

**EDGERTON CITY COUNCIL
EDGERTON PLANNING COMMISSION
JOINT WORK SESSION AGENDA
CITY HALL
404 EAST NELSON STREET
September 23, 2021
6:00 PM**

1. Call to Order

2. Roll Call:

CITY COUNCIL

____ Roberts ____ Longanecker ____ Lewis ____ Brown ____ Beem

PLANNING COMMISSION

____ Daley ____ Berger ____ Crooks ____ Lebakken ____ Little

3. Utility-Scale Solar Installation Presentation by Johnson County Planning Staff

4. Adjourn

INVITATION TO DISCUSS AND COMMENT Utility-Scale Solar Facilities in Unincorporated Johnson County

August 25, 2021

To: City of Edgerton Planning Commission

Katy Crow, Director, City of Edgerton Planning Department

Fr: Chris Iliff, Chair, Johnson County Planning Commission

Jay C. Leipzig, AICP, Director

Re: Utility-Scale Solar Facilities: 1) invitation to comment on impacts of Utility-Scale Solar Facilities on city growth and development and 2) summary of draft amendments to the Johnson County Comprehensive Plan and Zoning Regulations

Introduction: Johnson County is currently updating the Comprehensive Plan and Zoning Regulations to address Utility-Scale Solar Facilities. A private utility provider, NextEra Energy, is considering a future solar facility in the unincorporated area and the Johnson County Planning Commission is reviewing new regulations to prepare for this type of use. Two primary differences between utility-scale and residential solar installations are that the electricity generated from a Utility-Scale Solar Facility is not used directly at the host site and that a utility-scale project often spans hundreds or thousands of acres of land.

Regulations Drafted: In response to this activity, Johnson County Planning staff has worked with an independent consultant to draft amendments to the County's Comprehensive Plan and Zoning and Subdivision Regulations for the regulation of Utility-Scale Solar Facilities. These draft regulations are currently being reviewed and revised by the Johnson County Planning Commission in preparation for a public hearing. *Highlights of proposed policy and development standards for Utility-Scale Solar Facilities, as currently contemplated, are summarized below.*

Comments Requested: As part of the review and discussion of the draft amendments, the Johnson County Planning Commission is requesting ***comments from surrounding cities regarding anticipated impacts of Utility-Scale Solar Facilities on future city growth and development.*** Due to the large scale of Utility-Scale Solar Facilities (-up to 2,000 acres as proposed) and long life span (usually at a minimum of between 20 to 40 years in length, but potentially even longer in duration), these uses may affect future growth areas. , the. In order to facilitate this discussion, the Johnson County Planning Commission is inviting surrounding city planning commissioners and staff to their September 28, 2021 meeting, as follows:

INVITATION TO SEPTEMBER 28TH PLANNING COMMISSION MEETING

DETAILS

Host: Johnson County Planning Commission

Date: September 28, 2021

Time: 5:45 P.M.

Type of Meeting: Zoom Webinar (online meeting and NOT in person)

Details and instructions regarding how to attend a Zoom online meeting will be posted on the Johnson County Planning Department website one week prior to the Planning Commission meeting on September 28, 2021, at the following online address.

<https://www.jocogov.org/dept/planning-and-codes/pln/home>

You are encouraged to check the website at least two (2) business days prior to the meeting for any updates.

Purpose: To discuss and gather comments from surrounding city representatives regarding the impacts of Utility-Scale Solar Facilities on their future growth and development.

Format: Planning staff will present a brief introduction to solar facilities and the proposed regulations followed by an opportunity for area cities to ask questions and provide comments. Written comments are also suggested.

JOHNSON COUNTY COMPREHENSIVE PLAN AMENDMENTS

The following are highlights of draft Johnson County comprehensive plan amendments regarding Utility-Scale Solar Facilities (USSFs):

Goal: *Utility-Scale Solar Facilities bring with them unique impacts to surrounding areas and can be an appropriate use within the county if associated land use considerations are properly identified and managed. With these draft amendments, the County is endeavoring to proceed with caution to avoid inundation by a single use.*

Unique Impacts Identified:

- Large scale & wide geographic distribution
- Intense site coverage
- Long life spans
- Future city development
- Rural character, open space, aesthetics
- Wildlife, stormwater & the environment

Selected Draft Policies relating to City Development:

1. **Provide for future city growth and development.**
 - a. Adopt permit term limits that do not exceed a prudent planning period.
 - b. Protect land areas for future development in general, and in particular, within 1 mile of the city fringe development areas.
 - c. Coordinate with the street and land use plans of cities in the fringe areas.
 - d. Adopt performance standards to control impacts affecting future city growth and development.
2. **Protect the unincorporated area from being inundated by this single use.**
 - a. Adopt size and geographic extent restrictions and distance limitations, plus site coverage limits.
 - b. Restrict site coverage to promote and protect stormwater concerns.
3. **Provide for efficient development of other infrastructure and services.**
 - a. Coordinate with the plans of area providers of infrastructure and services.

4. **Promote the county's rural character and open spaces.**

- a. Adopt performance standards to control impacts affecting rural character and open space, including but not limited to requirements related to setbacks and screening to protect views from roads and abutting properties; ground cover consisting of prairie grasses, forbs and pollinators to protect disturbed areas; wildlife corridors; Project Area limitations to control the overall scale of the solar facility; height, noise and lighting to maintain a rural and not an urban character; and a decommissioning and reclamation plan to ensure that solar facility equipment is properly removed from the Project Area and disturbed areas reseeded.

JOHNSON COUNTY ZONING REGULATION AMENDMENTS

The following are highlights of draft Utility-Scale Solar Facility Development Standards associated with a new conditional use permit designed to uphold the above policies:

Selected Development Standards regulating a new Solar Facility Conditional Use Permit:

1. Term: Up to 20 years.
2. Equipment: Includes photovoltaic panels, charge regulators, inverters, **substations** (which are also referred to as "transformers"), **Battery Energy Storage Facilities**, parking areas, and fencing.
3. Maximum Project Area: 2,000 acres (3.1 sq. mi.).
4. Distance from Cities: Greater than 1 mile. Excludes city "islands" that are less than 80 acres in size. *Waiver available, upon review and approval by the BOCC with findings that the waiver does not conflict with planned uses for the subject area.*
5. Distance from other Solar Facilities: At least 2 miles.
6. Development Ratio: PV Panel Coverage/Project Area up to 70%.
7. Setbacks: Photovoltaic panels at least 50 ft. from Project Boundary. Increased setback requirements from existing dwellings. *Waiver available, upon review and approval by the BOCC.*
8. Security Fencing: Placed around sections of PV panels and not entire Project Boundary in order to provide wildlife corridors. Not more than 12 feet in height. May be chain link but shall not include slats.
9. Ground Cover: Disturbed land shall be reseeded with prairie grasses, forbs and pollinators.
10. Screening: Roads, residential zoning and existing dwellings screened from view of photovoltaic panels, equipment and storage.
11. Battery Energy Storage Facilities and Substations: Additional requirements will apply.
12. Decommissioning and Reclamation: Includes a surety and reclamation plan requirement.

UPCOMING JOHNSON COUNTY PLANNING COMMISSION SCHEDULE – SOLAR FACILITIES

- **Special Meeting: Tuesday, September 14th at 5:45 P.M.** conducted as an online meeting by a medium of interactive communication (Zoom Webinar). See
 - Topic: General discussion let by solar facility consultant.
 - See above for instructions regarding how to attend a Zoom Webinar.
- **Regularly Scheduled Business Meeting: Tuesday, September 28th at 5:45 P.M.** conducted as an online meeting by a medium of interactive communication (Zoom Webinar).
 - **Topic: Utility-Scale Solar Facility impacts on the future growth and development of surrounding cities.**
 - See above for instructions regarding how to attend a Zoom Webinar.
- **Future Meetings:**
 - There is a possibility of additional meetings regarding solar facilities prior to scheduling a public hearing.
 - Check the Johnson County Planning Department website as indicated above for updated information as it becomes available.

Attachments: Aerial View of Solar Facility

Solar Facility located in Independence, Mo., with Photovoltaic Panels and Inverters

Diagram of Key Components of a Utility-Scale Solar Facility

Example Battery Energy Storage and Substations

Map of One-Mile Buffer from City Limits

Example Aerial View of Solar Facility (Sussex, VA)



Example Solar Facility

Independence, MO



Independence, Mo Solar Facility -- Continued

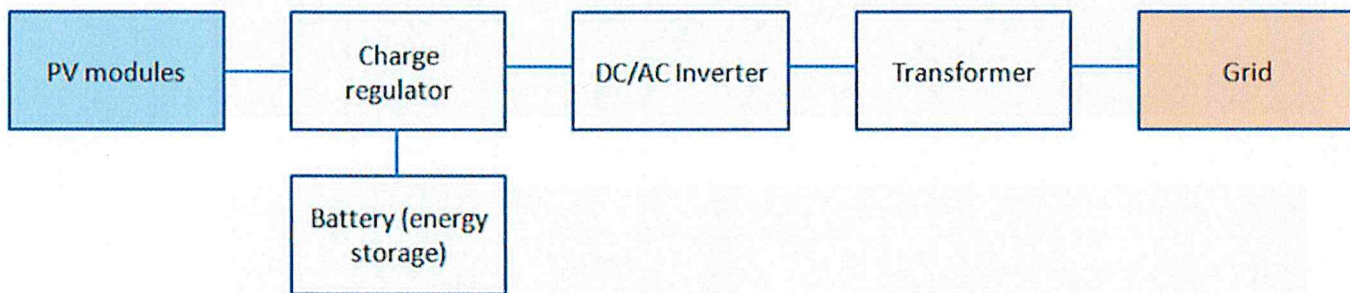
Photovoltaic Panels



Inverters



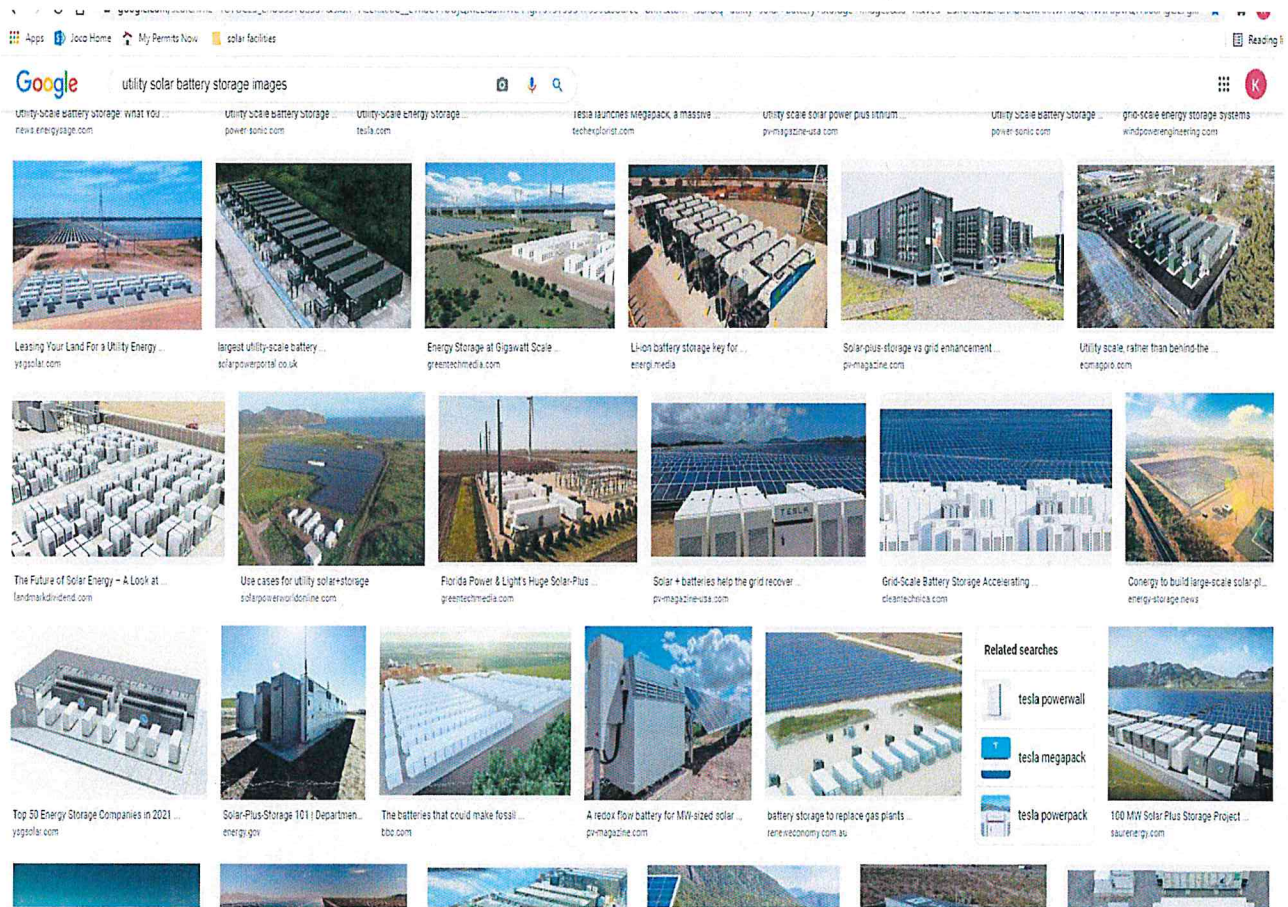
Key Components of a Utility-Scale Solar Facility



Notes:

- “Transformers” are also known as “Substations”.
- Battery Energy Storage is optional as part of a Solar Facility.

Example Battery Energy Storage



Example Electrical Substations (Transformers)



Cost Cutting Power Transformer Designs ...
industrytoday.com



11kv for Three Phase Solar Sy...
cnfarady.en.made-in-china.com



Smart power transformer maintenance ...
utilitymagazine.com.au



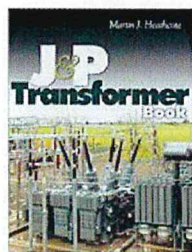
Power transformers | Transformers ...
siemens-energy.com



Digital twin of power transformer to be ...
smart-energy.com



Smart Transformer for Smart Grid ...
electricalindia.in



J & P Transformer Bo...
amazon.co.uk



Power Transformer Upgrades | SPX ...
envtransformersolutions.com



Power Transformer Industry - ...
facebook.com



First bullet resistant retrofit ordered ...
siemens-energy.com

One-Mile Buffer from City Limits

