

# How Your Community Can Move Forward on Solar Energy

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## Top Twelve Solar Energy and Energy Efficiency Options for New Mexico



# New Mexico's Communities Can Be Clean Energy Leaders

Season in and season out, the sun washes "The Land of Enchantment" and all our diverse communities. No surprise, New Mexico ranks second in the nation in solar energy production potential. In recent years, many cities, towns, counties, Native American communities, businesses, and private citizens have embraced the adoption of clean, renewable energy. The reasons are clear: reduced greenhouse gas emissions, lowered electricity bills, and economic development through the growth of solar jobs and industry. But communities can do more, much more, to capitalize on the potential of solar energy and its companion, energy efficiency. Energy efficiency allows users to reduce the amount of energy they need and are is therefore an important first step before utilizing solar energy.

This brochure offers a toolkit of ideas designed for local leaders and engaged citizens to complement New Mexico's energy transition and accelerate the deployment of clean energy to capture savings for local governments and households. It was inspired by "*Ten Ways Your Community Can Go Solar*," published by Environment America in 2020.

## Lead the Way

- 1. Set ambitious goals for energy efficiency and solar adoption:** The cheapest unit of energy is one that isn't generated. The first step in transitioning to a more sustainable energy system involves increasing efficiency: delivering the same services such as lighting and cooling, while using less energy. Reducing the energy we need means less energy required as we transition to renewable sources. Many communities pair strong efficiency goals with solar adoption goals. Additionally, national building code standards are updated every three years adopting new technologies and practices to continue to increase energy efficiency and reduce utility bills for homeowners. New Mexico and its municipalities should adopt the newest standards as they are revised. The City of Albuquerque for its part is moving toward its near term goal of 100% renewable energy by 2022 for municipal operations through a combination of installing more solar panels, purchasing solar energy from PNM through its new Solar Direct program, installing energy efficient streetlights, improving insulation and window glazing on its buildings, purchasing electric vehicles and adding more solar to city facilities and parks. The city is also adopting the latest 2018 building codes, in advance of the state.
- 2. Reduce demand and power public buildings and facilities with solar energy:** Communities can lead in the clean energy transition, boost the local solar market, and save on electric bills by implementing energy efficiency upgrades and powering their operations with solar energy. Energy Service Companies (ESCOs) design, build, and arrange financing for clean energy projects. They use performance-based contracting in which ESCOs' earnings are based on actual energy cost savings derived from the projects. Albuquerque is

moving towards reducing energy demand in municipal buildings by 65% through energy efficiency upgrades, many with pay back times less than five years. Silver City powers most of its wastewater treatment plant, a facility that can account for up to one-third of a municipality's energy bill, with a 1MW solar array paid for through performance contracting. Santa Fe is using performance-based contracting to upgrade buildings and facilities. Other local entities using performance contracting include Rio Arriba, Sandoval, and Bernalillo Counties and Las Cruces.

## Streamline Solar Development

3. **Eliminate red tape:** Homeowners and businesses often have to jump through too many costly and time-consuming zoning and permitting hoops to go solar. Communities can eliminate barriers by expediting permitting processes, making zoning policies clear for solar projects, and reducing application fees. Las Cruces has implemented expedited permitting of residential solar, rooftop or ground mounted. Permits are issued over the counter for small solar systems (10KW or less) as long as requirements are met and necessary information is provided at the time of application.
  
4. **Adopt a Solar Homes policy for new construction and renovations:** When it comes to reducing pollution and global warming emissions, any rooftop without solar is a missed opportunity. Cities can seize that opportunity and lower costs by requiring that new buildings include solar energy systems. The most cost-effective time to add solar to a home is as the home is being built, when roof pitch, orientation, and wiring can all be included in the building design and construction. Several cities across the US have adopted policies that all new homes be built with solar panels, such as South Miami, Florida. After several California cities adopted solar home policies, the state became the first to do so via a statewide building code update that went into effect on January 1, 2020. New Mexico communities should similarly require a solar homes policy that includes a way to offset additional upfront costs, such as buying down a portion of the cost of the solar array or waive permit fees.

## Expand Access

5. **Develop and publicize local financing options:** Not everyone interested in going solar or making energy efficiency improvements can pay the upfront costs. Credit unions and other entities often offer low interest rates for members wanting these improvements:
  - Nusenda Credit Union, based in Albuquerque, offers a signature loan for energy efficiency and solar installation.
  - Homewise, a nonprofit home builder in Albuquerque and Santa Fe, offers 6% loans for solar, 4% when the City of Santa Fe subsidizes the loans.
  - Northern Rio Arriba Electric Coop in Chama offers members a way to purchase new energy efficient appliances at no money down, with payment made over time on the utility bill, a program known as "on-bill financing and repayment."

- The models of cities “buying down” the interest rate for solar loans and of coops offering financing programs for energy efficient appliances are approaches which communities and coops across New Mexico can adopt.

Property Assessed Clean Energy (PACE) is another financing mechanism that enables low-cost, long-term loans for businesses and residents for energy efficiency, renewable energy and water conservation projects. PACE financing is repaid as an assessment on the property’s regular tax bill and is processed the same way as other local public benefit assessments (sidewalks, sewers) have been for decades. Over 20 states currently have operating PACE programs. Legislation passed in 2009 allows for New Mexico counties to establish a PACE program. In 2019, Sunland Park established the first residential PACE program in New Mexico.

6. **“Solarize” your neighborhood:** Everyone likes a discount, and New Mexico is again offering a 10% state income tax credit for purchase and installation of solar for homes, businesses, farms, and ranches. Another way to lower costs is for solar firms to offer neighborhood solar discounts for a group of existing homes or for a new housing development. Santa Fe’s Tres Placitas Cohousing Community (5 homes) and El Camino Crossing (40 homes) by Homewise demonstrate economies of scale, solar version.
7. **Support Community Solar:** Community solar programs allow cities, counties, pueblos, tribes, nations, nonprofits, and private entities to construct, own, and operate community solar facilities. As a unique feature, the programs allow businesses, apartment occupants, and other renters who are unable to install their own systems to access clean energy. Customers can subscribe to a shared solar project and receive a utility bill credit for electricity produced. Enabling legislation for community solar has been introduced in the state legislature each year since 2013. In 2021, the New Mexico legislature will again consider authorizing community solar projects throughout the state. The legislation will likely reserve a portion of community solar installations for low-income households. To date, there are two such solar arrays in New Mexico, the Taos Charter School and Picuris Pueblo. To support the legislation, communities can pass resolutions calling for community solar. Citizens can urge their legislators to vote “yes” on community solar and support the many organizations backing the bill.
8. **Ensure solar and energy efficiency projects benefit the most vulnerable community members:** To ensure a just energy transition, it’s imperative that new policies and programs seek to rebalance economic benefits across the community. This means having representatives of those marginalized “at the table” at the beginning of policy development and project design. It also means having policy makers look at projects from a triple bottom line perspective, paying attention to long term impacts on the environment, economy, and social equity. In Santa Fe, the Siler Yard: Arts + Creativity Center engaged low income artisans from the outset in conceptualizing affordable, rental live/workspaces. Individuals earning less than 60% of the area median

income will qualify to live there. The LEED Platinum project received a \$10.5 million federal low-income housing tax credit, will be carbon neutral with all units and community spaces powered by solar, and is scheduled to break ground in 2020.

## Go Beyond City Hall

9. **Partner with utilities:** Communities may be able to work with the electric utilities serving their areas – whether investor owned or rural electric coops – to advance the potential of solar energy.
  - In 2019 Nambe Pueblo, in collaboration with Jemez Mountains Electric Coop, the State Energy Office and Cornerstones, hosted the siting of PV on a Pole solar arrays at the homes of two septuagenarian pensioners. The hope is that many more PV on a Pole arrays, which are mounted on a single pole rather than a rooftop, can be sited at manufactured homes and paid for with grants as well as an on-bill repayment mechanism.
  - In 2020, Albuquerque, Silver City, and Deming, along with Grant and Santa Fe Counties joined PNM's Solar Direct program to purchase electricity at a fixed rate for 15 years from a 50MW solar project being built at the Jicarilla Apache Nation. This project will help participating communities meet their goals of renewable energy adoption, while the Jicarilla Apache Nation gains a revenue stream derived from renewable energy.
  
10. **Encourage solar projects throughout the community:** There are various creative solutions a community can implement to encourage solar:
  - Promote solarizing office buildings, condominiums, apartment complexes, and public housing that can take advantage of master meters to enlist their members and tenants to support solar. In Hatch, this approach was used to install solar arrays on the El Camino Real Apartments designed for affordable housing for farm workers, where solar output and energy usage by tenants is easily tracked by smart meters. The Santa Fe Civic Housing Authority often installs solar panels when building or retrofitting its public housing sites in Santa Fe and in the Town of Bernalillo.
  - Engage the New Mexico State Land Office/Office of Renewable Energy to determine if leasing state land for energy projects (solar, storage, etc.) assists the community in advancing its sustainability plan.
  - Support a solar coop for those living in a master metered development who buy shares and get credit on solar electricity produced monthly, as pioneered in Oakland, California.
  - Solarize a library or a community center, so that library and center patrons buy solar shares then the librarian or center staff would track the savings. • For non-profits, partner with the private sector on initial solar ownership through the creation of a Limited Liability Corporation to take advantage of available tax credits and depreciation to reduce upfront costs.
  
11. **Encourage integrating solar projects into innovative master planned developments:** The opportunity exists for innovative master planned developments, like Santa Fe's Midtown and Innovation Triangle planning, to

incorporate onsite solar, microgrids, battery storage, net zero buildings, geothermal, master metering as an option in advance of development. Not only would these additions lead to a low carbon development, but they would add a layer of resiliency to the projects in the event the electric grid goes down. Colleges and universities, which have long functioned as independent district heating and electricity systems, are developing greater resilience and cleaner electricity sources, as with the planned campus microgrid and related solar installations at Santa Fe Community College.

12. **Support strong state-level solar and energy efficiency policies:** New Mexico stands as a national leader in promoting clean renewable energy. The Energy Transition Act of 2019 committed the state to 100% zero carbon resources in the electricity sector by 2050. In 2020, the legislature approved tax credits of 10% or up to \$6,000 for solar projects in homes, businesses, and agricultural enterprises. However, legislation providing subsidies for energy efficiency projects for low income communities failed to advance. Our communities can do so much more. Now is the time for local leaders and citizens across the state to use this toolkit of ideas to accelerate the deployment of solar energy and to expand energy efficiency. Rapid advances take place when we move forward at all levels.

Coalition for Sustainable Communities New Mexico  
[www.coalitionscnm.org](http://www.coalitionscnm.org)

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