Agenda Item # 24i
Date 6/25/25

COPY

RESOLUTION NO._____
OF
THE DODGE COUNTY BOARD OF SUPERVISORS

WHEREAS: The Dodge County Board of Supervisors have general supervision of all planning and zoning activities of Dodge County, and

WHEREAS: The Dodge County Planning Commission did hold a Public Hearing on Tuesday, June 17, 2025 for the purpose of considering the adoption to Article 25 Supplemental Regulations Section 23, Solar Energy Conversions Systems to the Dodge County Zoning and Subdivision Regulations and,

WHEREAS: The Dodge County Planning Commission did by roll call vote recommend the Dodge County Board of Supervisors adopt said regulations to become effective immediately and,

WHEREAS: The Dodge County Board of Supervisors at their regular meeting of June 25, 20225 at 9:40 A.M. in the Board of Supervisors Room, 3rd Floor of the Courthouse, Fremont, NE 68025 heard testimony for and against said regulations, now therefore be it

RESOLVED: That the Dodge County Board of Supervisors do hereby approve said attached regulations effective today's date.

Supervisor _____moved to adopt said Resolution.

Roll Call Vote showed _____aye and _____nay.

ATTEST:

_____
Micki Gilfry,
Dodge County Clerk

_____
Bob Missel, Chairman
Dodge County Board of Supervisors

June 25, 2025
Date

Article 25: Supplemental Regulations – Section 23 Adopted_____
Solar Energy Conversions Systems



Section 1: Purpose & Intent.

This ordinance promotes the accommodation of on-site solar energy conversion systems within Dodge County's zoning jurisdiction, with the intent to reduce energy consumption, regulate necessary equipment and promote adequate access to sunlight. This ordinance also addresses utility-scale solar energy conversion systems, or "solar facilities", intended for the sale of electricity to utilities, industries, and/or businesses. Solar energy conversion systems, excluding solar facilities, shall be permitted in all zoning districts as a permitted use.

Section 23.1 Definitions:

CONCENTRATED SOLAR POWER: An SCS that generates power by using mirrors or lenses to concentrate a large area of sunlight, or solar thermal energy, unto a small area. These include but are not limited to the following technologies: parabolic trough, solar power tower, enclosed trough, Fresnel reflectors and Dish-Stirling.

ELECTRICITY UTILITY: The public entity providing retail electrical service to a given area.

NET EXCESS GENERATION: On an individual solar conversion system (ISCS), net excess generation means the net amount of energy, if any, by which the output of a qualified facility exceeds a customer-generator's total electricity requirements during a billing period.

NET METERING: Net metering means a system of metering electricity in which a local distribution utility:

A. Credits a customer-generator at the applicable retail rate for each kilowatt-hour produced by a qualified facility during a billing period up to the total of the customer-generator's electricity requirements during that billing period. A customer-generator may be charged a minimum monthly fee that is the same as other noncustomer-generators in the same rate class but shall not be charged any additional standby, capacity, demand, interconnection, or other fee or charge; and

B. Compensates the customer-generator for Net Excess Generation during the billing period at a rate equal to the electric utility avoided cost of electric supply over the billing period. The monetary credits shall be applied to the bills of the customer-generator for the preceding billing period and shall offset the cost of energy owed by the customer-generator. If the energy portion of the customer-

generator's bill is less than zero in any month, monetary credits shall be carried over to future bills of the customer-generator until the balance is zero. At the end of each annualized period, any excess monetary credits shall be paid out to coincide with the final bill of that period.

SOLAR ACCESS: The ability to receive sunlight across any real property for any solar energy device.

SOLAR ACCESS EASEMENT: A right, expressed as an easement, covenant, condition, restriction or other property interest in any deed, will or other instrument executed by or on behalf of any landowner or in any order of taking, appropriate to protect the solar skyspace of a solar collector at a particularly described location to forbid or limit any or all of the following where detrimental to access to solar energy: structures on or above ground; vegetation on or above ground; or other activities. Such right shall specifically describe a solar skyspace in three-dimensional terms in which the activity, structures or vegetation are forbidden or limited or in which such an easement shall set performance criteria for adequate collections of solar energy at a particular location.

SOLAR CONVERSION SYSTEM (SCS): An assembly, structure, or design, including passive elements, used for gathering, concentrating, or absorbing direct or indirect solar energy, specifically designed for holding a substantial amount of useful thermal energy and transferring that energy to a gas, solid or liquid or using that energy directly; this may include, but is not limited to, a mechanism or process used for gathering solar energy through thermal gradients, or a component used to transfer thermal energy to a gas, solid or liquid or to convert into electricity.

SOLAR CONVERSION SYSTEM, COMMERCIAL (CSCS): A SCS with the following characteristics: a series of solar modules and equipment connected to supply the converted energy to a community and/or power grid. A CSCS shall have a one-way connection to the power grid.

SOLAR CONVERSION SYSTEM, GROUND-MOUNTED: Any SCS which is supported and attached to the ground.

SOLAR CONVERSION SYSTEM, INDIVIDUAL (ISCS): A solar conversion system for the specific use of an individual residential, commercial, public or industrial use.

SOLAR CONVERSION SYSTEM, NEIGHBORHOOD (NSCS): A series of solar panels and equipment connected in order to supply converted energy to a specific neighborhood and its uses.

SOLAR CONVERSION SYSTEM, STRUCTURE-MOUNTED: Any SCS which is directly connected to and supported by a building.

SOLAR ENERGY: Radiant energy received from the sun at wavelengths suitable for heat transfer, photosynthetic use.

SOLAR SKYSPACE:

A. Commercial and/or Utility Scale Ground Mounted Solar Energy System; the Solar Skyspace shall be the maximum three-dimensional space extending from a solar collector to all positions of the sun necessary for maximum use of the collector.

B. Where a solar energy system is used for heating purposes only, solar skyspace shall mean the maximum three-dimensional space extending from a solar energy collector to all positions of the sun between nine o'clock (9:00) A.M. and three o'clock (3:00) P.M. local apparent time from September 22 through March 22 of each year.

C. Where a solar energy system is used for cooling purposes only, solar skyspace shall mean the maximum three-dimensional space extending from a solar collector to all positions of the sun between eight o'clock (8:00) A.M. and four o'clock (4:00) P.M. local apparent time from March 23 through September 21 of each year

SOLAR ORIENTED SUBDIVISION: A subdivision in which a minimum of 65 percent of the lots are solar oriented lots.

SOLAR OR SOUTH-FACING: True south, or 20 degrees east of magnetic south.

Section 23.2 General Provisions

The following provisions shall apply to all the different solar conversion systems in this Section:

A. Pre-existing SCS: Not withstanding non-compliance with the requirements of this section, a SCS erected prior to the adoption of these regulations, pursuant to a valid building permit issued by Dodge County, may continue to be utilized so long as it is maintained in operational condition.

B. Concentrated Solar Power (CSP) systems are prohibited within Dodge County's jurisdiction.

C. All SCS shall be constructed in conformance with all state and national building and fire codes. For those systems that include electrical, plumbing and/or heating constructions, any applicable permits shall also be obtained.

D. A SCS may be installed in the floodplain subject to the floodplain regulations, as may be amended from time to time, given that all components are installed a minimum of one foot (1') above base flood elevation and subject to written authorization of the Floodplain Administrator.

E. No SCS shall be constructed in an identified Floodway.

F. Maintenance: All system and components shall be kept in operational condition, including appearance of all components; plus, the ground-mounted SCS shall be kept in a presentable manner.

G. Repowering: If an SCS is no longer operating for purposes of repowering, replacement, or maintenance, decommissioning provisions will not apply for up to 12 months. However, an SCS that is not operating or is operating at a substantially reduced capacity for more than 12 months will be considered abandoned and decommissioning provisions will apply.

H. Repowering does not require a new permit or permit amendment if the footprint of the SCS is the same or reduced. Any increase in the footprint of the facility will require a permit amendment.

I. Decommissioning: All systems when they are no longer generating power and will no longer be used shall follow a decommissioning plan that has been agreed to upfront by Dodge County, and the owner/developer.

Section 23.3 Individual Solar Conversion Systems (ISCS)

A. General Requirements for ISCS:

ISCS shall meet the following requirements as provided herein:

(i) A structure-mounted ISCS may project two feet into the front yard, six feet into the rear yard, and two feet into the side yard.

(ii) A ground-mounted ISCS may be in the rear yard. It may be located not less than five feet from the rear lot line and not closer than one foot to any existing easement as measured from the closest point of the structure including its foundation and anchorage.

(iii) All ground mounted ISCS shall have an executed Solar Access Easement, on the south side of the yard, from any neighboring properties. Said easement shall be filed as an instrument to each property's deed and said easement shall stay in place as long as the ground mounted ISCS is in place and operational.

(iv) All ground mounted ISCS shall be required to obtain a building permit and follow all local and state building codes for foundation and anchoring of the system.

B. Structural Requirements:

The physical structure and connections to existing structures shall conform to the applicable local, state and federal codes.

C. Site Plan:

The application for a permit shall be accompanied by a site plan, drawn to scale, showing property lines, existing structures on the lot, proposed with respect to property lines, and dimensions of the proposed ISCS.

D. Decommissioning:

(i) Whenever an ISCS is no longer operating, the owner shall notify the Dodge County Zoning Administrator and the electric utility.

(ii) Whenever a ground mounted ISCS is no longer operating, the property owner shall have 180 days to completely remove the structure and wiring. The location of the SCS shall be returned to a usable state based upon the surrounding property.

E. Interconnection Agreement:

The applicant for any ISCS that has potential to generate electricity shall provide evidence that they had an executed Interconnection Agreement with the electric utility.

F. Utility Approval to Construct:

Prior to the installation of any ISCS that has potential to generate electricity, the applicant shall provide evidence that they have official Approval to construct from the electric utility having jurisdiction.

G. Witness Test:

Prior to be interconnected operation of any ISCS that potential to generate electricity, a final inspection must be performed by the electric utility or their agent to ensure the ISCS was constructed as designed and the system is still safe to interconnect.

Section 23.4 Neighborhood Solar Conversion Systems (NSCS)

Applicability

A NSCS is hereby defined as a solar photovoltaic system generating between 500 kilowatts (kW) and 5 mega-watts (MW) of power, and located on less than 40 acres of ground, distributing that energy to the electrical grid; intending to support more than one residence or business within the community (also sometimes referred to as a "Community Solar Gardens"). The provisions in this section are based on a project that is ground mounted and constricted with techniques that support the flow of rainwater between and beneath each module, the growth of vegetation beneath the arrays, limit the impacts of stormwater runoff, and allow for minimal disturbance to the existing ground and grade of the site.

A. General Requirements for NSCS:

NSCS shall meet the following requirements as provided herein:

Zone Districts Allowed: NSCS are permitted uses in the A-1(Agricultural) A-2 (General Agricultural), A-3 (Transitional Agricultural), I-1 (Light Industrial) and I-2 (Heavy Industrial) zone districts, with approval of a Conditional Use Permit.

The NSCS shall be designed and constructed for no more than anticipated maximum solar usage in the designated neighborhood or development, which shall not exceed, in total 5 MW of power or be larger than 40 contiguous acres in size.

A net metering agreement between the developer, Homeowners Association, and any other entity and the electric utility shall exist in case of excess electricity. No net excess power generated shall be sold or given to a user outside the agreed upon neighborhood or development, except via net metering agreement.

All ground mounted NSCS's shall have an executed solar access easement from any neighboring properties. Said easement shall be filed as an instrument to each property's deed and said easement shall stay in place as long as the ground mounted NSCS is in place and operational.

The developer shall provide Dodge County with all solar easements established; however, Dodge County shall not be responsible for enforcing said easements.

All solar easements shall be enforced by established Homeowners Association for the development/neighborhood in which the NSCS is constructed.

An access agreement between the developer, Homeowners Association, and any other necessary entity and the electric utility shall exist in case of an emergency.

The NSCS shall be set on its own lot within a neighborhood/development.

The developer shall provide evidence that the project meets commonly accepted management practices for avian, wildlife, and environmental protections in place at the time of application.

The NSCS shall comply with any specific requirements of the appropriate fire district.

All NSCS operations shall have, located at key access points, signage stating specific language as outlined by the electric utility. Signage shall conform to the Dodge County Sign Regulations.

All connections to the uses with the neighborhood shall be made underground and a ground mounted NSCS shall be protected with fencing and/or bollards.

B. Structural Requirements:

The physical structure and connections to existing structures shall conform to the applicable local, state and federal codes.

C. Solar Oriented Subdivision Site Plan:

Whenever a NSCS is part of a proposed subdivision, the developer shall outline the specific lot or out lot where the NSCS will be placed. Specific developments/neighborhoods initially designed with an NSCS shall identify all solar easements on the preliminary and final plats and shall be recorded the same as other utility easements. In addition, the subdivision plats shall indicate, in addition to all other requirements in the subdivision regulations, the location of all proposed conduits serving the other lots in said subdivision.

The application for a permit shall be accompanied by a site plan drawn to scale showing property lines, existing structures on the lot, proposed solar panel location with respect to property lines and dimensions of the proposed NSCS.

The developer shall install all underground wiring as prescribed by the governing electric codes.

All underground wiring shall be protected by a utility easement or located within prescribed rights-of-way.

The developer shall provide Dodge County with as-builts of the wiring locations within the subdivision.

D. Decommissioning:

A decommissioning plan shall be required to ensure that facilities are properly removed after their useful life. Decommissioning of the NSCS must occur in the event it is not in use for 12 consecutive months. The plan shall include provisions for removal of all structures and foundations, restoration of soil and vegetation and a plan ensuring financial resources will be available to fully decommission the site. Dodge County may require the posting of a bond, letter of credit to ensure proper decommissioning fully funded at 5 years. The NSCS owner shall remove all SCS equipment and appurtenances within 180 days of abandonment.

Section 23.5 Commercial Solar Conversion Systems (CSCS)

A. Applicability:

The purpose of this subsection is to provide standards for a CSCS generating more than 5 mega-watts (MW) of capacity, and with a Project Area larger than 40 contiguous, or non-contiguous, acres, and connecting that energy to the electrical grid for utility distribution. The provisions of this subsection are based on a ground-mounted SCS constructed with techniques that support the flow of rainwater between each module, the growth of vegetation beneath the arrays, limit the impacts of stormwater runoff, and allow for minimal disturbance to the existing ground and grading of the site. Based on the assumed CSCS, Dodge County finds the use to be low intensity with minimal trip generation, low amounts of impervious cover, and low emission; this, the use is compatible in non-urbanized, low-density areas with other agricultural and scattered industrial use.

B. Site Development Standards:

Zoning Districts: CSCS are permitted uses, with an approved Conditional Use Permit, in the A-1 (Intensive Agricultural), A-2 (General Agricultural), A-3 (Transitional Agricultural), I-1 (Light Industrial), and I-2 (Heavy Industrial) zone districts.

Lot Coverage: No more than 5 percent of the gross site area shall be occupied by enclosed buildings and structures.

Setbacks: The required setbacks shall meet or exceed the required setbacks for the zoning district in which the CSCS is located. A 30-foot wide and rear setback shall apply only to the setback area measured from a lot line that abuts a residential use or residential zoning district. The side and/or rear setback shall be eliminated where the CSCS does not abut a residential use or residential zoning district, or the CSCS and the residential use or residential district are separated by a public right-of-way and/or where the CSCS project is located on adjacent or contiguous parcels.

Height: The maximum height of the ground mounted CSCS shall not exceed 25 feet, excluding substations.

Screening: CSCS shall provide visual screening only along a lot line that abuts a residential use or residential zoning district. The screen shall only be required if the closest exterior wall of a dwelling on the adjacent property is within 300 feet of the CSCS. Screening is not required where the CSCS does not abut a residential zoning district, or the two districts are separated by a public road right-of-way. There are no requirements for screening from public streets. Viewshed considerations will be considered during conditional use permitting for non-participating dwellings.

Stormwater Management: CSCS shall be considered pervious, and the property shall be designed to absorb or detain specific runoff. The impervious cover calculation shall include the support posts of the panels, any roads or impervious driveway surfaces, parking areas and buildings on the site.

All CSCS operations shall have, located at key access points, signage stating specific language as outlined by the electric utility or owner. Signage shall conform to the Dodge County Sign Regulations.

On-site power lines should be buried where reasonably feasible, except where connecting to existing overhead utility lines. This requirement shall not apply to fiber optic operations.

Fencing: Due to the unique security requirements of this land use, to ensure public safety, and to facilitate the educational value of seeing this land use, fencing up to eight feet in height is permitted, provided the fencing material is predominantly open. For security and safety purposes, chain-link fence, wildlife fence or similar is required.

All state and federal codes and provisions not specified in this subsection are required including but not limited to tree preservation, traffic impact analysis and historic preservation.

C. Submittal Requirements:

These requirements shall apply to a Conditional Use Permit application for a CSCS. All applications shall contain, at a minimum, the following:

A site plan, drawn to scale, of the project area, indicating the parcels to be included in the project, total site acreage, landscape and buffer areas, tree preservation, location of all structures, the proposed location of the solar panels, the distances of the solar panels to structures on the property as well as distances to all project boundary lines.

The site plan shall include any roads, electric lines and/or overhead utility lines.

A description of the electrical generating capacity and means of interconnecting with the electrical grid as coordinated and pre-approved with the appurtenant electric utility.

Manufacturer's recommended installations, if any.

Documentation of land ownership and/or legal authority to construct on the property. The applicant may submit a letter of authorization from the legal owners of the land consenting to participation in and construction of the CSCS on their land.

Evidence that the project meets commonly accepted management practices for avian, wildlife, and environmental protections in place at the time of application; and

Any specific requirements of the appropriate fire district will be considered during the conditional use permitting process.

A cost estimate for the decommissioning of the CSCS and any estimated resale or salvage value shall be provided at the cost of the applicant. The applicant shall provide Dodge County a revised and updated decommissioning cost estimate every five years from the date of approval.

A decommissioning plan to ensure the facilities are properly removed after their useful life. The plan shall include provisions for removal of all structures and foundations, restoration of soil and vegetation and a plan ensuring financial resources will be available to fully decommission the site. Upon the five-year interval when the decommissioning cost estimate set forth in this section shows a positive net decommissioning cost, Dodge County may require the posting of a surety, in the form of a bond, letter of credit to ensure proper decommissioning fully funded at 5 years. The net surety amount shall account for the estimated resale and salvage value of materials.

D. Compliance with Other Regulations:

Conditional use permit applications for CSCS's shall be accompanied by a single line drawing of electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the State's adopted electrical code and that has been pre-approved by the associated electric utility meeting their distribution generation requirements and guidelines.

This subsection does not waive any requirements of any state or federal codes, electrical codes or other technical codes as applicable. Evidence of all applicable permitting is required prior to construction.

E. Decommissioning:

A CSCS shall be considered abandoned after 12 consecutive months without energy production; provided, however, that a CSCS shall not be considered abandoned if the energy is not being produced as a result of maintenance, repairs or replacement of the CSCS system or damage caused to the CSCS system by an event outside of the control of the owner. A Natural Disaster Site Reconstruction Plan shall be submitted to the Dodge County Zoning Administrator within 90 days of a natural disaster. The CSCS owner shall remove all SCS equipment and appurtenances within 180 days of abandonment.

F. Retention of Expert:

The Dodge County Board of Supervisors may hire any consultant and/or expert necessary to assist the Zoning Administrator, Planning Commission and County Board in reviewing and evaluating all aspects of the project, including but not limited to, conditional use permit application, road use agreement, decommissioning plan, or any other process that occurs during preconstruction, construction, operation or decommissioning. The applicant shall reimburse Dodge County for the actual costs of such consultant and/or expert used. Costs shall be reimbursed to the County within 30 days of receipt of billing statement.