Solar Energy Toolkit: Planning, Zoning, & Development

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Local government approaches to planning, zoning, and development can have a very significant impact on solar energy growth. When done right, planning and zoning can help expand energy options and reduce costs for residents and businesses, while balancing other development priorities in the community. However, many local planning and zoning approaches inadvertently discourage solar energy growth and increase costs by adding time and associated expense required for solar installations. SolSmart aids communities in implementing fair and transparent processes that support the safe and efficient development of solar energy.

This toolkit provides information on how local governments can incorporate solar energy goals into local planning documents and identifies best practices for addressing solar development in zoning codes.

Related Resource: View SolSmart Best Practices in Planning & Zoning Accessory Use

Integrating Solar into Planning Processes and Documents

Municipalities and counties use a variety of documents to plan for future development. These documents help the community identify goals and strategies, manage competing priorities and provide guidance on where and how development should occur. Zoning and development standards reflect the vision and goals set forth in a community's planning documents. As such, integrating solar into local planning is an important step to establishing a foundation to guide solar development in the community.

As the American Planning Association (APA) notes, local plans generally fall into three categories: comprehensive plans, subarea plans, and functional plans.[1] Depending on the community, it can be appropriate to include energy goals in one or more of these different plans.

Comprehensive plans. Sometimes referred to as master or general plans, comprehensive plans provide a framework for a community's growth in the next 20-25 years. They also provide the legal basis for local zoning and land use regulations. A comprehensive plan provides an opportunity to incorporate solar into a community's development goals, while

balancing solar development against other community values. (For example, a community that values both solar development and tree preservation could include a strategy to manage these competing priorities.)

Subarea plans provide a framework for the redevelopment of a limited geographic area, such as a neighborhood, special district, or corridor. Compared to a comprehensive plan, subarea plans can include more specific goals for particular areas of land. Frequently, communities develop design guidelines that are more specific than the requirements in the comprehensive plan or zoning ordinance. Local governments can integrate solar energy goals into these guidelines to encourage solar development in an optimal location.

Functional Plans are stand-alone plans that cover a specific topic, such as energy, climate or sustainability. Functional plans can either be part of a comprehensive plan or stand-alone documents. Within the plans, local governments can establish policies, goals, and implementation actions to meet their objectives for solar energy development. For example, a community interested in resilience could include a goal of installing 1 MW of solar on community facilities by a certain deadline, with interim action steps to work toward this goal.

Local plans provide an opportunity to establish energy goals and determine the appropriate set of strategies or actions that will be implemented to meet these goals. Local plans can provide a snapshot of the current opportunities for solar energy and can include other aspects of energy infrastructure planning. All goals should be shaped by stakeholder input. For more information on this topic, visit our stakeholder engagement toolkit.

Best Practices in Zoning for Solar

Zoning codes or ordinances are local land use regulations that control where and how development takes place in a community. Zoning codes have a direct influence on the opportunity and cost of solar development. A National Renewable Energy Laboratory (NREL) study found a correlation between higher levels of installed solar capacity per capita and references to solar in the local code.[2]

Many communities publicly state that they allow solar installations even though there is no mention of solar in their zoning code. In these instances, the local government has a gap in its code that leaves the community and solar energy system owners vulnerable. A resident could oppose a neighbor's installation or sue the local government for allowing land use that is not defined or explicitly allowed in local land use regulations. According to the APA, "a conspicuous silence on the part of local policies, plans, and regulations on the topic of

solar energy use constitutes a significant barrier to adoption and implementation of these technologies."[3]

Local governments should consider reviewing their zoning ordinance to ensure they have clear and transparent regulations for solar development and are not creating unintentional barriers or adding unnecessary cost to projects. They can also consider opportunities to encourage or incentivize solar through their land use regulation. For example, communities may allow developers to add height or density if their project includes on-site solar.

SOLAR ENERGY DEFINITIONS

It is important for local governments to include a comprehensive definition of solar energy systems in the code, in order to avoid any potential misinterpretations. This includes broadly defining solar energy systems to incorporate both passive and active solar energy collection and electricity generation, as well as water heating.

Defining energy storage in the zoning code will accommodate the anticipated growth in battery storage devices linked to solar energy systems and allow the review of storage equipment as part of, rather than separate from, the solar energy system. Additionally, defining and distinguishing between roof-mounted and ground-mounted installations of various sizes will allow subsequent sections of the code to identify which projects require separate review, and which installations are eligible to bypass zoning review and apply directly for a building permit. These distinctions may be made in a use table.

The examples below distinguish between types of solar energy systems and enable communities to apply performance or design standards in an appropriate context.

Solar energy system: A device, array of devices, or structural design feature, the purpose of which is to provide for generation or storage of electricity from sunlight, or the collection, storage, and distribution of solar energy for space heating or cooling, daylight for interior lighting, or water heating.

Solar photovoltaic system: A solar energy system that converts solar energy directly into electricity, the primary components of which are solar panels, mounting devices, inverters, and wiring.

Grid-connected solar energy system: A solar photovoltaic system that is connected to an electric circuit served by an electric utility company.

***Roof-mounted solar energy system*:** A solar photovoltaic system mounted on a rack that is ballasted on, or is attached to, the roof of a building or structure. Roof-mount systems are accessory to the primary use.

***Ground-mounted solar energy system (Accessory Use)*:** A solar photovoltaic system mounted on a rack or pole that is ballasted on, or is attached to, the ground and the system is accessory to the primary use.

***Ground-mounted solar energy system (Primary Use)*:** A solar photovoltaic system mounted on a rack or pole that is ballasted on, or is attached to, the ground and is the primary land use for the parcel(s) on which it is located. Primary use systems are permitted through a discretionary approval process.

***Community-scale solar energy system*:** A solar photovoltaic system that qualifies for the [STATE COMMUNITY SOLAR PROGRAM NAME – if applicable].

BY-RIGHT SOLAR

Zoning codes typically specify development that is allowed within a zoning district as a right. Said another way, a property owner has the right to develop a parcel based on the rules within the underlying zoning for that parcel. This type of development may be referred to as “by-right” or a “permitted use." Generally, development that is permitted by-right is allowed with standard building and electrical permits and is approved administratively (meaning, without special permitting that may require a public hearing).

Zoning ordinances often specify the primary and accessory uses that are permitted by-right within particular zoning categories. As its name would suggest, primary uses are the predominant use on a site. Accessory uses are those that are incidental or in support of the site’s primary use. An example of something that would be permitted by-right would be the development of a single-family home as a primary use in an R-1 residential zone. Another would be a shed as an accessory use in the same R-1 residential zone. Both would be approved administratively if the property owner files the necessary permits. As such, by-right development does not require a special use permit, conditional use permit, or zoning variance.

There are many advantages to including small rooftop and ground-mounted solar installations as by-right development in all major zoning districts. For municipalities and counties, this streamlines the process for small-scale solar PV systems and minimizes staff review time. Many zoning codes include solar energy systems in a use table, or a listing of permitted accessory uses. Local governments can establish development

standards that must be met by by-right solar energy systems to avoid the need for additional permits or a variance.

Most important, both roof-mounted solar energy systems of any scale and small-scale, ground-mounted solar energy systems may be allowed as accessory uses in all major zoning districts without zoning review. Further, communities can require a conditional use permit and site plan requirements for medium- and large-scale ground-mounted systems.

Examples

Brownsville, TX

"Solar energy systems are a permitted accessory use within all districts, whether as part of a structure or incidental to one or more structures. Solar energy systems will be permitted according to Table 18-1: Solar Energy Systems by Use District."[4]

Pierce County, WA

"Solar energy equipment and solar thermal equipment may be allowed as an accessory use on a lot; provided, that the equipment primarily serves the residence."[5]

For more information about Permitted Accessory Use Solar, check out SolSmart's Best Practice Guidance for Solar and Zoning – Accessory Use

REGULATING UTILITY-SCALE SOLAR

Utility-scale solar projects are larger ground-mounted systems that provide power to the grid (sometimes referred to as "in front of the meter") are typically considered a primary use. Compared to small-scale solar developments, medium- and large-scale ground-mounted solar energy systems come with additional considerations (for example, grading and storm water management.) As a result, communities may choose to regulate such development through a conditional or special use permit. The conditional use permit process allows communities to consider each medium- and large-scale, ground-mounted solar energy system within its unique context and apply development requirements as appropriate. Site plan review is also appropriate for large-scale projects and provides an opportunity to consider the layout of a project including access roads, fencing, lighting, wiring, etc.

Before establishing regulations for utility-scale solar, local governments need to understand their authority to do so. In some states, the regulation of these projects is handled by a state siting board or other authorities having jurisdiction. To learn more read, Wait, Who Approves Large-Scale Solar Siting?

Some communities choose to restrict ground-mounted, large-scale solar to industrial zoning districts, but there are many benefits to expanding the range of locations where large-scale solar is allowed. The purpose of industrial districts is to manage the impacts of disruptive activities such as noise, pollution, and traffic. Once they are in operation, large-scale PV facilities do not pose such drawbacks; they are quiet and clean and do not have many employees on-site. Some communities have established zoning overlay districts where large-scale solar projects are permitted or otherwise encouraged.

Examples of Model Ordinances Addressing Utility-Scale Solar Development.

Model Code	Publisher	Target Audience
Midwestern States Model Solar Ordinances	Great Plains Institute	Illinois, Indiana, Iowa, Minnesota, Wisconsin
NH Model Solar Zoning Ordinance	Clean Energy NH	New Hampshire
NY Model Solar Energy Local Law	New York State Energy and Research Development Authority	New York
Planning & Zoning for Solar Energy Systems	Michigan State University Extension	Michigan

Establishing Appropriate Standards

In the zoning regulation, the standards for solar projects should be clearly described. The following summarizes some of the more common standards that communities address in zoning regulations and suggests best practices identified by SolSmart.

AESTHETIC REQUIREMENTS

Aesthetic standards can be adapted to accommodate solar energy systems while meeting a community's aesthetic goals. For example, many zoning codes require screening for rooftop mechanical equipment. However, screening on solar panels may cause shading, add new costs, and discourage new installations. An overall best practice is for

communities to allow a solar energy system to be displayed openly and avoid onerous screening and aesthetic requirements.

For rooftop systems, some communities require flush-mounted systems where PV modules must be mounted parallel to the plane of the roof. On pitched roofs, flush mounting is an effective way to alleviate structural concerns and visually integrate the system with the roof. However, requiring solar energy systems to be mounted flush with flat roofs can decrease efficiency. On flat roofs, an array tilt angle optimized for its latitude is generally preferred. An exemption for solar energy systems on flat roofs will ensure systems may be optimized for maximum efficiency.

Another common aesthetic concern is that PV modules will cause blinding glare or act like mirrors. However, PV modules use non-reflective glass, which is generally less reflective than windows.[6]

Caption: Solar Array on a Furniture Factory in Gardner, MA.

HEIGHT

Height restrictions may prohibit the construction of some solar energy installations if the building is already at the maximum allowed height. Providing rooftop solar an exemption from building height restrictions (or an allowance to exceed a certain height) can eliminate this potential barrier.

The following two examples provide zoning code language discussing solar energy height:

For ground-mounted systems, one approach is to establish a maximum allowed height of 10-15 feet or apply the zoning district's accessory use height maximum to accessory use

systems. The PV modules in ground-mounted single-axis tracking systems, common for large-scale installations, generally do not exceed 10 feet, and would therefore be within the maximum height limits established for accessory uses in most zoning ordinances. The modules may be higher in smaller ground-mounted PV systems, where the modules are fixed rather than mounted on tracking.

Examples:

Milton, NH

"Roof-mounted solar energy system. Height – Roof-mounted solar energy systems may exceed the height limits applicable to each district by five feet."[7]

Adams County, Colorado

"Maximum Height of Attached Panels: Solar panels attached to a roof shall not exceed the maximum permitted height of the structure type by more than five (5) feet. Maximum Height of Detached Solar Panels: Fifteen (15) feet." [8]

TREES

Solar energy advocates may run into conflict with tree preservationists and urban foresters, since trees can reduce the output from solar energy systems. Trees can conflict with solar in three main ways. First, a property owner may want to cut down trees to install a solar energy system but may be prohibited from doing so or charged a fee by the local government. Second, trees on an adjacent property may grow large enough that the shade gets in the way of the panels. Finally, a neighbor could plant new trees that block a solar system's access to the sun.

Communities can develop plans to reduce this conflict and allow homeowners to install solar while the locality maintains its tree canopy. For example, communities can mandate that removed trees be replaced, and that trees that are larger or more mature require a higher level of replacement.

For utility-scale solar projects, communities should include regulations related to site clearing that are consistent with requirements applied to other construction projects. Regulations should also address the revegetation of the site and any ongoing maintenance, such as mowing.

SETBACKS

Smaller ground-mounted systems that provide power to buildings on the property (or are "behind the meter") should be considered an accessory use and regulated in ways that are comparable to other accessory structures. Excessive setback requirements may eliminate opportunities for solar unintentionally. Providing solar energy systems with an exemption from setback requirements, or an allowance to go beyond these setbacks, can ensure that more homeowners have the opportunity to install an accessory use ground-mounted system that meets their energy needs.

Setbacks for utility-scale solar projects vary widely. Communities should consider the purpose of the setback and how that purpose can be best achieved. For example, if a community is most concerned about the visibility of a project, it may be more appropriate to look at sign design options or vegetated screens, rather than increase setbacks. Increasing setbacks may also have unintended consequences and lead to additional land clearing or deeper infringement into forests or agricultural lands. Regulations should also clarify how setbacks are measured.

BUFFERS

For utility-scale projects, local governments may require a buffer of natural vegetation and/or fencing to create a visual screen, particularly for projects that are adjacent to sensitive viewsheds. A combination of site design decisions, setbacks and buffers can be used to mitigate visual impacts.

FENCING

Utility-scale solar projects should include fencing that complies with the latest version of the National Electrical Code (NEC). The current NEC standards require a 6-foot fence with three lines of barbed wire or a 7-foot fence with no barbed wire. However, many local governments choose to restrict barbed wire and encourage or require wildlife-friendly fencing.

NOISE

Solar panels do not create noise as they convert sunlight into electricity, however the inverters and transformers associated with utility-scale projects may have fans and cooling systems that ensure the projects operate optimally. Often the impacts of this sound can be mitigated through project design and ensuring that this equipment is located a sufficient distance from property lines or neighbors. It is appropriate for local

governments to require compliance with their noise ordinance or set conditions for sound based on comparable standards applied to other development in a given district.

LOT COVERAGE AND IMPERVIOUS SURFACE REGULATIONS

In addition to setback requirements, many communities establish maximum lot coverage allowances, limiting the percentage of the lot that may be covered by buildings or impervious surfaces. Communities use coverage allowances for two main reasons. One is to maintain a certain character for the community. The other is to maintain vegetated areas, which can minimize the amount of storm water runoff onto neighboring properties.

Technically, ground-mounted PV equipment pads and racking posts are impervious surfaces. However, they generally have spaces between them where water can flow and support vegetative growth. Vegetation beneath the PV arrays aids in storm water absorption, reduces erosion, and improves the visual appearance of the property.

Example

New Jersey State Statute:
An ordinance requiring approval by the planning board of either subdivisions or site plans, or both, shall not include solar panels in any calculation of impervious surface or impervious cover.[9]

Caption: Native vegetation growing under the solar PV array at the National Wind Technology Center in Colorado. [10]

If small-scale, accessory use, ground-mounted solar installations are counted toward total lot coverage allowances, they may exceed the total allowance when added to primary and accessory buildings. Similarly, lot coverage maximums can prevent many large-scale, principal-use solar energy systems from moving forward.

Large-scale solar developers can apply for a variance or exemption from such requirements, but this adds risk, costs, and time to the project development. To reduce barriers and decrease staff time required for processing a variance, municipalities and counties can amend the zoning ordinance to provide exceptions or allowances for lot coverage and impervious surface requirements for large-scale ground-mounted solar energy systems which could be processed administratively.

By providing a conditional or special use permit to large-scale solar energy systems, local governments can consider each site individually and require accommodations to address specific impacts for large-scale solar projects. For example, a landscape buffer or a particular style of wall or fencing may be required in lieu of a setback or lot coverage requirement to address visual impacts on neighboring land uses. Communities can also establish standards for large-scale development, such as water quality and habitat improvements. For example, Minnesota and Maryland have statutes that encourage large-scale, ground-mounted solar sites to "provide native perennial vegetation and foraging habitat beneficial to gamebirds, songbirds, and pollinators, and reduce storm water runoff and erosion."[11]

DECOMMISSIONING

Local governments should establish clear guidance related to the decommissioning of utility-scale solar systems. Most solar panels are designed to operate for 25-40 years and there may be opportunities to repower older systems. Systems that are not functioning for an extended period of time should be decommissioned. Local zoning regulations can require a decommissioning plan that details how the equipment will be removed, and the land restored and secures adequate financial assurances to cover related costs.

HISTORIC AND SPECIAL USE DISTRICTS

More than 2,400 local jurisdictions have historic preservation ordinances, and many communities require a special review of projects in historic districts.[12] Providing clear guidance within historic preservation ordinances on where and under what restrictions solar is allowed can streamline such reviews. If the zoning code is silent on solar in historic districts, it is safe to assume that solar is not allowed. Even many state statutes that protect the right to install solar can make exemptions for historic districts. This leaves it up to the local jurisdiction to determine when such installations may occur.

Local governments may choose to provide guidance or encouragement about how to appropriately design solar installations in historic neighborhoods. For example, communities may incorporate guidance in design standards rather than a zoning ordinance. If design standards are developed outside of the zoning, they may not be as enforceable but could still provide direction to developers about how solar energy systems could be installed on historic properties.

Example

Acton, MA:
The Acton Historic District Commission published "Guidelines for Solar Installations in Historic Districts. This brief guideline establishes standards that the Historic District Commission uses in reviewing potential solar projects.[13]

Avoiding Grid Regulation in Zoning Codes

Policies that regulate use of the electricity grid fall outside the purview of zoning codes, which are in place to protect the health, safety, and welfare of a community. Therefore, communities should take care not to include requirements on how much electricity properties can generate, who can use the electricity, where the electricity can be used, and who must own the system. Requiring on-site consumption of accessory use solar electricity generation, for example, is often irrelevant to the impact of an installation on neighbors (or in other words, their welfare). A best practice is to define and regulate solar installations based on the area (e.g., square feet) or impact of the installation rather than the capacity.

Solar Access/Solar Rights Ordinances

Apart from any legal requirements, localities have the authority to provide additional protection for homeowners. They frequently do so through a solar access ordinance, which ensures that property owners will have a "reasonable" amount of sunlight without excessive shade from structures and vegetation.[14] To produce an adequate amount of electricity, solar energy systems need access to sunlight. This access can become a challenge if a solar system is shaded by vegetation or new structures on adjacent properties. In the United States, there is no common law right to access sunlight, but many states and localities have enacted provisions ensuring access to a reasonable amount of sun. The most common ways to establish these protections are through solar access easements, solar permits, solar fences, and solar rights laws.

Solar access easements are voluntary agreements between property owners, ensuring that one property will continue to have access to sunlight without obstructions from nearby properties. Many communities allow for these negotiated agreements to be recorded in the land records with the local government. Solar access easements generally do not terminate with the sale of the property and usually transfer with the title. Because they are voluntary and must be negotiated among neighbors, they are considered a relatively weak form of protection.[15]

Communities can also consider using solar access permits, which are established automatically when an owner receives a permit for a solar energy system. These permits do not require voluntary agreements between neighbors. Communities can structure these permits to balance the need to protect solar access while allowing some shading to occur. For example, a community may allow a solar system to be shaded up to 5 percent before mitigation is required.[16]

Solar rights laws protect homeowners by limiting public or private restrictions on their ability to install solar energy systems on their own property. While these laws generally ban outright prohibitions against solar, there are varying rules on what types of restrictions a community or homeowners association may place on solar energy systems. For example, a solar rights provision may bar a homeowner's association from prohibiting solar while still allowing it to set aesthetic restrictions.

Example:

Boulder, CO

Boulder Colorado has enacted regulations to protect the use of solar energy (section 9-9, BRC 1981). Boulder has established the concept of a “solar fence” which protect 12-foot and 25-foot “fences” around properties in certain zoning districts to ensure solar access.[17]

Solar-Ready Ordinances

Solar-ready codes for new construction (one- and two- family dwellings, multifamily, commercial buildings, etc.) can help make future solar installations easier and more cost effective. Solar-ready buildings are designed and constructed to accommodate the future installation of solar.[18]

The following is a list of solar-readiness code components that should be thoughtfully considered by municipalities:

- Roof load bearing specifications should be sized to bear the weight of a solar installation
- The roof should be oriented to maximize solar capacity. The greatest production will occur when a roof is south facing, angled between 30 and 45 degrees.
- Roof types should be compatible with solar installation mounting.

- Non-solar rooftop equipment (HVAC systems, chimneys, vents) should be placed to avoid shading of solar equipment and maximize the amount of continuous roof space.
- Electrical panels should be sized to accommodate a future solar system.
- There should be enough space in the utility room or outside for a solar DC-AC inverter
- Conduit for wiring should be placed from the roof to the electrical panel.

Solar-ready codes should be mandated for both new residential (one- and two- family dwellings) buildings along with commercial (multi-family, workplaces, mixed-use) buildings. Solar-ready codes can be included in the residential and/or building code, the green building code, or the zoning ordinance.

Brownfields and Under-Utilized Land

Many communities are interested in opportunity to develop solar on former landfills, contaminated areas ("brownfields"), vacant lots, or other under-utilized land. The EPA Repower America's Land Initiative has mapped over 100,000 sites and almost 44 million acres of potentially contaminated and under-utilized properties across the nation.[19] To learn more about how to encourage and pursue solar development on these properties, visit our Toolkit: Solar Development on Public Facilities and Under-Utilized Land

Additional Resources

SolSmart's Best Practices Guidance for Solar and Zoning – Accessory Use

This guide highlights the key components for organized, transparent, and consistent accessory use solar energy regulations for zoning or land use codes. A local government's approach to zoning and development can have a significant impact on solar energy growth. The inclusion of solar energy zoning best practices provides a foundation that can help facilitate the growth of solar energy, while balancing other development priorities in a community. While more cities and counties have included solar energy zoning best practices in their land use regulations, many local zoning approaches still inadvertently discourage solar energy.

Solar@Scale Guidebook

This resource is a comprehensive guide to local governments that want to better understand the issues and opportunities presented by large-scale solar development. Developed by ICMA in partnership with the American Planning Association, this resource includes sections on planning and zoning and links to many community examples.

Grow Solar Toolkits for Minnesota, Wisconsin, Iowa, and Illinois

These toolkits should be used as a set or resources to assist city, county, community, and electric utility leaders to navigate permitting, planning, and zoning in each of these states.

Planning and Zoning for Solar in North Carolina

This resource provides a foundation for communities to begin to evaluate solar development and craft appropriate ordinances to regulate solar PV in their communities. While the publication focuses on North Carolina, it presents model ordinances from across the country and its discussions and lessons can be applied in other states.

American Planning Association, Integrating Solar Energy into Local Development Regulations

This resource provides planners, public officials, and engaged citizens with an overview of three aspects of integrating solar energy into local development regulations—removing barriers, creating incentives, and enacting standards. It also provides examples from communities across the country that are taking steps to support local solar market growth.

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[1] *Planning for Solar Energy*, American Planning Association, April 2014. https://www.planning.org/publications/report/9117592/.

[2] Jeffrey Cook et al., *Clean Energy in City Codes: A Baseline Analysis of Municipal Codification across the U.S.*, National Renewable Energy Laboratory, December 2016. http://www.nrel.gov/docs/fy17osti/66120.pdf.

[3] *Solar Briefing Papers*, American Planning Association. https://planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/research/solar/briefingpapers/pdf/localdevelopmentregulations.pdf.

[4] Ord. No. 2025-235, 114, § 18-768 (1), Approval Procedures. *Brownsville City Commission*, August 2025. https://library.municode.com/tx/brownsville/codes/code_of_ordinances?nodeId=PTIICOOR_CH18BUBURE_ARTXIENCOCO_DIV3SOENSY_S18-768APPR.

[5] County Code. Pierce County, Washington. https://pierce.county.codes/PCC/18A.37.130

[6] Riley, Evan and Scott Olson, *A Study of the Hazardous Glare Potential to Aviators from Utility-Scale Flat-Plate Photovoltaic Systems*, ISRN Renewable Energy, 2011. http://dx.doi.org/10.5402/2011/651857; *Clean Energy Results: Ground-Mounted Solar Photovoltaic Systems,* Massachusetts Department of Energy Resources, Massachusetts Department of Environmental Protection, Massachusetts Clean Energy Center, June 2015. http://www.mass.gov/eea/docs/doer/renewables/solar/solar-pv-guide.pdf

[7] Zoning Ordinance, Town of Milton New Hampshire, March, 12, 2024. https://www.miltonnh-us.com/sites/g/files/vyhlif916/f/uploads/2024_milton_zoning_ordinance_final_approved_rev_1_0.pdf

[8] "Development Standards & Regulations – Chapter 4 Design Requirements and Performance Standards," *Adams County, Colorado,* October 1, 2024 https://adcogov.org/sites/default/files/2024-11/dsr-chapter-04.pdf

[9] New Jersey NJ Rev Stat § 40:55D-38.1 (2024)

[10] Beatty, Brenda, Jordan Macknick, James McCall, Genevieve Braus, and David Buckner, *Native Vegetation Performance under a Solar PV Array at the National Wind Technology Center,* National Renewable Energy Laboratory, May 2017. www.nrel.gov/docs/fy17osti/66218.pdf.

[11] "Minnesota Statutes 2016 – 216B.1642 Solar Site Management," *Office of the Revisor of Statutes*, Accessed July 25, 2017, https://www.revisor.mn.gov/statutes/?id=216B.1642.

[12] National Park Service, *National Register of Historic Places,* https://www.nps.gov/subjects/nationalregister/index.htm

[13] Acton Historic District Commission, *Guidelines for Solar Installations in Historic Districts*. https://www.acton-ma.gov/DocumentCenter/View/6919/HDC-SOLAR-GUIDELINES

[14] *Integrating Solar Energy into Local Development Regulations,* American Planning Association, July 2014. https://www.planning.org/publications/document/9148295/.

[15] *Planning for Solar Energy*, American Planning Association, April 2014. https://www.planning.org/publications/report/9117592/.

[16] City of Boulder Planning and Development Service Center. "Solar Access Guide" https://bouldercolorado.gov/sites/default/files/2021-02/solar-access-guide.pdf

[17] Boulder Colorado, *Solar Access Guide*. https://bouldercolorado.gov/services/solar-access-guide

[18] Holm, Allison. Solar Ready Building Design: A Summary of Technical Considerations, 2017. https://www.nrel.gov/solar/market-research-analysis/blog/posts/solar-ready-building-design-a-summary-of-technical-considerations

[19] *RE-Powering America's Land Initiative: Renewable Energy on potentially Contaminate Land, Landfills an Mine Sites*, U.S. Environmental Protection Agency, 2021. https://www.epa.gov/sites/production/files/2015-09/documents/re_powering_program_overview.pdf