

Solar Zoning and Permitting

Comprehensive Solar Energy Development Reports

U.S. Department of Energy, [Solar Powering Your Community: A Guide for Local Governments](#) (January 2011)

- All-inclusive guide to developing a solar-powered community, draws upon Solar America Cities ongoing feedback (see example: "[Solar in Action](#)" city report)
- Tips/resources/best practices examples broken down by chapter:
 - Initial organizing/strategizing
 - Financing
 - Updating/enforcing rules/regulations
 - Improving utility processes
 - Economic development
 - Educating customers
 - Example installations on government properties
- Collaborating authors include: IREC, NNEC, Vote Solar (see below for descriptions)
- Extensive links to industry guides and reports within each subchapter

Clean Energy Coalition, [Solar Ann Arbor: A Plan for Action](#) (2011)

- Guide for developing a solar community in Ann Arbor
- Extensively references *Solar Powering Your Community 2009* (see above) and DSIRE website
- Also draws on reports/work done by NNEC, Vote Solar, Solar ABCs, Go Solar California and more (all listed below)
- Includes national best practices research/summaries
- Strategy recommendations for Ann Arbor (details in report):
 - Commit to solar plan/process
 - Municipal solar incentives
 - Simplify permitting
 - Advocate for state-level policy changes
 - Integrate solar into City infrastructure & policy
 - Introduce solar access laws & robust building energy codes
 - Create solar outreach campaign
 - Support solar workforce development & green jobs

American Planning Association, [PAS Essential Info Packet 30: Planning and Zoning for Solar Energy](#) (2011)

Solar Zoning and Permitting Resources

IREC (Interstate Renewable Energy Council), [Emerging Approaches to Efficient Rooftop Solar Permitting](#) (May 2012)

- IREC is one of the DOE partners on the DSIREusa.org website, and contributes to the *Freeing the Grid* net metering/interconnection report.
- Report is very current and provides a clear, thoughtful summary of state, regional, and local permitting best practices examples across the U.S.
- Report does *not* define a list of IREC general best practices; rather, it summarizes general steps in the permitting process and gives examples of cities/counties/states widely cited as having the best model in each step.
- Report provides an extensive bibliography with links to other reports and websites, including SunRun, SolarABCs, etc.

Loma Prieta Chapter, Sierra Club, Reducing Local Barriers to the Installation of Solar Power Systems in California, [Solar Electric Permit Fees in Northern California](#) (2d ed., July 2011)

- Report studies selected California municipality permitting practices but makes broad permitting reform recommendations including:
 - Flat permit fees, not valuation based
 - Standardize permitting requirements across jurisdictions
 - Fast-track application for solar installers with reliable records
- Sierra Club also developed an MS Excel tool to help local jurisdictions calculate reasonable PV permitting fee that enable cost recovery

NNEC (Network for New Energy Choices), [Taking the Red Tape Out of Green Power](#) (September 2008). Also, NNEC, [Freeing the Grid: Best and Worst Practices in Interconnection Standards](#) (2011 ed.)

- NNEC is a non-profit promoting environmentally responsible energy policies.
- NNEC also co-authors the annual *Freeing the Grid Report* which covers interconnection best practices and gives grades to U.S. states on their current practices (used in Sunshot application process).
- Report is one of the earlier ones covering solar permitting costs, is cited by subsequent reports including IREC
- Report reviews common obstacles cited in the permitting process, outlines the current standard permitting process common across jurisdictions, and makes specific recommendations to improve the process including:
 - Remove PV zoning/building barriers
 - Streamline approval/permitting processes

Solar ABCs (Solar America Board for Codes* & Standards), [Expedited Permit Process for PV Systems: A Standardized Process for Review of Small-Scale PV Systems](#) (October 2011). Bill Brooks, Brooks Engineering.

- Solar ABCs is a DOE-funded central body created to address solar codes and issues
- Detailed technical report outlines an expedited permitting process, including sample electronic permitting forms that can be used and/or customized by a jurisdiction.
- Widely cited in best-practices reports (SunRun, IREC) as starting place for standardizing the solar permitting across the U.S.

U.S. Department of Energy, [SunShot Initiative](#) and [Solar Energy Resource Center](#)

- [Solar Access: Recommendations for the City and County of Denver](#)

Solar 3.0, U.S. Department of Energy and SolarTech

- [Solar 3.0](#) offers three primary resources to help communities streamline their solar PV permitting processes:
 - Resources, templates, and guidance in the Permitting page of the Toolbox section of this site,
 - Training, regional workshops, and webinars, and
 - Community Profiles describing how communities around the country are implementing permitting practices to support solar energy.

SolarTech

- [SolarTech](#) is a Silicon Valley, CA-based private/public industry consortium which collaborates with numerous national entities including Solar ABCs and IREC to advance the solar industry
- Website lists permitting best practices recommendations which largely agree with SunRun, Vote Solar recommendations. Recommendations include:
 - Common submittal form for all jurisdictions
 - OTC permitting for vetted installers
 - Electronic submittal process
 - Timely inspection process

SunRun, Inc., [The Impact of Local Permitting on the Cost of Solar Power](#) (January 2011)

- SunRun is a national solar leasing company whose network spans 20 states; claims to have 20% national solar market share
- Calculates the impact of local permitting costs on solar installations at \$2,516 (\$0.50 per watt) per average installation
- Gives specific recommendations for reducing permitting costs across U.S. including:
 - Adopt Solar ABCs standards
 - Reduce permit fees to \$250 or cost of issuance
 - Shorten permit decision times, inspection windows, allow electronic submission of permit forms
- Report is endorsed by numerous industry and advocacy groups including: SolarTech, Sierra Club, and Vote Solar

The Vote Solar Initiative

- [Vote Solar](#) is a San Francisco-based non-profit solar advocacy group.
- Collaborated on the DOE's *Solar Powering Your Community* Guide.
- Recommendation include:
 - Fair flat permit fees (\$250 max, not based on valuation)
 - OTC permitting
 - Standardized permitting requirements
 - Electronic submittal process
- Launched *Project Permit* online permit cost mapping initiative to track permit costs across the U.S.

Solar and Net Metering

Michigan Net Metering Program

- The Michigan Public Service Commission is an agency within the Department of Licensing and Regulatory Affairs. On November 1, 2011, the Michigan Public Service Commission (MPSC) issued its net metering and solar pilot program [report](#), which shows that the number of net metering customers in Michigan increased 147 percent over the previous reporting period. The 2011 report was expanded to include information on the solar pilot programs offered by Consumers Energy and Detroit Edison. In October 2011, Michigan's net metering program received a grade of "A" for the second consecutive year as noted in [Freeing the Grid](#), a policy guide that grades states' net metering programs.
- Under Michigan's net metering program, when customers produce electric energy in excess of their needs, power is provided back to the serving utility, permitting the customer to receive a credit. The report issued noted that the number of net metering customers increased from 254 in 2009 to 628 in 2010. Solar proved the most popular with 300 additional customers in 2010; wind followed with 74 additional customers in 2010.
- The MPSC's renewable energy website includes information on [net metering basics](#) and [how to become a net metering customer](#).

NEEC (Network for New Energy Choices), contributions by IREC, Vote Solar, and North Carolina Solar Center, [Freeing the Grid](#) (October 2011)

- Widely cited report on best practices in statewide net-metering/interconnection procedures
- Grades every U.S. state, A-F scale (DE, MA, UT are "A/A")
- DOE used *Freeing the Grid* criterion as part of SunShot application process
- Report gives specific utility best practices recommendations, including:
 - Don't require 2nd meter for net-metering
 - No extra fees / additional insurance
 - Use IEEE 1547 standards for interconnection

Solar Planning Reports

American Planning Association, [PAS Essential Info Packet 30: Planning and Zoning for Solar Energy](#) (2011)

- APA website has a FAQ section outlining zoning practices in communities encouraging solar
- Specific examples/links to city's zoning codes

Michigan Examples of Solar Zoning

Ann Arbor, MI – In Michigan, the City of Ann Arbor provides one of the best examples of Solar Zoning. Currently in DRAFT form, Ann Arbor is crafting a new Solar Ordinance that will operate under their [Community Energy Plan](#) (See: [Solar Ann Arbor: A Plan for Action](#), October 2010.) The current DRAFT (April 2011) of the Ann Arbor MI DRAFT of Proposed Solar Ordinance Language is as follows: “(5)A solar energy system may extend above the maximum building height provided the solar energy system extends less than twelve inches above the roof plane, or that for each foot the solar energy system exceeds the maximum building height, an equal setback from the roof perimeter is provided.”

Saginaw Futures – In 2012, in collaboration with the MEDC Michigan Energy Office and the Clean Energy Coalition, Saginaw Futures began a project to develop a model solar zoning, permitting and financing program for the City Saginaw and the Great Lakes Bay Region. The Michigan Municipal League (Green Communities Program), Great Lakes Renewable Energy Association, Michigan Saves and the Dow Chemical Company are key supporters of the project. It is expected that the MEDC Michigan Energy Office will undertake a program in the future to deploy the Best Practices from this project across the entire state.

Michigan Utility Programs and Solar Energy

Public Act 295 has spawned wind-related activity in Michigan utilities. The following is a brief discussion of these programs:

- [Consumers Energy, Experimental Advanced Renewable Program \(EARP\)](#) - Consumers Energy has announced the start of its Experimental Advanced Renewable Program (EARP), in which the utility company will purchase energy generated through solar photovoltaic systems for the rate of \$0.45/kWh in 2009 and \$0.37/kWh for 2010 and beyond, for up to ten years.
- [DTE Energy, GreenCurrents Program](#) - GreenCurrentsSM is DTE's voluntary renewable energy program. The program is designed to reduce carbon dioxide emissions and strengthen Michigan's energy independence.
- [Michigan Municipal Electric Association](#) - The Michigan Municipal Electric Association (MMEA) is Michigan's trade group for municipally owned electric utilities. Many of its members are currently involved in solar-energy projects.

Solar Energy Support Resources

[Dow Corning Solar Solutions Center](#) - The new Solar Solutions Application Center North America, in Freeland, Michigan, is one of the most customer-focused technical facilities for solar research and solar product development in the industry. This industrial-scale research and development facility with extensive testing capabilities enables us to collaborate with customers to get to market faster with products that are more competitive.