable energy equipment owned by utilities and other entities operating in Arizona is assessed at 20% of its depreciated cost for determining property tax.
Utility-Specific	Southwest Gas Corporation - Home Builder Efficiency Rebate Program	Southwest Gas Corporation (SWG) offers rebates to residential customers in Arizona who purchase and install energy efficient natural gas tankless water heaters, clothes dryers, windows, attic insulation and floor insulation.
	SRP - Solar Water Heating Program	SRP's EarthWise Solar Energy Program provides incentives to its residential and commercial customers to purchase solar water heating systems.
	SRP - Business Solutions Energy Efficiency Rebate Program	SRP Business Solutions is a program designed to help SRP business customers manage energy usage and increase the energy efficiency of participating facilities.
	SRP - Residential Energy Efficiency Rebate Program	SRP's Residential Energy Efficiency Rebate Program is designed to encourage residential SRP customers to utilize energy efficient appliances and measures at home.
	Sulphur Springs Valley EC - SunWatts Rebate Program	The SunWatts Program offers home and business owners two different incentive options.

Sulphur Springs Valley EC - Residential Energy Efficiency Rebate	SSVEC's residential rebate program offers a \$500 rebate for the installation of 15 SEER or higher electric heat pumps and a \$200 rebate for the installation of 16 SEER or higher dual-fuel heat pumps.
Sulphur Springs Valley EC - SunWatts Loan Program	Sulphur Springs Valley Electric Cooperative (SSVEC) has a loan program that allows its members to finance a portion of a photovoltaic (PV) or small wind system.
Sulphur Springs Valley EC - Residential Energy Efficiency Loan Program	SSVEC offers the Member Loan Program to residential customers to improve the energy efficiency of eligible homes.
TEP- Residential Solar Water Heating Incentive	Tucson Electric Power (TEP) offers incentives to encourage residential and business customers to install solar water heating equipment.
TEP - New Construction Program	TEP's New Construction program provides rebates for non-residential members for designing and constructing new energy efficient facilities.
TEP - Residential Energy Efficiency Rebate Program	Tucson Electric Power (TEP) offers rebate programs for residential customers who install energy efficient equipment in existing homes.
TEP - Commercial EasySave Program	TEP's Commercial EasySave Program encourages small business and K-12 schools to install selected high-efficiency lighting, HVAC and refrigeration measures by working with an approved installation contractor.
Trico Electric Cooperative - SunWatts Incentive Program	Through the SunWatts Program, Trico Electric Cooperative offers residential and business customers a rebate for installing photovoltaic (PV) systems and solar water heaters.
UES - Renewable Energy Credit Purchase Program	Through the Renewable Incentive Program, UniSource Energy Services (UES) offers customers who install various renewable energy sources the opportunity to sell the credits associated with the energy generated to UES.
UES - Commercial Energy Efficiency Rebate Program	UniSource Energy Services (UES) offers the Commercial Energy Solutions Program for non-residential electric customers to upgrade existing equipment with more energy efficient measures.
UES (Electric) - Residential Efficiency Program	UniSource Energy Services (UES) offers rebates to electric customers for the installation of air conditioners and heat pumps, as well as offering gas customers incentives on energy efficient

		equipment.
	UES (Gas) - Commercial Energy Efficiency Rebate Program	UniSource Energy Services (UES) offers the Commercial Energy Solutions Program for non-residential gas customers to install energy efficient equipment.
	UES (Gas) - Residential Efficiency Program	UniSource Energy Services (UES) offers rebates to gas customers for the purchase and installation of energy efficient equipment and measures.
	UniSource Energy - Contractor Energy Efficiency Rebate Program	UniSource Electric Power offers rebate programs for residential customers who install energy efficient equipment in existing homes.
Local	City of Chandler - Expedited Plan Review for Green Buildings	The mayor and city council of Chandler, AZ adopted Resolution 4199 in June 2008, establishing incentives for green building in the private sector.
	City of Phoenix - Energize Phoenix Residential Incentives	The city of Phoenix was awarded a \$25 million federal grant from the U.S. Department of Energy Better Buildings Neighborhood Program and the American Recovery and Reinvestment Act (ARRA) to launch the Energize Phoenix program in partnership with Arizona State University and with support from Arizona Public Service.
	City of Phoenix - Energize Phoenix Commercial Incentives	Through a partnership with Arizona State University and Arizona Public Service (APS), the City of Phoenix is providing incentives for businesses located along a 10-mile stretch of the Metro light rail to improve the energy efficiency of their buildings.
	City of Scottsdale - Green Building Incentives	Scottsdale's Green Building Program, established in 1998, was the first such program in Arizona with an emphasis on residential home construction.
	City of Tucson - Permit Fee Credit for Solar Energy Systems	The City of Tucson passed Resolution No. 20193 on September 27, 2005, to encourage the installation of solar energy systems throughout the city.
	Town of Buckeye - Green Building Incentive	Buckeye's Green Home Building Program was adopted by Town Council on May 6, 2008 and encourages sustainable construction for residential dwellings.

CONCLUSION

When comparing Arizona's energy policies to the recommendations set forth by the NAACP, one can see that Arizona is on the path, but just needs to pick up the pace a bit.

In February 2015 only 9.5% of Arizona's utility-scale net electricity generation was sources from renewable resources.¹² Arizona gets a majority of its electricity from coal, natural gas, and nuclear energy. Five coal fired power plants in Arizona received a failing environmental justice grade in the 2012 NAACP Coal Blooded Report. Four of those plants remain open and running in 2017. Coal based electricity production, from cradle to grave, is proven to be unhealthy to humans and the environment.

Out of 50 states (plus the District of Columbia), Arizona ranked 12th in the list of states where ratepayers spent the highest proportion of income on electricity in 2012.¹³ Therefore investing wisely, with an emphasis on sustainability, health, local economic development, and affordability, is essential.

While Arizona has a mandatory renewable portfolio standard, the state should increase the goal to at least 25% by 2025, particularly given Arizona's vast potential for harnessing clean energy resources. Additionally, under Arizona's RPS, allowable sources include options that have a history of proven harm. Alternately, Arizona should focus on solar, wind, and geothermal sources.

As of 2013, Arizona's energy efficiency standard is mandatory and meets recommended level of 2% annual reduction from each previous year's retail electricity sales, which is commendable.

Finally, the net metering standard has no specific capacity limit, but the size of each system is restricted to not exceed 125% of the customer's total connected load. Ideally, Arizona will ensure that capacity limits are at least 2000 kW per system. Fortunately, Arizona also has an array of state, local, and utility specific incentives to spur investments in energy efficiency and clean energy with resulting cost savings by ratepayers and reduction in pollution.

Arizona's Disadvantaged Business Enterprise program provides certification opportunities for entrepreneurs of color. Ideally the DBE program would include funding set aside to ensure contracting with DBEs as well as a training program and a mechanism to notify DBEs of opportunities. Arizona has a local procurement provision for solar projects. Ideally, the state will expand the program to include other sources of clean energy and encompass local hiring so Arizona will fully maximize tax dollars to spur local economic development.

Arizona has tremendous potential to meet the NAACP's recommended standards while increasing economic development and energy affordability for its residents. Investing significantly in energy efficiency, while more aggressively tapping into its vast clean energy sources, will help Indiana become a more resilient state. Indiana must also expand on its current hiring and procurement policies to strengthen local economies and ensure that residents benefit from the energy sector's expansion.

The NAACP is committed to using this analysis of energy efficiency and renewable energy potential and policies, in tandem with economic development and equity models, as tools for the continued transformation of the energy sector. We will be hosting a series of meetings and events aimed at mobilizing our units, collaborating with our partners, and working with stakeholders in implementing these recommendations, as outlined in the soon-to-be-released Just Energy Policies Action Toolkit.

ENDNOTES

-
- ¹ Margaret Sheehan, Samantha Chirillo, Josh Schlossber, William Sammons, Matt Leonard, "Biomass Electricity: Clean Energy Subsidies for a Dirty Industry," *Energy Justice Network Biomass Accountability Project*, Jun 2011, <http://www.pfpi.net/wp-content/uploads/2011/06/BAP-Biomass-Projects-Report.pdf>.
 - ² Mary Alldred and Kristin Shrader-Frechette, "Environmental Injustice in Siting Nuclear Power Plants," *University of Norte Dame 2*, 2 (2009), http://www3.nd.edu/~kshrader/pubs/final-pdf-ej-nuke-siting-wi-Allred_08-0544.pdf.
 - ³ Joseph E. Lowery, Yvonne Scruggs-Leftwich, Connie Tucker, Angela Ledford, "Air of Injustice," *Energy Justice Network*, October 2002, http://www.energyjustice.net/files/coal/Air_of_Injustice.pdf.
 - ⁴ "State of the Air 2017," *American Lung Association*, 2017, <http://www.lung.org/our-initiatives/healthy-air/sota/>.
 - ⁵ http://www.energyjustice.net/files/coal/Air_of_Injustice.pdf.
 - ⁶ National Research Council. Committee on Health, Environmental and Other External Costs and Benefits of Energy Production and Consumption. Hidden Costs of Energy: *Unprimed Consequences of Energy Production and Use*. National Academies Press, 2010. pp. 82-94.
 - ⁷ Basav Sen, "How States Can Boost Renewables, With Benefits For All: Renewable Portfolio Standards and Distributed Solar Access for Low-Income Households," *Institute for Policy Studies*, April 2017, <http://www.ips-dc.org/wp-content/uploads/2017/04/RPS-Report.pdf>.
 - ⁸ "Energy, Economics, and the Environment: Effects on African American," *American Association of Blacks in Energy*, February 2004, <http://www.aabe.org/docs/whitepapers/docs/1-State-of-Energy-in-Black-America-Report.pdf>.
 - ⁹ "Potential for 1.9 Million Renewable Energy Jobs," *Alternative Energy News*, November 2013, <http://www.alternative-energy-news.info/potential-for-19-million-renewable-energy-jobs/>.
 - ¹⁰ Jessica Goad, Daniel J. Weiss, and Richard Caperton, "The Vast Potential for Renewable Energy in the American West: Developing Wind, Solar, and Geothermal Energy on Public Lands," *Center for American Progress*, August 2012, http://www.americanprogress.org/wp-content/uploads/issues/2012/08/pdf/renewable_energy_west.pdf.
 - ¹¹ Anthony Lopez, Billy Roberts, Donna Heimiller, Nate Blair, and Gian Porro. "U.S. Renewable Energy Technical Potentials: A GIS Based Analysis," *National Renewable Energy Laboratory*, July 2012, <http://www.nrel.gov/docs/fy12osti/51946.pdf>.
 - ¹² "Arizona State Profile and Energy Estimates," United States Energy Information Administration, U.S. Census Bureau, <https://www.eia.gov/state/?sid=AZ>.
 - ¹³ "2015 Average Monthly Bill- Residential," *United States Energy Information Administration, U.S. Census Bureau*, http://www.eia.gov/electricity/sales_revenue_price/pdf/table5_a.pdf.