

ARTICLE VIII-B

SOLAR ENERGY CONVERSION SYSTEMS

PART 1. PURPOSE AND GENERAL PROVISIONS

8B-101. **Statement of Purpose.**

- (A) It is the purpose of this Article to provide a regulatory scheme for the construction and operation of Solar Energy Conversion Systems (SECS) in Barton County, create a process to permit the development of a SECS project subject to reasonable restrictions, and identify significant environmental, social, and economic impacts related to the SECS project. This article applies to and addresses all types of solar energy conversion systems.
- (B) It is the intent of these regulations to address major issues associated with the SECS project. Issues that are not listed and that are deemed significant during the course of review will be addressed with the review and conditions of each individual Conditional Land Use Permit (CLUP).

8B-102. **Findings.**

- (A) Barton County notes that the science of determining the impact of SECS is in a developmental stage. Consequently, Barton County reserves the right to reconsider the boundaries of the No Build Zone in the future and will formally conduct such review by the Barton County Planning Commission as deemed necessary.

8B-103. **Definitions.**

- (A) The following definitions shall be used in the interpretation of this article.

**AGRIVOLTAIC:** A solar energy conversion system that includes the dual use of the land; combining agriculture and a solar energy conversion system. The most common types of agrivoltaic facilities include the growing of crops, providing for pollinators, and grazing of animals. These agricultural activities occur underneath and surrounding the panels or modules.

**BATTERY ENERGY STORAGE SYSTEM:** One or more battery cells for storing electrical energy including battery management system regulators, equipment and secondary containment measured to the perimeter fence.

**BATTERY MANAGEMENT SYSTEM:** An electronic regulator that manages a Battery Energy Storage System by monitoring individual battery

module voltages and temperatures, container temperature and humidity, off-gassing of combustible gas, fire, ground fault and DC surge, door access and capable of shutting down the system before operating outside safe parameters.

**CONCENTRATING SOLAR THERMAL DEVICES:** Also known as concentrated solar power; these devices use mirrors or lenses to reflect and concentrate sunlight onto a receiver. The energy from the concentrated sunlight heats the receiver to a higher temperature. This heat is then used to spin a turbine or power an engine to generate electricity.

**ECOLOGICAL REVIEW / ENVIRONMENTAL IMPACT ASSESSMENT:** An evaluation of the environmental consequences of a plan, policy, program, or projects.

**EXTRAORDINARY EVENTS:** Any of the following would be considered an “extraordinary event”: large-scale or system wide damage to solar panels, solar modules or solar arrays and facilities due to wind, storm, hail, fire, flood, earthquake, or other natural disaster, explosion, grievous injury to any citizen or employee, or similar event.

**FEEDER LINE:** Any power line that carries electrical power from one or more SECS or individual transformers associated with individual SECS to the point of interconnection with the electric power grid. In the case of interconnection with the high voltage transmission system, the point of interconnection shall be the substation serving the SECS.

**GRADING:** The act of excavation or filling or a combination of both or any leveling to a smooth horizontal or sloping surface on a property, but not including normal cultivation associated with an agricultural operation.

**NET METERING:** A system in which solar panels or other renewable energy generators are connected to a public-utility power grid and surplus power is transferred onto the grid, allowing customers to offset the cost of power drawn from the utility.

**NO BUILD ZONE:** The area where Commercial Scale and Large Scale Non-Commercial SECS are not permitted.

**OWNER / OPERATOR:** The party or entity responsible for the construction, operation, maintenance, and decommissioning of the Solar Energy Conversion System.

**PERMEABLE FENCING:** Fencing that allows wildlife to pass through. Examples include typical barbwire fencing, wire fencing with larger holes than traditional chain link fence or woven wire, or wildlife corridors for larger wildlife.

**PHOTOVOLTAIC SOLAR PANEL:** Materials and devices, including photovoltaic panels, which absorb sunlight and convert it directly into electricity.

**PROJECT AREA:** The total impacted area of land in acres used for converting sunlight into electricity including the necessary equipment for generating electricity, which shall include Solar Panel Photovoltaics, inverters, substation parking lots, support structures (which may include buildings), electrical substations and Battery Energy Storage Systems, accessory or appurtenant structures and equipment, wildlife corridors, and other components of the solar energy conversion system.

**PROJECT EXTENT:** The entire area including property and setback lines, lease lines, streets, roads, easements, landscaping, wildlife corridors, right-of-way corridors and utility easements; includes the project area.

**PROPERTY LINE:** The boundary line of the area over which the entity applying for a SECS permit has legal control for the purposes of installation of a SECS. This control may be attained through fee title ownership, easement, or other appropriate contractual relationship between the project developer and landowner.

**SOLAR ARRAY:** A collection of multiple photovoltaic solar panels wired together into a circuit.

**SOLAR ENERGY CONVERSION SYSTEM (SECS):** A machine or device that converts sunlight into heat (passive solar) or into electricity, whether by photovoltaics, concentrating solar thermal devices, or other conversion technology.

- a. **SOLAR ENERGY CONVERSION SYSTEM (SECS), COMMERCIAL SCALE:** An electrical generating system that converts sunlight into electricity, whether by photovoltaics, concentrating solar thermal devices, or other conversion technology, for the primary purpose of wholesale sales, resale, or off-site use. This term includes all appurtenant facilities such as roads, substations, and operation or maintenance buildings. The system is connected to transmission, collector, feeder lines, and/or battery storage, and is intended for use in a larger electrical network exclusive of individual use; commonly referred to as “Solar Farms” or “Solar Systems.”
- b. **SOLAR ENERGY CONVERSION SYSTEM (SECS), LARGE SCALE NON-COMMERCIAL:** An electrical generating system that converts sunlight into electricity, whether by photovoltaics,

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concentrating solar thermal devices, or other conversion technology. Minor structures other than energy conversion equipment may be included in this use. A large scale non-commercial system is typically created for business use, although it can be created by a group of people that join together to cooperatively create and use solar energy. Electricity created is for consumption of members in the group or business and not for transfer or sale to a third party.

- c. SOLAR ENERGY CONVERSION SYSTEM (SECS), SMALL SCALE NON-COMMERCIAL: An electrical generating system that converts sunlight into electricity, whether by photovoltaics, concentrating solar thermal devices, or other conversion technology, which is used for personal use or is accessory to other uses. A small scale non-commercial system cannot exceed the maximum usage of the on-site needs. Small scale non-commercial systems are permitted in Barton County and are not subject to the conditional land use permit (CLUP) process. A building permit is required. Electricity created is for consumption on-site and not for transfer or sale to a third party.

SOLAR ENERGY CONVERSION SYSTEM (SECS), DECOMMISSIONING AND RECLAMATION PLAN: A plan to disconnect, remove, and properly dispose of equipment, systems, or devices of a (SECS) and Battery Energy Storage Systems and reclaim the site.

SOLAR MODULE: A structure comprising of multiple solar panels.

SOLAR PANEL: A device that converts sunlight into electricity by using photovoltaic cells.

STRUCTURE: Something that is constructed.

WILDLIFE: Living things and especially mammals, birds, and fishes, vertebrates, reptiles, and amphibians that are neither human nor domesticated.

WILDLIFE CORRIDOR: A vegetated route or other connection which allows movement of wildlife between areas of habitat. A wildlife corridor may be a naturally occurring area such as a stream corridor or constructed break in the contiguously fenced area other than the roads. A wildlife corridor allows animals to travel through an area that may be fragmented with solar energy conversion systems or other features, rather than using the nearby roadways.

8B-104. **Commercial and Large Scale Non-Commercial Scale Solar Energy Conversion Systems.**

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- a. Purpose of Regulation. It is the purpose of this article to provide details related to any application for a Commercial Scale SECS or Large Scale Non-Commercial SECS project, create a process to consider issuing a permit for the development of these projects, and identify significant environmental, social, and economic impacts related to the SECS project.
- b. Intent of Regulations. It is the intent of these regulations to address major issues associated with the project; however, issues that are not listed and that are deemed significant during the course of review will be addressed with the review and conditions of each individual CLUP.
  - 1) These regulations specify the plans, information surveys, and studies that must be submitted as part of the CLUP application.
  - 2) Appropriate locational criteria for siting a Commercial or Large Scale Non-Commercial SECS are provided.
  - 3) Standards are provided to:
    - a. Ensure the land remains viable for its original use following decommissioning;
    - b. Minimize the impact of the system on nearby properties;
    - c. Minimize negative environmental impacts;
    - d. Ensure reclamation of the site; and
    - e. Provide appropriate decommissioning and disposal measures.
- c. Review Considerations. As part of the CLUP process set forth in the Barton County Zoning Regulations, Version II, Kansas Department of Wildlife and Parks and The Nature Conservancy will be provided a copy of each permit application for a Commercial or Large Scale Non-Commercial SECS and given the opportunity to comment.
- d. Applicability.

These standards and regulations apply to Commercial and Large Scale Non-Commercial SECS proposed in the unincorporated jurisdiction of Barton County.

#### 8B-105. **Conditions Required For Approval.**

The following conditions shall be evaluated with the review of any application:

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- a. The Owner / Operator shall demonstrate their ability to strictly conform to all applicable performance standards detailed in these regulations as well as applicable local, state, and federal laws or regulations.
- b. Key issues to be considered with the review of the application include, but are not limited to:
  - 1) Visual impact;
  - 2) Impact on wildlife habitat/native flora and fauna;
  - 3) Impact on cultural, historical, or archeological features;
  - 4) Impact on critical wildlife habitats, current state-listed threatened and endangered species, and species in need of conservation as defined by Kansas Department of Wildlife and Parks;
  - 5) Impact on environmentally sensitive lands;
  - 6) Impact on water quality and soil erosion;
  - 7) Impact on infrastructure, including roads and bridges for construction access;
  - 8) Aviation/Federal Aviation Administration (FAA) impacts;
  - 9) Cumulative impacts;
  - 10) Company experience, reputation, and financial ability;
  - 11) Decommissioning, removal, reclamation, and disposal plans;
  - 12) Bond agreement or other means of ensuring reclamation, disposal, and decommissioning performance;
  - 13) Specific requirements for building and construction;
  - 14) Emergency services and training requirements;
  - 15) Degree to which agricultural uses and wildlife habitat are accommodated with the system layout and design;
  - 16) Results of a KDWP Ecological Review;
  - 17) Results of the National Environmental Policy Act Review (NEPA) on all Commercial Scale SECS applications;
  - 18) Results of a review of the Project Area by the Kansas State Historic Preservation Office, including an archeological survey by a professional archeologist meeting the Minimum Professional Qualifications set forth by that office if requested by the Kansas State Historic Preservation Office. The survey of the Project Area must be completed prior to beginning construction and shall be funded by the Owner / Operator; and
  - 19) Impact on the Wetlands & Wildlife National Scenic Byway.

#### 8B-106. **Standards**

The following standards apply to all Large Scale Non-Commercial and Commercial Scale SECS, except where specifically noted:

Large Scale Non-Commercial SECS may be exempt from the following standards:

- o. Affidavit

- p. Liability Insurance
  - q. Decommissioning Bond
  - w. Transfer of Owner / Operator
  - y. Reviews
- a. Concentrating Solar Thermal Devices. SECS shall not utilize concentrating solar thermal devices.
- b. Height. Solar panels shall not exceed fifteen feet in height, measured when oriented at maximum tilt, with the following exceptions:
- 1) Said height restrictions shall not apply to appurtenant enclosed structures. Structures shall comply with the height limit for the zoning district.
  - 2) The Board of Barton County Commissioners may approve a modification to allow panels of greater height, if found to be necessary to accommodate slopes without grading or to accommodate agrivoltaic uses provided the height of the solar panels do not negatively impact nearby land uses or the character of the area.
- c. Location. The system shall be located to:
- 1) Accommodate the future growth of incorporated cities and unincorporated community districts;
  - 2) Utilize existing terrain, vegetation, and structures to screen the project from off-site view to the extent possible. If this is not possible, additional screening may be required;
  - 3) Avoid steep slopes of 15% or greater;
  - 4) Minimize impact to all environmentally sensitive lands in Barton County as well as the Cheyenne Bottoms Basin. The largest interior marsh in the United States, Cheyenne Bottoms is one of the most important shorebird migration stopover points in the Western Hemisphere. It shall be noted that the exact area designated for protection shall be determined with the review of each CLUP application;
  - 5) Avoid sites with prehistoric cultural resources or historic cultural resources as determined by the Kansas State Historic Preservation Office; and
  - 6) Minimize impact on the Wetlands & Wildlife National Scenic Byway.

d. Glare.

All solar panels must be constructed to minimize glare or reflection onto adjacent properties and adjacent roadways and must not interfere with wildlife, traffic, including air traffic, or create a safety hazard as per any Local, State and Federal Laws and Regulations. Examples of measures that can be utilized to limit glare, include, but are not limited to:

- 1) Textured glass;
- 2) Anti-reflective coatings;
- 3) Screening;
- 4) Distance; or
- 5) Positioning units in a manner that reduces glare.

e. Vegetation.

Land around and under solar panels/arrays and in designated buffer areas shall be managed to prevent erosion and runoff as approved by the USDA NRCS.

f. Soils.

All grading and construction activities shall minimize the displacement of topsoil.

g. Setbacks.

- 1) All structures shall be located in compliance with the setbacks required for that zoning district or as otherwise set forth in this article.
- 2) The solar panels/array and appurtenant structures shall be located a minimum of 1,000-feet from the property line of a tract with a residence located on the tract, unless a lesser setback is agreed to by the owner of the property and approved by the Barton County Commission.
- 3) Buffering or screening landscaping, fencing, agricultural uses and access drives may be within this 1,000-foot setback.
- 4) Battery storage shall not be located within 1,000-feet of the property Line of a tract with a residence located on the tract.
- 5) No portion of a SECS may encroach upon the public right-of- way with the exception of distribution or transmission lines (overhead or underground) provided all applicable approvals from the authority having jurisdiction over that portion of the right-of-way have been obtained.



- 6) Additional setbacks may be required to mitigate site specific issues or to provide for frontage roads, cross-access easements, commercial corridors or other means of egress/ingress.

h. Fencing/Screening.

- 1) Properties containing Large Scale Non-Commercial or Commercial Scale SECS shall be enclosed by perimeter fencing to restrict unauthorized access. Permeable wildlife friendly fencing shall be used where possible.
- 2) Critical electrical and communications equipment shall be fenced as required by local, state, and federal regulations.

i. Battery Energy Storage System.

Documentation shall be provided that shows all battery energy storage systems shall comply with the requirements of the National Fire Protection Association (NFPA) 855 and all other local, state, and federal regulations. The following standards shall also apply:

- 1) Battery energy storage systems, including all mechanical equipment, shall be enclosed by a fence with a locked gate to prevent unauthorized access unless housed in a dedicated-use building.
- 2) The area within ten (10) feet on each side of a battery energy storage system shall be cleared of combustible vegetation and surfaced with gravel or other non-combustible surfacing.
- 3) Documentation must be provided that signage for the battery energy storage system follows ANSI Z535 and shall include the following information: the type of technology associated with the battery energy storage system, any associated special hazards, the type of suppression system installed in the area of the battery energy storage system, and 24-hour emergency contact information.
  - a) As required by the National Electric Code (NEC), disconnect and other emergency management information shall be clearly displayed on a light reflective surface. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.
  - b) Warning signage spacing shall be determined with the battery energy storage plan.
- 4) Battery storage shall not be located within 1,000-feet of the property

line.

- 5) Monitoring Wells shall be required within a range designated for all battery energy storage systems by KDHE, at the owner / operator's expense. KDHE shall permit, inspect, and approve every aspect of the required monitoring wells for the life of the SECS.

j. Signage.

- 1) Perimeter fencing shall incorporate appropriate safety signage at a minimum spacing of every five hundred (500) feet unless otherwise required by applicable laws or safety codes.
- 2) Signage, including addresses for each fenced area, shall be provided as required by Barton County Communications.

k. Lighting.

Security or safety lighting relating to the SECS, battery energy storage system and appurtenant structures shall be limited to the minimum necessary to mitigate visual impacts.

l. Noise.

- 1) The operational noise generated from the solar installation equipment including inverters, battery energy storage systems, components and associated ancillary equipment shall not exceed a noise level of sixty decibels (60 dBA) as measured at the property line or 1,000-feet of the property line of an existing residence.
- 2) Applicants shall submit equipment and component manufacturer noise ratings at the time of application to demonstrate compliance with the maximum permitted noise level.
- 3) Transformers, inverters or other sound or vibration generating equipment must be placed so that low level recurring ambient noise does not exceed the permitted limit. Noise levels can be minimized with the type of equipment or the placement of equipment interior to the site, shielded by proposed solar panels and/or by specifically placed noise and vibration deadening fencing, landscaping, or other efforts.

m. Electrical Interconnections.

- 1) All electrical interconnection and collection lines within the Project Area site shall be located underground, with the following exceptions:

- a) When site conditions require, a modification may be granted by the Board of Barton County Commission in instances where shallow bedrock, water courses or other protected environmentally sensitive lands make underground connections detrimental.
  - b) Generation tie-lines from the project substation to a utility substation may be aboveground.
- 2) Off-site above ground utility or power lines may only be used for generation tie-lines from the project substation to a utility substation and must be located in public rights-of-way, easements, or other legally dedicated tracts of land.

n. Maintenance.

All structures shall be maintained and kept in good condition by the owner / operator.

- 1) Maintenance shall include, but not be limited to, painting, structural repairs, replacement of damaged or worn parts or cables and integrity of security measures.
- 2) Site access shall be maintained to a level acceptable to local emergency personnel. The owner / operator shall be solely responsible for maintaining the Project Area, all appurtenant structures, and the installation and maintenance of any access road(s), unless accepted as public rights-of-way.

o. Affidavit.

Upon issuance of a permit for a Conditional Land Use by the Barton County Commission, the applicant shall file an affidavit with the Barton County Register of Deeds on all the properties within the conditional land use permit, which includes a copy of the CLUP and all setback and buffer waivers. Filing fees will be covered by the applicant.

p. Liability Insurance.

Applicants shall provide general liability insurance, showing general liability insurance coverage for the lifespan of the project encompassing installation and operation through decommissioning. Evidence shall be provided annually in the form of a certificate of insurance.

- 1) Applicants shall provide a certificate of general liability insurance for

personal injury and property damage in the amount of not less than two million dollars and name Barton County as an additional insured on said insurance. The certificate shall state the dates of coverage and an updated certificate shall be provided at all times showing coverage is in effect. In the event no such certificate is provided, it shall be treated as an involuntary decommissioning event if no cure is made within 30 days of notification to applicant.

q. Decommissioning Bond.

The applicant agrees to, or to cause one of its Affiliates to, pay the premiums for and to post any collateral required by the surety for the decommissioning bonds for the cost of returning the premises to their pre-project condition. The amount of the decommissioning bond shall be determined by a professional engineering firm proposed by the applicant, cost to be paid by the applicant and approved by Barton County to perform such service.

- 1) Prior to permit approval, the applicant and Barton County shall execute a Decommissioning Agreement pertaining to the project. The executed Decommissioning Agreement shall be Recorded at the office of the Barton County Register of Deeds. The Decommissioning Agreement shall include but not be limited to topics such as:
  - a) Removal of the solar panels and other above ground and below ground components;
  - b) Removal of any concrete base down to a minimum of four feet below ground surface;
  - c) Removal of access roads, unless the landowner, township, or county burdened by such roads requests otherwise;
  - d) Re-seeding and restoration of disturbed areas;
  - e) The timeline for removal;
  - f) Removal of all electrical equipment down to a minimum of four feet below ground surface;
  - g) A definition of the circumstances in which involuntary decommissioning would be required, such as:
    - i. Project owner provides notice of intent to decommissioning;
    - ii. Commercial Operation has not commenced within twelve (12) months of completion of construction;
    - iii. The project ceases to operate or is abandoned for more than 180 consecutive days as determined by the Barton County Zoning Administrator.
  - h) An initial and updated estimate by a 3<sup>rd</sup> party engineer of the total cost of decommissioning;

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- i) Surety, Bond, or other financial guarantee accepted by the Board of Barton County Commissioners for the purpose of paying for decommissioning costs in the event applicant fails to decommission voluntarily. The decommissioning financial guarantee shall be irrevocable and provide for the cost of decommissioning throughout the term of the project.

- r. Airspace Overlay or Airstrip.

If a system is proposed to be placed within an Airspace Overlay (ASO) District or within five (5) miles of any airstrip, the applicant shall provide acknowledgement of location approval or acceptance from the Federal Aviation Administration with the CLUP Application.

- s. Other Standards and Codes.

All SECS shall follow all applicable local, state, and federal regulatory standards.

- t. Modifications.

Upon a written request by the applicant, the Barton County Planning Commission may consider a modification from the standards if said modification is found to be necessary and is consistent with the purpose and intent of these regulations. The Barton County Planning Commission shall make recommendations to the Barton County Commission on requested modifications in conjunction with their recommendation on the conditional land use permit. The Barton County Commission shall make the final determination on all modification requests.

- 1) Items that are available for modification are the size of the Project Area, height of the solar panels, amount of grading possible, and the location (above or below ground) of electrical interconnections and distribution lines, changes to the procedure for testing soil and water, and any other revision deemed appropriate to implement this code.

- u. Building Permits and Plan Review.

The applicant shall contract with a special inspector and/or Plan Reviewer, approved by the Barton County Zoning Administrator, for construction plan review and all required construction inspections, at the Owner / Operator's expense.

- v. Time Frame.

The CLUP shall be approved for the lifespan of the SECS and shall be subject

to floodplain compliance and building permits.

w. Transfer of Owner / Operator.

If the Owner / Operator listed on the approved CLUP plans to sell or otherwise transfer their responsibilities to an entity not listed on the CLUP, the listed Owner / Operator shall notify the Barton County Zoning Administrator of this proposed transfer. Furthermore, the new Owner / Operator shall notify the Board of Barton County Commissioners and the Barton County Zoning Administrator in writing, acknowledging their acceptance of responsibility and intent to comply with all conditions listed in the approved CLUP.

- 1) In the event the Operator of the project is a different entity than the Owner of the project, all obligations of the Operator described herein shall simultaneously be obligations of the Owner.
- 2) The Board of Barton County Commissioners may approve the transfer of Owner / Operator if they find the proposed Owner / Operator has demonstrated their ability to strictly conform to all applicable performance standards detailed in these regulations as well as applicable local, state, and federal laws or regulations, including the ability to financially perform all obligations of the project.

x. Extraordinary Event.

- 1) Within seven (7) days of an extraordinary event, the Owner / Operator shall provide written notice of the event to the Barton County Zoning Administrator, noting the cause and the degree of damage associated with the event.
- 2) Within forty five (45) days of the event, the Owner / Operator shall provide the Barton County Zoning Administrator with a mitigation plan noting the steps they will take to mitigate any negative impacts. Additional mitigation steps may be required by the Barton County Zoning Administrator.

y. Reviews.

The SECS shall be reviewed for compliance with the standards of the CLUP at the time of application, one (1) year after approval and every five (5) years thereafter through the life of the CLUP. These reviews shall be conducted by a third-party firm, selected and financed by the owner / operator and approved by the Barton County Zoning Administrator.

8B-107. Approvals Required for Revisions.

- a) Conditional Land Use Permit. Any proposed expansion of the SECS will require approval of a new CLUP. This would include an increase in the Project Area or the area for accessory equipment.
- b) Site Plan. Minor modifications to the site plan may be approved by the Barton County Zoning Administrator. A minor modification includes changes which do not increase the Project Area or the area for accessory equipment.

8B-108. **Application and Required Documents.**

Large Scale Non-Commercial SECS are not required to submit the following additional materials with the application:

- d. 1. Additional Public Notice
- d.11. Traffic and Road Maintenance Plan
- d.13. Emergency Services, Fire and Safety Plan
- d.14. Solar glare Hazard Analysis
- d.15. Groundwater Monitoring Plan
- d.16. Soil Sampling Plan
- d.17. Abandonment, Decommissioning, and Reclamation Plan
- d.18. Bond Requirements

a. Additional Public Notice.

Prior to submitting an application for a Conditional Land Use Permit for a Large Scale Non-Commercial and Commercial Scale SECS, the applicant shall mail notice of the potential development application to property owners within a one (1) mile radius of the property included in the application. (This is in addition to the Barton County Zoning Administrator Office's mailed notification of the Barton County Planning Commission public hearing to property owners within 1000-feet of the subject development).

- 1) The applicant shall submit a certificate of mailing provided to the Barton County Zoning Administrator for this notice, a sample letter, and a list of notified property owners at the time of the application.
  - i. A certified list of property owners within one (1) mile of the subject development within the CLUP application shall be obtained from the Barton County Cartographer's Office, within 30 days of the mailing date.
  - ii. The notice shall be sent by mail and shall include a brief description of the project, proposed construction date, date the application will be submitted to the Barton County Zoning Administrator's Office, the person with contact information (phone, email, address) designated by the applicant to respond to

questions concerning the proposed application and include the following statement:

*This letter is being sent to the owners of nearby property for the purpose of informing the property owners and other interested parties about the proposed Commercial Solar Energy Conversion System (SECS) project described further in this letter. This letter does not grant the recipient and / or the property owner any additional legal rights to challenge the proposed development, instead, it is being provided solely to advise property owner(s) of the pending development. For Further information, contact the applicant's designated representative (insert contact information here) or the Barton County Zoning Administrator's Office at 620-796-4300.*

- iii. The applicant is responsible for mailing notices to all property owners listed on the certified property owner list prior to the submittal of the CLUP application.
- iv. When required notices have been properly addressed and deposited in the mail, failure of a party to receive such notice will not be grounds to invalidate any action taken by the Barton County Planning Commission or the Board of Barton County Commissioners.

b. Existing Conditions.

A physical and digital site plan of existing conditions on all properties included in the Project Area showing the following (digital site plan must be formatted to toggle each layer off and on):

- 1) Existing property lines and property lines extending one hundred (100) feet from the exterior boundaries of the Project Area, including the names of the adjacent property owners and current use of those properties, as determined by site inspection or from the Barton County Appraiser's Office. (This information is available from the Barton County website under Property Search / Appraiser Portal.)
- 2) All recorded leases, and easements included in the Project Area, with type and recording information, and the location and width of all public road rights-of-way;
- 3) Existing points of ingress and egress to the Project Area;
- 4) Location and size of any known wells (oil, water, geothermal, etc.);



- 5) Existing buildings and any paved or gravel surfaces, with dimensions;
- 6) Contour lines showing the existing topography of the Project Area at one-foot intervals. The source of the topography must be stated. If the Project Area contains any Federal Emergency Management Agency (FEMA) mapped floodplain, the topography must be tied to the Flood Insurance Rate Map (FIRM) datum;
- 7) Boundaries and designations of any Special Flood Hazard Areas identified on the FIRM of Barton County, Kansas;
- 8) Existing vegetation (list type and percentage of coverage; i.e., pasture, grassland, farmland, wooded areas, etc.);
- 9) Existing waterways, rivers, wetlands, channels, ditches or streams, existing ponds and lakes, and existing culverts;
- 10) Soil map showing location of soils classified as Class 1 and 2 soils, prime farmland, and farmland of statewide importance as identified in the Natural Resource Conservation Service (NRCS) soil survey;
- 11) Map of residential uses and structures within 1,000-feet of the SECS boundary;
- 12) Presence of any critical habitat for threatened or endangered species as determined by Kansas Department of Wildlife and Parks; and
- 13) The location of any underground pipelines and all utility easements including, but not limited to, railroad and drainage easements.

c. Proposed Conditions.

A physical and digital site plan of proposed conditions showing the following:

- 1) Number, location and spacing of solar panels and all appurtenant structures. Panel type, fixed or tracking, to be listed on the plan;
- 2) Name and address of Owner / Operator;
- 3) Location and width of access drives;
- 4) Planned location of underground and overhead electric lines connecting the SECS to any building, substation, or other electric load;
- 5) Proposed phasing schedule;

- 6) New electrical equipment other than at an existing building or substation that is the connection point for the SECS;
- 7) Planned wildlife corridors;
- 8) Environmentally sensitive lands to be protected;
- 9) Clearly delineated limits of proposed land disturbance or vegetation removal for all phases of construction and operation;
- 10) Location and height of any proposed lighting;
- 11) Locations with descriptions and sizes of planned temporary construction laydown yards;
- 12) Wiring diagram for the Project Area;
- 13) Approximate limits of disturbance for all temporary and permanent project components associated with the Project Area; and
- 14) Utility easements including, but not limited to, easements for transmission and interconnection.

d. Additional Materials.

The following shall be submitted with the application:

- 1) Public outreach required for SECS. Information regarding public outreach, such as how the applicant informed nearby property owners and interested stakeholders in the community, what meetings were held, and / or what information was provided;
- 2) Manufacturer's specification and recommended installation methods for all major equipment, including solar panels, mounting systems and foundations for poles or racks;
- 3) Assessment of construction impacts such as, but not limited to, noise, vibration, lights, waste management, water supply, etc. and mitigation measures. Mitigation measures could include, but are not limited to: limited construction hours, reduced scope of work at one time, alternate construction methods, etc.;
- 4) A preliminary equipment specification sheet that documents the proposed battery energy storage system components, inverters, and associated electrical equipment being installed;

- 5) A grading/vegetation removal plan which includes all proposed changes to the topography and vegetation on the site (clearing, grading, topographic changes, tree removal, etc.;
- 6) A stormwater management plan with supporting calculations, documenting how increased runoff will be conveyed throughout the Project Area. The calculations must include the design of open channels and culverts on the Project Area. Based on recommendations from the Barton County Engineer, storage, and controlled release at points of discharge from the Project Area may be required. If required, the stormwater management plan must be implemented on the final site plan prior to approval;
  - a) Preliminary stormwater management plans may be provided with the original application, as required by the Barton County Engineer. Engineered or detailed plans must be submitted for the Barton County Engineer's review and evaluation prior to the Board of Barton County Commission's final action on the CLUP application.
    - Staff may require more detailed information when needed to make informed decisions on the use.
    - Changes required by the stormwater plan, such as detention, shall be shown on the final plans for the Board of Barton County Commission's consideration.
- 7) A copy of any Interconnection Facilities Studies;
- 8) A copy of the interconnection agreement with the electric utility shall be provided;
- 9) A copy of the KDHE approved Stormwater Pollution Prevention Plan (SWPPP) for the site; and
- 10) An operation and maintenance plan which includes measures for maintaining access drives to provide access for emergency vehicles, as well as general procedures for operation and maintenance of the installation;
- 11) Traffic and Road Maintenance Plan:

A traffic and haul route plan based on the recommendations of the Barton County Engineer and Barton County Township Boards affected by the proposed project. The plan shall include, but is not limited to:

- a) A general Project Schedule.
- b) A traffic study estimating the volume and type of traffic generated by the project, both during construction and during normal operations. The study must identify proposed haul routes for construction traffic, trucks, and oversize or overweight loads.
- c) Based on the traffic study and the Barton County Engineer's recommendations, the following items shall be required:
  - Notes on the plan designating haul routes from the Project Area to a paved county or state highway;
  - Road maintenance agreement to be executed with Barton County or Barton County Township(s), addressing compensation for road maintenance or dust control on public roadways; and
  - Public improvement agreements to be executed with Barton County or Barton County Township(s), addressing compensation for necessary road, bridge, or culvert improvements on public roadways.

12) Vegetation Management Plan:

A vegetation management plan is needed, detailing all proposed changes to the vegetation of the Project Area and outlining all proposed uses, current or future.

- 1) The plan shall show where existing vegetation is to be removed and detail any new vegetation that will be placed and the location(s).
- 2) The plan shall include the installation, establishment and maintenance of buffering or screening landscaping as required.
- 3) The plan shall include the installation, establishment and maintenance of ground cover and other vegetation to minimize erosion, maintain soil health and accommodate the proposed use.

13) Emergency Services, Fire, and Safety Plan:

A plan including all means of managing an Extraordinary Event at the SECS Project Area shall include, but will not be limited to, the

following:

- 1) The project summary, electronic schematics, site plans, and emergency ingress / egress plans, with the location of the access drives and the width and load rating of the access drives.
- 2) Emergency contact information, which shall also be posted on the Project Area.
- 3) Description of how the fire safety system and its associated controls will function and be maintained in proper working order.
- 4) Fire protection and suppression systems for buildings that store batteries, hazardous materials, or compressed gases.
- 5) Site control measures during and after any emergency. All means of managing an emergency including shutting down the SECS shall be noted and clearly marked.
- 6) Procedures for inspection and testing of associated alarms, interlocks, and controls shall be noted on the plan.
- 7) Material Safety Data Sheet (MSDS) unless the SECS meets the reporting thresholds of Emergency Planning and Community Right to Know (EPCRA) Act in which case the applicant shall provide and submit a Tier II report if required by the EPA. The EPA requires Tier II reports for facilities that store hazardous chemicals above certain threshold quantities.
- 8) Electrical shock hazards and possible contact with hazardous substances or toxic fumes shall be identified.
- 9) The Owner / Operator shall update the Emergency Services and Fire Safety Plan annually in collaboration with Barton County Emergency Management, and provide new copies to the SECS Owner / Operator, the local fire district, emergency response agencies, Barton County Emergency Management, and the Barton County Zoning Administrator.
- 10) Any specialty response equipment required to adequately manage Extraordinary Events will be provided, updated, and / or replaced by the owner / operator, as needed and at the owner / operator's expense.
- 11) Annual Emergency and Extraordinary Event response training will be provided for all emergency response stakeholders on the

plan, Project Area, equipment, and processes required to assure their safety and effective management during an event.

14. Solar Glare Hazard Analysis:

The applicant shall provide a Solar Glare Hazard Analysis utilizing the latest version of the Solar Glare Hazard Analysis Tool (SGHAT), or its equivalent.

15. Groundwater Monitoring Plan.

The plan shall outline a procedure to characterize and document the water health, a pesticide panel and any heavy metals present at the following phases: before construction begins, when construction is complete, prior to renewing a CLUP, prior to beginning decommissioning and reclamation, and following decommissioning / reclamation of the site. The applicant shall contract with a third party, approved by the Barton County Zoning Administrator, for conducting all water sampling, at the Owner / Operator's expense. All water tests shall be analyzed at Kansas certified labs that are certified for each compound tested.

- 1) With each approved SECS CLUP application; a water analysis of active wells shall be offered to all owners of property within one-quarter mile of the Project Area by certified mail, at least 90 days prior to beginning construction.
- 2) The test shall analyze the water in the nearby wells for substances such as lead, and cadmium as determined with the CLUP and shall include a pesticide panel. A pesticide panel includes four main substituent chemicals: herbicides, fungicides, insecticides, and bactericides.
- 3) The results of groundwater testing shall be provided to the Barton County Zoning Administrator and sent by certified mail to the landowners who requested the testing.
- 4) A copy of the certified letter and a list of property owners notified shall be provided to the Barton County Zoning Administrator along with a list of all property owners who requested the testing and the results of that testing. This must occur prior to beginning construction.
- 5) Water remediation plans shall be provided to the Barton County Zoning Administrator for review if contamination has occurred. In the event that contamination has occurred, the Barton County

Zoning Administrator will send the results of the water testing information to the appropriate authorities who will then determine a course of action. Remediation measures shall be implemented as approved. Remediation shall not be considered complete until the water quality results are within a range designated by KDHE, as established with the groundwater remediation plans.

- 6) Additional water test locations may be required.
- 7) Additional water tests may be required by Barton County or KDHE at the owner / operator's expense in the event that one or more panels are damaged to the point that leaching may have occurred or if damaged panels were not removed within thirty (30) days. In that case, a sample will be taken and analyzed from wells that are nearest to the location of the incident, and a report will be provided to the owner of the well and to the Barton County Zoning Administrator.

16. Soil Sampling Plan:

The plan shall outline a procedure to characterize and document the soil health and any heavy metals present at the following phases: before construction begins, when construction is complete, prior to renewing a CLUP, prior to beginning decommissioning and reclamation, and following decommissioning and reclamation of the site. The applicant shall contract with a third party, approved by the Barton County Zoning Administrator, for conducting all soil sampling, at the owner / operator's expense.

- 1) The soil sampling plan shall include, but is not limited to, the following:
  - a). Total carbon (organic and inorganic);
  - b). Phospholipid fatty acid (PFLA) for soil health; and
  - c). Heavy metals such as lead, and cadmium as determined with the review of the CLUP.
- 2) The surface soil sample locations shall be established prior to construction and will be utilized for each scheduled sampling event.
- 3) A map of sampling locations shall be included with the plan.
- 4) A photo of each sample that demonstrates the location within the

site and current vegetation shall be provided.

- 5) Sampling shall occur at one twenty five (25) foot by twenty five (25) foot sampling site within each discrete fenced area in a location deemed to be representative of the vegetation and soil conditions for the fenced area. Fenced areas exceeding forty (40) acres will require additional sampling in order to obtain the equivalent of one sample representing a maximum of forty (40) acres.
  - 6) Subsamples of soil shall be taken of the upper 0-6 inches of soil, with five (5) subsamples combined and mixed to form a representative sample for each 25-foot by 25-foot sample site designated on the map.
  - 7) Additional soil tests and test locations may be required by Barton County or KDHE at the owner / operator's expense in the event that one or more panels are damaged to the point that leaching may have occurred or if damaged panels were not removed within thirty (30) days. In that case, a sample will be taken at the location of the incident and a report will be provided to the Barton County Zoning Administrator.
  - 8) Additional soil test locations may be required.
  - 9) All soil tests shall be conducted at EPA certified labs that are certified for each compound tested. The phospholipid fatty acid (PLFA) may be tested by a non-EPA lab if needed.
  - 10) Soil remediation plans shall be provided to the Barton County Zoning Administrator for review if contamination or soil degradation has occurred. Remediation measures shall be implemented as approved. Remediation shall not be considered complete until the soil testing results are within a range designated by KDHE, as established with the soil remediation plans.
  - 11) All required soil test results shall be sent by certified mail, with chain of custody, from the testing lab to the Barton County Zoning Administrator.
17. Abandonment, Decommissioning, and Reclamation Plan:

A decommissioning and reclamation plan shall be required to ensure that SECS components are safely removed after their useful life. Decommissioning of solar panels must occur in the event that they do



not produce electricity, have no demonstrated plan to restore to operating condition, and before the end of the lifespan of the CLUP.

- 1) To verify production level, a report of power generated by the SECS shall be submitted to the Barton County Zoning Administrator annually.
- 3) The Barton County Zoning Administrator shall issue a notice of Abandonment to the owner / operator of the SECS. The owner / operator shall have the right to respond to the Notice of Abandonment within thirty (30) days from the Notice receipt date.

The Barton County Zoning Administrator may withdraw the Notice of Abandonment and notify the owner / operator that the Notice has been withdrawn if the owner / operator provides sufficient information to demonstrate that the SECS has not been abandoned, which may include documentation or certification by the owner / operator of the local electric utility, or that the owner / operator is actively pursuing a plan, including specified steps and a proposed schedule acceptable to the Barton County Zoning Administrator, to bring the SECS back into service.

- 3) The decommissioning and reclamation plan shall include provisions for removal of all structures, foundations, underground wiring and any and all materials foreign to the Project Area prior to installation.
  - a) All cables buried thirty-six (36) inches or less underground must be removed. Cables that are deeper than thirty-six (36) inches may remain if the following requirements are met: a map of the buried lines is provided to One Call and an affidavit is attached to the deed of the property to note that buried cables, deeper than thirty-six (36) inches, are present on the property.
- 4) The decommissioning and reclamation plan must ensure the Project Area will be reclaimed to a useful, nonhazardous condition without delay including regrading with a minimum of ground disturbance, seeding of the land after the removal of equipment, and revegetation of reclaimed soil areas with crops or native seed mixes, excluding any invasive species.
- 5) The decommissioning and reclamation plan must include a description of how any changes to the surrounding areas and any other part of the SECS adjacent to the battery energy storage system, such as, but not limited to, structural elements, means of

egress, and required fire detection suppression systems, will be protected during decommissioning and confirmed as being acceptable after the SECS is removed.

- 6) The decommissioning and reclamation plan must provide that soil shall be tested following removal of equipment and compared with preliminary soil testing to evaluate any soil contamination and develop a remediation program, if needed.
- 7) Concrete and other materials used in the construction and operation of the SECS must be removed. If discarded in Barton County, it must be discarded in a manner that complies with the Barton County Solid Waste Management Plan. Disposal of all solid and hazardous waste must be in accordance with local, state, and federal waste disposal regulations.
- 8) For any part of the project on leased property, the decommissioning and reclamation plan may incorporate agreements with the landowner regarding leaving access roads, fences, gates, or repurposed buildings in place or regarding restoration of agricultural lands. Any use of remaining structures must be in conformance with the Barton County Zoning Regulations in effect at that time.
- 9) If the Barton County Zoning Administrator has issued a notice of abandonment, the permit holder will have one year to complete decommissioning of the SECS installation and reclamation of the Project Area. Decommissioning and reclamation shall be completed in accordance with the approved decommissioning and reclamation plan. The Owner / Operator shall notify the Barton County Zoning Administrator when decommissioning and reclamation is complete.
- 10) The decommissioning and reclamation plan shall include estimated decommissioning costs in current dollars and the method for ensuring that amount will be available for decommissioning and reclamation. The applicant shall provide the basis for estimates of net costs for decommissioning the Project Area (decommissioning costs less salvage value). The cost basis shall include a mechanism for calculating adjusted costs over the life of the SECS.

18. Bond Requirements:

The applicant shall post a bond with the Barton County Clerk, establish an escrow account, or provide such other financial security deemed

acceptable by Barton County, in an amount equal to the estimated decommissioning costs, to ensure proper decommission and reclamation of the site.

- 1) Applicant agrees to, or to cause one of its Affiliates to, pay the premiums for, and to post any collateral required by the surety for, the Decommissioning Bond for the cost of returning the premises to its pre-project condition. The amount of the decommissioning bond shall be determined by a professional engineering firm proposed by the applicant and approved by Barton County to perform such a service.
- 2) The bond, or other financial security, shall be posted prior to the commencement of the use.
- 3) The bond, or other financial security, shall include a mechanism for adjustment over the life of the project.
  - a) The bond, or other financial security, shall be adjusted for inflation annually.
  - b) The SECS owner / operator shall engage a qualified individual to recalculate the estimated cost of decommissioning at an interval of every five years and every year for the final five years of the CLUP. If the recalculated estimated cost of decommissioning exceeds the previous estimated cost of decommissioning, then the owner / operator shall adjust their financial security to meet the new cost estimate. If the recalculated estimated cost of decommissioning is less than the previous estimated cost of decommissioning, then the Barton County Commission may approve reducing the amount of the security to the recalculated estimate of decommissioning cost.
- 4) In the event the owner / operator is in non-compliance or default due to non-payment, Barton County shall have the right to call said bond, or other financial security and use it for decommissioning purposes. Should there be any remaining balance, Barton County shall have the right to withhold payment of any refund until the decommissioning process is completed to Barton County's satisfaction.

8B-109. **Zoning Map.**

SECS shall have special permitting requirements in Barton County with reference to the Cheyenne Bottoms Basin. Refer to the following for all proposed Commercial

and Large Scale Non-Commercial SECS applications:

- (1) No Build Zone: From the intersection of NW 10 Avenue and NW 130 Road, then east to the intersection of NE 130 Road and NE 120 Avenue, then south to the intersection of NE 120 Avenue and NE 30 Road, then west along NE 30 Road extending to the intersection of NW 10 Avenue, then north to the point of origin. The NO Build Zone shall include all land within the described boundaries that are in the unincorporated jurisdiction of Barton County.