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Compiled Research & Materials, Appendix J: Solar for Economic Development Toolkit

National Association of Regional Councils

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Solar for Economic Development Toolkit

Most people are familiar with solar energy's environmental benefits, but solar energy adoption also presents numerous economic and community development opportunities. Solar expands local markets, reduces electricity costs, improves business competitiveness, and increases property values. It leads to short term jobs in construction, installation, and site development as well as long term positions in facility maintenance and operation. In rural communities where grid connection is difficult, solar provides an off-grid electricity source that helps residents save on their energy bills. Communities nationwide are building local workforces of designers, technicians, and installers to accommodate the increasing number of solar installations. Regional councils and their local governments are in an excellent position to attract solar investments through incentives and policy changes. By working collaboratively to meet local economic goals, communities can effectively use solar as a catalyst for sustainable economic development.

The *Solar for Economic Development Toolkit* provides regional councils with a framework for using solar energy to boost regional growth. The toolkit presents basic information concerning the economic benefits of solar adoption and then explores different ways a regional council and/or local government can finance, plan, and implement solar energy in their community.

The *Solar for Economic Development Toolkit* is designed as a compendium to the National Association of Regional Councils' [Regional Solar Deployment Handbook](#). For general resources on how your region can go solar, including myths and misconceptions of solar, information about the current solar market, financing tools, and regional solar best practices, please see the handbook.



THE CASE FOR SOLAR

The socio-economic benefits associated with solar energy adoption make it a valuable component of a regional council's development strategy. Local solar installations encourage the creation of small businesses, create stable local jobs, support local financial markets, reduce dependence on foreign energy sources, and increase a region's tax revenues. The resources found in this section of the toolkit serve as an introductory guide to the benefits of solar energy and its role in enhancing local economic development efforts.

Spurring Local Development with Clean Energy Investments

U.S. Department of Energy

This resource contains case studies on how local governments have grown their economies through successful renewable energy projects. Local and state leaders may use this resource to identify the economic benefits of renewable energy investments and learn from other regions' experiences.

The Benefits of Distributed Generation: Why Locally Produced Solar Power is Good for Communities

Daily Energy Report

This web page details the benefits of solar power generation, focusing on economic and community development outcomes of local solar implementation such as small business creation, reduction of energy imports, increased tax revenues, and employment of local residents.

Job and Economic Impact Models (JEDI)

National Renewable Energy Laboratory

JEDI models show the economic impacts of clean energy implementation at the state and local level. The models focus on project development and onsite labor impacts, local revenue and supply chain impacts, and induced impacts from construction of renewable energy projects. County and state leaders can input project-specific data into these tools and analyze the predicted outcomes those projects will have on their economies.

Energizing Rural America Podcast

National Association of Regional Councils

The SEDA-Council of Governments in Lewisburg, Pennsylvania explains how renewable energy is a valuable economic development tool for rural America. Renewable energy helps to reduce electricity costs, bolster local supply chain networks, and enhance local emergency response.



2014 National Solar Jobs Census

The Solar Foundation

One of the biggest economic benefits of solar energy is the creation of a stable, local workforce. The *National Solar Jobs Census 2014* reports that the solar industry sector added workers at a rate nearly 20 times faster than the overall economy and accounts for 1.3% of all jobs created in the U.S. over the past year.

How Solar Creates Jobs: 2013 National Solar Job Census

National Association of Regional Councils

Did you know that in 2013, the U.S. solar industry employed over 142,000 solar workers (a 20% increase in employment from 2012)? This podcast features a discussion with the Solar Foundation on their award-winning *National Solar Jobs Census* report. The census counts the number of solar workers across the U.S. solar value chain and analyzes growth in the various solar industry sectors.

Local Community Benefits From Large Solar Power Plants

Clean Technica

In recent years, a number of large-scale solar power plants have been built in California and along the West Coast. The majority of workers employed on these projects are from local union halls, which has made a major impact on the economies of the surrounding counties. This article briefly examines some of the benefits local solar construction brings to communities.

Solar energy projects can have the same effect on local economies as other development activities. However, solar energy and economic development investments are often viewed separately or as competing interests. There are multiple federal agencies that specifically fund economic and community development through renewable energy deployment, including the U.S. Department of Agriculture (USDA), U.S. Department of Housing and Urban Development (HUD), and the Economic Development Administration (EDA). The resources and information found in this section provide an overview of options available to regional councils for financing economically focused solar energy projects.

Rural Energy for America Program (REAP)

U.S. Department of Agriculture

Solar-integrated micro grids are beneficial to rural businesses and farmers because they provide a reliable energy source that does not depend on non-local generation. This program provides loans and grants to agricultural producers and rural small businesses for solar and other renewable energy projects.

Community Development Block Grant Program (CDBG)

U.S. Department of Housing and Urban Development

The CDBG program provides \$4.9 billion in funding to states and communities for a wide range of community development programs and activities related to economic growth, improving community facilities, and neighborhood revitalization. Renewable energy projects and energy efficiency improvements are included in CDBG's list of eligible activities.

Integrating Solar PV into Energy Services Performance Contracts

The North Carolina Clean Energy Technology Center

Many local governments purchase solar through energy services performance contracts, public-private partnerships that guarantee costs and energy savings. Governments interested in boosting economic development and energy efficiency can use this resource to see the benefits and best practices for financing through performance contracts as well as experiences from other regions.

Leveraging State Clean Energy Funds for Economic Development

Brookings Institution

According to this report, clean energy funds exist in over 20 states and generate \$500 million per year in support for clean energy projects. The article details how states are beginning to use these funds to focus on innovation and industry development through investments in clean technology research and clean energy startup companies.



[Financing Renewable Energy Projects on Contaminated Lands](#)

U.S. Environmental Protection Agency

Abandoned mines, capped landfills, and contaminated sites are ideal locations for solar energy projects. There are a number of federal financing options for redevelopment of contaminated lands. This resource lists some of the redevelopment financing options that can be used toward constructing renewable energy projects on these sites.

[Database of State Incentives for Renewables & Efficiency \(DSIRE\)](#)

The North Carolina Clean Energy Technology Center

DSIRE is the most comprehensive source of information on incentives and policies that support renewables and energy efficiency in the U.S. Users can use this site to view state-by-state policies and incentives for alternative energy and sort them with multiple filters.

Solar energy has shown striking growth in recent years and is steadily becoming a robust economic player across the country. Local development offices and regional councils can foster economic growth through solar by strategically planning investments and providing an attractive environment for alternative energy development. Supportive policies and incentives, as well as a comprehensive plan, are crucial aspects of successful regional solar energy development. This section of the toolkit contains information and resources on how to effectively plan for regional solar development.

Solar Photovoltaic Economic Development: Building and Growing a Local PV Industry

U.S. Department of Energy

This report serves as an introduction to solar for economic development offices seeking to set informed recruiting goals for renewable energy. It was created to help communities evaluate opportunities in solar energy and develop a strategic approach to building a local industry.

Turning Renewable Energy into an Economic Development Opportunity

National Association of Development Organizations

This paper provides tips on how regional development organizations can turn renewable energy deployment into an effective economic development strategy. Best practices from successful regions include conducting an inventory of natural resources, using incentives to attract private investment, becoming aware of federal and state programs, performing community outreach, and planning for the future.

Aligning Renewable Energy Firms and Economic Developers

International Economic Development Council

Economic developers across the country were surveyed about the assets and barriers they deemed most important to renewable energy development. The survey showed that permitting, policies, and incentives were the most important local assets for the solar industry, and that lack of financing and investment capital were the biggest challenges.

Planning for Solar Energy

American Planning Association

This guide supports the integration of solar energy through local policy and action. It includes recommendations for creating solar-friendly goals and policies, a checklist for auditing local plans, and a model framework for solar energy development regulations.



Pima Association of Governments: Regional Solar Plan

National Association of Regional Councils

The Pima Association of Governments (PAG) created a regional solar plan to establish a viable market for solar energy, help their region compete effectively with other western states, stimulate investment and workforce growth in the region, and secure the participation of key stakeholders. This case study documents PAG’s efforts to improve solar energy development in the Southern Arizona region.

Clean Energy for Resilient Communities

Clean Energy Group

This report focuses on the use of solar energy for community development in Baltimore, Maryland. The paper analyzes policies and recommendations from across the U.S. on how to implement solar energy programs that enhance local resiliency.



Solar panels are not just for rooftop installations. Solar panels can be used on agricultural fields, contaminated land, water bodies, parks, and many other locations. These sites present opportunities for regional councils to incorporate solar energy in their regional economic development efforts. Regions across the country are turning underused or abandoned land into a source of revenue with solar. Others are installing solar in small and rural communities to expand local job markets. This section of the toolkit provides information on implementing solar for economic and community development purposes, including ideal locations for solar as well as examples of successful regional implementation.

[Proven Strategies to Successfully Implement a Solar Energy Program that Benefits Your Community](#)

The International City/County Management Association

This interactive web conference details the efforts of three local governments to overcome barriers to solar deployment and implement successful programs in their communities. The presentation includes strategies and lessons learned from each of these governments. One community grew their solar business by six, and one such company created eight jobs in the community, leading to over \$1 million in local work.

[A Guide to Community Solar](#)

National Renewable Energy Laboratory

Community options for solar energy expand access to renters and apartment owners and reduce upfront costs. This guide provides a detailed look at the incentives for community solar while highlighting successful projects implemented around the country.

[Solar Energy's Emerging Role in Agriculture](#)

National Association of Regional Councils

Today, farmers are noticing the benefits of integrating solar energy onto their farms. Solar energy allows farmers to independently meet their high energy needs, eliminate risks associated with fossil fuels, and reduce their farm's impact on the environment. This case study details the efforts of Pinehold Gardens, a farm in Milwaukee, Wisconsin that selected to adopt solar energy in order to reduce the farm's carbon footprint and monthly electricity bill.

[Solar on Farms](#)

The SunShot Solar Outreach Partnership

There is a huge opportunity for farmers around the country to take advantage of the benefits of solar energy. Farmers can use solar to cut energy costs and expand job opportunities. Taking lessons and examples from Germany, the Solar Outreach Partnership wrote this article to show how farmers can transition to renewable energy.



Green Dining

The SunShot Solar Outreach Partnership

This case study focuses on how Asheville, North Carolina provides electricity to retail businesses and community members with solar energy. Through strong community leadership, Asheville developed a number of solar economic drivers, including a Green Dining Destination.

Solar (re) Development

The International City/County Management Association

Vacant and underutilized land has the potential to be transformed into additional revenue sources with solar installation. This webinar explains the benefits of solar implemented on vacant or contaminated sites as well as provide tools to help evaluate possible projects.

Developing Solar on Abandoned Mine Lands

U.S. Environmental Protection Agency

This report provides information about the development of solar energy at former mining sites. The paper was created for communities interested in creating renewable energy resources and new economic opportunities at these sites.

Solar On Brownfields

National Association of Regional Councils

The Merrimack Valley Planning Commission (MVPC) commissioned an [analysis](#) of closed landfills in the region to determine if they are acceptable for renewable energy. This podcast discusses how communities with suitable sites can work with local solar installers to turn their brownfields into “brightfields.”

Best Practices for Siting Solar on Landfills

U.S. Environmental Protection Agency

Closed landfills in the United States represent thousands of acres of land that is either underutilized or abandoned. This land has the potential to be an additional revenue source with solar. This guide demonstrates best practices and strategies for siting solar on landfills.



Using the *Solar for Economic Development Toolkit*, your region can discover a multitude of ways to bolster economic growth through the adoption of solar energy. The reports, fact sheets, case studies, and other resources compiled in this toolkit will help your region use solar to enhance economic and community development initiatives. See the [Regional Solar Deployment Handbook](#) for an overview of solar technology and the solar market. It identifies seven actions regional councils can take to promote solar in their communities.



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