

Legal Strategies to Promote Solar Energy, Public Health, and Climate Adaptation

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Solar Energy and Public Health

Increasing solar energy production can reduce public health harms caused by climate change and the combustion of fossil fuels, including increased incidence of asthma and cardiovascular disease and exposure to contaminants in drinking water leaching from coal ash storage facilities. Solar power can also increase community resilience to natural disasters and other energy interruptions. These health hazards disproportionately impact low-income communities and communities of color that have higher rates of exposure to pollution, are more affected by climate change, and pay a higher portion of income to meet energy needs. Historically higher income single family homes have dominated the solar market.

Role of Law and Local Communities

Public health laws establish the conditions for people to be healthy. These laws balance individual rights with government powers to protect and promote the community's health, safety, and welfare. Central to achieving public health outcomes is community support, particularly in fashioning viable and sustainable policy solutions that address the disparities in health outcomes. Equitable public health outcomes must address direct health threats as well as the social determinants of health, including safe and affordable housing, clean air and water, and job availability.

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Legal Strategies

Affordable and Multi-unit Housing: Solar programs reduce energy costs for low income communities and can create job opportunities, which can lead to better public health outcomes.

Illinois Solar for All: A program of the Illinois Future Energy Jobs Act, that dedicates funds to solar projects serving low-income households, environmental justice communities, and multi-family housing units. The program reduces energy costs for low-income communities by eliminating upfront costs and requiring savings to be passed on to renters, and includes a community driven grassroots education component as well as workforce training and employment requirements to promote community job opportunities.

Triangle Court (Richmond, California): Low-Impact Weatherization Program funds were used to install rooftop solar on affordable housing units. To pass savings on to renters, the housing authority effectively froze rent costs. Without this rent freeze, tenants would not benefit from the solar energy savings because the fixed percentage of income tenants pay for housing includes utilities.

Resolutions and Solar Group Buys: Resolutions and solar group buys can be catalysts for community education, support decision-making, and demonstrate economic benefits for homeowners. A resolution in Cedar Rapids, Iowa, commits the city to increasing solar readiness using the SolSmart framework, and the local public health department in Linn County held community public information sessions promoting installation of residential and commercial solar systems. The result: 600 kW of new solar capacity, \$78,000 in utility cost savings, and yearly savings of over 1,000,000 pounds of CO2 and 285,000 gallons of water.

Solar plus Storage: Adding battery storage to solar projects can supercharge their impact. The ability to use stored solar energy during high demand times, when energy costs may be higher, saves residential and affordable housing units even more money and reduces stress on the grid during extreme heat events. Solar plus storage also allows solar energy systems to continue to operate during grid outages without risk to workers fixing the grid. Florida communities were more resilient in the face of natural disaster Hurricane Irma thanks to solar plus storage units acquired under the American Resilience and Recovery Act of 2009 that kept power flowing to emergency shelters during the grid outage.

Ordinances and Rural Systems: In rural areas, solar arrays on marginal cropland allow farmers to diversify income. In Minnesota, a Chisago County Board ordinance promotes the development of solar energy and creates a permitting and notification structure for approval of new systems. The ordinance includes performance standards for construction noise, sediment and erosion control, pollinator friendly ground cover, visual screening, setbacks, and security fence design.



Solar Investment Tax Credit: Federal tax policy provides a solar investment tax credit of 30%. This benefit is set to decrease in the coming years and in 2022 the residential credit will expire and the commercial credit will flatten to 10%.

Pollinators: Ground mounted solar arrays planted with pollinator friendly native plants and grasses can reduce erosion and runoff and provide food for bees and other pollinators. Laws in Minnesota, Illinois, Maryland, and New York set standards for "pollinator friendly" designations.