

PZ-1 Zoning Review

Community: Laramie, WY



PZ-1: Review zoning requirements and identify restrictions that intentionally or unintentionally prohibit solar PV development. Compile findings in a memo. (Required for Bronze)

To assist your local government, the national solar experts at SolSmart have conducted a review of your community's zoning and land use regulations to assess possible barriers (i.e. height restrictions, set-back requirements, etc.) and gaps related to solar PV development. Below, please find the outcome of the review. By reading the narrative, reviewing the example code language provided, and signing the statement at the bottom of the page, your community will satisfy the PZ-1 pre-requisite and be one step closer to achieving SolSmart designation.

Overview

The City of Laramie Unified Development Code was accessed and reviewed during November 2021. The code was accessed via the [city's website](#).

- A search for “photovoltaic” yielded 1 result in reference to the definition of a solar collector.
- A search for “solar” yielded 141 results with the majority of these references relating to solar access permits and solar rights.

Positive Elements in Current Code

Section	Element	Description
15.10.000.E Table of Allowed Uses	Accessory Use	Solar access systems are a permitted use in all Zone Districts.
15.14.030.A. 1.b		Solar energy systems shall be a permitted use in all zoning districts subject to certain requirements.
Review Comment		
This aligns with SolSmart best practices. Codifying accessory use solar as a permitted use provides clarity and transparency. This action will allow Laramie to submit for PZ-5, the Planning and Zoning pre-requisite for Gold designation.		

Section	Element	Description
15.14.030.A. 1.c	Height	Roof-mounted solar systems can exceed by up to 3 feet above the maximum height limits in the code.
Review Comment		
This aligns with SolSmart best practices. Allowing roof-mounted solar energy systems to exceed a districts height limit can improve system performance.		

Section	Element	Description
15.14.030.A. 1.d	Setbacks	Solar systems and equipment can extend into required setbacks up to 3 feet.
Review Comment		
This aligns with SolSmart best practices. Allowing ground-mounted solar panels to extend into side and rear setbacks allow a system to be sited in the best location for system performance.		

Note: I think the is referring to setbacks for a ground-mounted system but if it is referring to a setback from a roof line then additional clarification could be helpful.

Potential Barriers in Current Code

Section	Element	Description
15.14.030.A. 1.c	Height	Roof-mounted solar systems taller than 3 feet need to go through a conditional use permit process to obtain approval.
Review Comment		
<p>Solar panels are most efficient when installed at an angle equal to a location’s latitude. On flat rooftops, the goal would be to design a system with a tilt as close to the city’s latitude as possible. By only allowing systems to be up to 3 feet tall, the ordinance could be interpreted as discouraging efficient system design if exceeding that 3-foot limit would mean going through a conditional use permit process that can be complex, time consuming, and costly.</p> <p>General comments on height:</p> <p>Height limits are often imposed on buildings within specific zoning districts to satisfy several planning objectives such as protection of views, controlling neighborhood character, density, and access to sunlight. In many districts, buildings, particularly those with flat rooftops, are constructed up to the maximum allowed height, thereby limiting a building’s ability to install solar unless exemptions are provided. Many local governments exempt antennas, chimneys, flagpoles, and mechanical equipment from height limits to allow for their placement and use. Since solar panels are most efficient when installed at an angle equal to a location’s latitude, local governments should consider exempting solar energy systems from height limits.</p> <p>Height limits should not be a barrier for solar energy systems on pitched or sloped roofs. Solar energy systems are usually attached at the same slope as the roof but with a few inches in between to allow for space to access wiring and to promote airflow around the panels. There should be space, usually 3 feet, between the roof peak and the edge of the panels to allow for emergency access and ventilation opportunities in case of a fire.</p>		

Potential Gaps in Current Code

Element	Priority
Definition	High. The definition forms the basis of understanding for any forthcoming solar ordinance.
Review Comment	
<p>Consider adding a definition with distinctions between roof-mounted and ground-mounted and small, medium, and large solar energy systems to provide clarity and a foundation on which to base levels of review and permits required.</p> <p>The ordinance includes solar energy systems (photovoltaic collector) in the definition of Solar Collector which includes a wide variety of uses. The best practice is to provide additional definitions</p>	

specific to solar photovoltaic. Note: the current definition of Solar Collector appears to align with the definition in the state code: [Chapter 22: Solar Rights Act](#).

Examples

- 1) *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.
- 2) *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.
- 3) *Grid-connected system*: A photovoltaic solar energy system that is connected to an electric circuit served by an electric utility company.
- 4) *Roof-mounted solar energy system*: A solar energy 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 principal use.
- 5) *Ground-mounted solar energy system*: A solar energy system mounted on a rack or pole that is ballasted on, or is attached to, the ground. Ground-mount systems can be either accessory or principal uses.
- 6) *Small-Scale solar energy system*: A Solar Energy System that occupies 1,750 square feet of surface area or less.
- 7) *Medium-scale solar energy system*: A Solar Energy System that occupies more than 1,750 but less than 40,000 square feet of surface area.
- 8) *Large-scale solar energy system*: A Solar Energy System that occupies more than 40,000 square feet of surface area and is the principal land use for the parcel(s) on which it is located. Large-scale systems are permitted through the discretionary approval process.

Element	Priority
Large-scale Solar/Principal Use	Low.
Review Comment	
If the Laramie has enough usable land that could be developed for a principal use solar system, it might consider adding some zoning considerations and development requirements into the zoning ordinance. This could be of particular interest if there is a brownfield site such as a landfill available for development.	
Examples	
See Example #2 (Site Plan Review provisions for large-scale ground-mounted solar energy systems) in the Model Zoning for the Regulation of Solar Energy Systems, MA DOER .	

Additional Notes

The Laramie Unified Development Code provides some standards for the development of solar energy in the city. The code could be enhanced by adding additional definitions for various types of solar systems, exemptions or an allowance to exceed a districts height requirement, and greater clarity for small-scale ground-mounted systems.

The UDC also provides details about the process to obtain a solar access permit and solar right.

Briefly summarized:

Solar Access Permit Authority

- City Council hears and decides on solar access permit appeals
- Planning Commission serves as the solar board of review
- Planning Commission makes final decision on solar access permits
- City Manager can review and make recommendations to decision-making body on solar access permits

15.06.060.L Solar Access Permits

- The process for someone to establish a solar right
- All projects need to have a solar right, and go through the process
- Notices posted, public hearing, record with the count and provide a copy of record to Planning Department

15.14.030.A. 2 Solar Rights

- Solar Access Permit Required for Protection of Solar Right

Based on a review of the UDC language and not knowing how it is completed in practice, the process to obtain a solar access permit and solar right seems cumbersome and time consuming for prospective solar homeowners. I am wondering if the process has been streamlined? Or if it could unintentionally discourage homeowners from installing solar?

While doing some research I came across [a law article from 1984](#) that looked at parts of Laramie's solar rights language. Not likely relevant now, but some interesting text throughout, including: *In 1981, the Wyoming Legislature passed the Solar Rights Act (the "Act").' In doing so, the Legislature recognized not only the need to promote the use of a resource which, by the year 2020, is projected to supply twenty-five percent of the nation's energy needs, but also the need to develop a set of rules which would make the transition into the solar age as painless as possible for the State of Wyoming.*

Solar encouraged in building design:

15.14.090 Commercial, Industrial and Institutional Design Standards

15.14.090.D Building Design

- Flat roofs shall include parapets to screen rooftop mechanical equipment, City Manager's office may waive or reduce the requirement if solar systems are installed

Also, why are clothes lines listed in 15.14.030.A. Solar Energy?

4. Clothes Lines

Clothes lines shall be permitted in all residential and mixed-use zoning districts.

Please see the document SolSmart Zoning Code Considerations for additional information about what can be included in a solar ordinance.

I, Derek Teini as Planning Manager of Laramie, WY have received the zoning review and read its findings.

Signature:

A handwritten signature in blue ink, appearing to read "Drew E.", written over a horizontal line.

Date: 1/7/2022

Please note that this review is not an endorsement or recommendation for changing and/or updating the zoning code/ordinance. This is an informational review only.