

Elk Creek Solar is currently pursuing a Certificate of Public Convenience and Necessity from the Public Service Commission. If granted, the Project is approved to proceed to the financing, advanced engineering, and construction phase of development. Construction for Elk Creek Solar is anticipated to start in Fall of 2024, with an expected in-service date as early as Spring of 2026. This timeline is subject to change pending regulatory approvals, utility interconnection schedules, and equipment procurement, however, Elk Creek Solar team is excited to move into late-stage development and pre-construction planning. Detailed below is an outline of the construction process.

SITE PREPARATION

The first step in construction is to prepare the site, this is called civil work. Workers install tracking pads at construction entry and exit points, to reduce soil sediments being tracked from vehicles onto the road. Stormwater best management practices (BMPs), outlined in the Erosion Control Stormwater Management Plan (ECSMP)¹ in the Project's Certificate of Public Convenience and Necessity (CPCN) application², will be followed as any necessary site grading occurs. Site grading includes preparing the slope of the land to meet the needs of the project and equipment. Once the site has been prepped and this civil work is complete, the Engineering, Procurement, and Construction (EPC) crews can begin work on the remainder of the project.

With a large site, Elk Creek Solar will be constructed in blocks. While portions of the site may have civil work (grading, site preparation, etc.) to complete, other blocks within the Project site may move on to planting, installation of cabling and other components.

PRE-PLANTING

Elk Creek Solar is committed to the promotion of native plant growth and pollinator habitats. These native and pollinator-friendly plant species, comprised of grasses and flowering plants, will be incorporated and have the potential to produce a 3-fold increase in pollinator supply. In addition to the native prairie grass varieties, the pollinator-focused seed mix is great for attracting pollinators such as bees, butterflies, moths, and other beneficial wildlife populations, which has the potential for increasing our neighbors' yields of surrounding crops. Pollinator-friendly vegetation has been studied to prevent soil erosion, improve water retention, and increase carbon storage potential by 65%. Visit our office to receive a seed packet and check out a small selection of our seed mix with a breakdown of some of the species!

SOLAR CONSTRUCTION



Pile Driver



Array and Deer Fencing



Driven Piles



Inverter Skid



SOLAR COMPONENTS

There are several components to the solar array, including the solar panels, racking systems, pilings (or posts), inverters, and underground cabling. Given the amount of equipment required for the construction of a solar project and the sequencing of construction, solar components will be delivered to the site throughout this process.

UNDERGROUND CABLING:

Underground cabling will be bored or trenched to bring medium-voltage electricity from the solar panels to the inverters and from the inverters to the substation.

PILINGS:

Pilings are steel posts that anchor the solar array racking into the ground. They are driven into the ground by a pile driver to a depth of 6 to 10 feet. Once the pilings are placed, the racking systems can be installed.

RACKING SYSTEMS:

Racking systems are securely fixed to the pilings and support the solar panels at a height of 3-12 feet off the ground. An integrated tracking system uses small motors to slowly and quietly rotate the panels to follow the sun throughout each day. The tracking systems also have precautionary sensors for extreme weather events to prevent damage to the facility components or surroundings.

INVERTERS:

As power is generated by the solar panels, low-voltage cabling brings direct current (DC) power to the inverters which convert that power to alternating current (AC) electricity. Alternating current electricity is what is delivered to homes and businesses for everyday use.³ More underground cabling brings the AC electricity from the inverter to the Project substation.

SUBSTATION:

The Project substation transforms the power from low voltage to a high voltage to match the existing transmission lines in order for solar generated electricity to be delivered to the electric grid. The electrical substation will sit on its own concrete foundation and will have mounted breakers, which will isolate the system for maintenance and outages and will protect from faults, overloads, and short circuits.

FENCING:

The Elk Creek Solar project will use wildlife-friendly fencing around the solar project. This style of fencing will allow smaller wildlife, such as rabbits and other small mammals as well as turtles and other small reptiles, to move freely through the solar project while keeping larger wildlife, such as deer, from entering. In addition to its functionality, this fencing also provides a natural aesthetic fitting for a rural setting.

STAY CONNECTED:

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¹https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=449752

² https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=449706

 $^{^2\,}https://www.energy.gov/eere/solar/solar-integration-inverters-and-grid-services-basics$