ARTICLE 31: SOLAR ENERGY SYSTEMS

Sec. 31-1. Intent

The intent of this Article is to facilitate the siting, development, construction, installation, and decommissioning of solar energy systems in a predictable manner that promotes and protects the safety, health, and welfare of the community. This Article encourages the appropriate siting of solar energy systems to bolster local economic development and job creation, diversify the state's energy portfolio, strengthen energy and grid security, and reduce other environmental impacts. The appropriate siting of solar energy systems considers, avoids to the extent possible, and mitigates any adverse impacts to wildlife, productive and nationally important agricultural lands, forests, endangered species habitat, and historic, natural, and other sensitive lands. The appropriate siting of solar energy systems also establishes standards and requirements to assure that the use and enjoyment of lands located adjacent to and in the proximity of solar energy systems are fully protected.

Sec. 31-2. Definitions

a) *Solar Energy System (SES)* means a device, including its components and subsystems that collects solar energy for electricity generation, consumption, or transmission, or for thermal applications. SESs are categorized as three types depending on how the system is incorporated into the existing land use:

   1) *Integrated Solar Energy System* means an SES where the solar materials are incorporated into the building materials, such that the building and solar system are reasonably indistinguishable, or where the solar materials are used in place of traditional building components, such that the SES is structurally an integral part of the house, building, or other structure. An Integrated SES may be incorporated into, among other things, a building façade, skylight, shingles, canopy, light, or parking meter.

   2) *Rooftop Solar Energy System* means an SES that is structurally mounted to the roof of a house, building, or other structure and does not qualify as an Integrated SES.

   3) *Ground Mounted Solar Energy System* means an SES that is structurally mounted to the ground and does not qualify as an integrated SES. Ground Mounted SESs are subcategorized as follows:

      (a) *Small Scale Ground Mounted Energy System (Small Scale SES)* which is a Ground Mounted SES with a footprint of less than two thousand five hundred (2,500) square feet.

      (b) Intermediate Scale Ground Mounted Energy System (Intermediate Scale SES) which is a Ground Mounted SES with a footprint of between two thousand five hundred one (2,501) square feet and five (5) acres.

      (c) Large Scale Ground Mounted Solar Energy System (Large Scale SES) means a Ground Mounted SES with a footprint of more than five (5) acres.

b) *Exempt Solar Energy System (Exempt SES)* means a SES that is a facility of a municipally owned electric system or public utility regulated by the Kentucky Public Service Commission or Federal Energy Regulatory Commission, which is exempt from planning and zoning requirements under KRS 100 and otherwise in conformance with then-existing law or regulation.

c) *Footprint* of the SES is calculated by drawing a perimeter around the outermost SES panels and any equipment necessary for the equipment to function, such as transformers, ~~and~~ inverters, and co-located battery storage. The footprint does not include perimeter fencing or visual buffers, nor transmission lines or portions thereof that are required to connect the SES to a utility or customer outside the SES perimeter.

d) *Siting Board Regulated SES* means a SES that constitutes a "merchant electric siting facility" under KRS 278, the construction and siting of which is subject to review and approval of the Kentucky State Board on Electric Generation and Transmission Siting. A merchant electric siting facility is an electricity generating facility or facilities that, together with all associated structures and facilities are capable of operating at an aggregate capacity of ten megawatts (10 MW) or more and sell the electricity produced in the wholesale market, at rates and charges not regulated by the Kentucky Public Service Commission.

e) *Farmland of Statewide Importance* means a map unit identified by the Natural Resources Conservation Service as including soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods.

f) *Prime Farmland* means a map unit identified by the Natural Resources Conservation Service of the United States Department of Agriculture as having the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available to these uses.

g) *Brownfield Property* is real property, the expansion, redevelopment, or reuse of which may be complicated by the presence of a potentially hazardous material, substance, or contaminant including but not limited to potentially contaminated lands, landfills, and mine sites.

Sec. 31-3. Applicability

a) This Article applies to the siting, construction, installation, and decommissioning of any new SES within the jurisdiction of the Lexington-Fayette Urban County Government after the effective date.

b) An SES in operation, or which has begun physical construction prior to adoption of this Article, shall be considered to have legal nonconforming status in accordance with KRS 100 and Article Four.

c) Any Exempt SES shall provide the Lexington-Fayette Urban County Planning Commission ("Planning Commission", Lexington-Fayette Urban County Board of Adjustment ("Board of Adjustment"), or other Lexington-Fayette Urban County authority having jurisdiction, with information concerning service facilities which have been located on and relocated on private property in accordance with KRS 100.

Sec. 31-4. Permitted Uses, Accessory Uses, and Conditional Uses

P: Principal Use. The SES is a use that is permitted as a principal use in a specified zone, subject to the requirements contained herein.

CUP: Conditional Use Permit required. The SES is permitted as a conditional use in a specified zone subject to the review of the Board of Adjustment and the requirements contained herein.

A: Accessory Use. Within the urban zones, Ground Mounted SES may only qualify as accessory if the total area of the system is less than fifty (50) percent of the floor area of the principal structures on the lot. Within the agricultural zones, accessory Ground Mounted SES shall only be allowed if the total area of the system is less than fifty (50%) percent of the area of the property.

X: Prohibited

With the exception of sites utilizing the Brownfield exemption outlined in Section 31-8, the following table outlines the allowance of Solar Energy System uses by zone.

ZONES	**R-1A, R-1B, R-1C, R-1D, R-1E, R-1T, R-2, R-3, R-4, R-5, EAR-1, EAR-2, EAR-3, M-1P**	**B-1, B-2, B-2A, B-2B, B-3, B-5P, B-6P, P-1, P-2, CC**	**B-4, I-1, I-2, ED**	**A-R, A-B, A-N A-U**
Integrated SES	A	A	A	A
Rooftop	A	A	A	A
GROUND MOUNTED SES				
Small Scale	~~CUP~~ A	A	P	A
Intermediate Scale	X	A	P	~~CUP~~ X
Large Scale	X	X	CUP	X

Sec. 31-5. General Requirements Applicable to Integrated and Rooftop Solar Energy Systems

a) *Height Restrictions.* A rooftop SES shall be subject to the following regulations:
   1) No solar energy system shall be mounted or affixed to any freestanding wall or fence.
   2) A rooftop solar energy system shall not extend beyond the edge of a roof.
   3) Solar panels installed on a building with a sloped roof shall not project vertically more than four feet above the roof surface, ridge line, or highest point of the roof.
   4) Solar panels installed on a building with a flat roof shall not extend more than ten (10) feet above the highest point of the roofline.

b) *Lighting.* Integrated and Rooftop SESs shall not be illuminated.

Sec. 31-6. General Requirements Applicable to Ground Mounted SESs

a) *Lot Coverage*. Solar Energy Systems shall not be included within calculations of minimum lot coverage, or floor area ratio. Solar energy systems utilizing vegetative ground cover shall not be included in calculations of maximum lot coverage.

b) *Height Requirements* for Ground Mounted SES. A Ground Mounted SES shall not exceed twenty (20) feet in height as measured from the highest natural grade below each solar panel. The height restriction excludes utility poles, storage batteries, substation structures, and antennas constructed for the project.

c) *Siting Restrictions for Ground Mounted SES*.

1) An Intermediate or Large Scale Ground Mounted SES~~, measured from the closer of the outer edge of the nearest panel or perimeter fencing,~~ shall be located at least fifty (50) feet from the property line of any property located within an agricultural or residential zone, at least thirty (30) feet from the property line of any property zoned for commercial, business, industrial, office, or mixed use, and at least fifty (50) feet from the centerline of any public road. The distance shall be measured from the property to the nearest panel and fencing may be installed within the setback.

2) An Intermediate or Large Scale Ground Mounted SES~~, measured from the closer of the outer edge of the nearest panel or perimeter fencing,~~ shall be located no closer than one hundred (100) feet from a residence located on a property other than that on which the Ground Mounted SES is to be installed. The distance shall be measured from the property to the nearest panel and fencing may be installed within the setback.

3) These setback provisions above can be waived in writing by the adjacent property owner to whom the property line or residence setback is applicable.

d) *Screening*. Ground Mounted SESs approved as a conditional use or those utilizing the brownfield exemption in Section 31-8 below shall be screened as per Article 18-3(a)(1)(6). For SES approved as a conditional use, the Board of Adjustment may modify the required screening as needed in order to ensure a reasonable visual buffer is provided.

e) *Signage*. A Ground Mounted SES may include such signage as is required by law.

f) *Ground Cover ~~within the Agricultural Zones~~:* Ground Mounted Solar Energy Systems ~~within the Agricultural Zones~~ shall utilize vegetative ground cover underneath the panels, and the project area must contain a minimum of eighty-five percent (85%) vegetative coverage.

g) *Maximum Land Utilization.* No more than one percent (1%) of the land in Fayette County can be used for Large Scale Ground Mounted Solar Energy Systems, in the Agricultural zones.

~~h) For any *Large Scale SES located in an A-R or A-U zone*,~~

~~There shall be a vegetative cover requirement, and applicant shall provide to the Directors of the Division of Planning, Building Inspection, and Environmental Services, and the authorized Lexington-Fayette Urban County Government, a Land Management Plan which shall be reviewed and updated, if appropriate, every five (5) years at the same time as the review of the Decommissioning Plan.~~

~~A Land Management Plan shall include: baseline soil conditions, periodic evaluation of soil conditions, pasture and other ground cover composition, fertilization, pest control, livestock utilization, soil compaction, minimization for staging areas, the decompaction and restoration of all temporary roads and installation staging areas, fencing, and access control.~~

~~The Land Management Plan shall also include a description of the measures that will be taken to minimize erosion and sedimentation, and to promptly stabilize and revegetate any disturbed areas with native vegetation.~~

~~i)~~ h) *Community Benefits Plan.* The applicant may enter into a Community Benefits Plan with the LFUCG or one or more community-based organizations within Lexington Fayette-County.

1) The community benefits plan shall prioritize alleviating energy costs to low-income households.

2) The suggested community benefits plan amount should align with fair-market investment standards and be provided for no-less than twenty (20) years, unless the total investment is provided upfront. The suggested minimum contribution is $750/MWdc of solar array capacity.

3) *Form and Content of a Community Benefits Plan.* Should the applicant elect to execute one or more Community Benefits Plans within Lexington-Fayette County for the purpose of demonstrating the community benefits promoted by the proposal and elicit the support of community-based organizations for the proposal, such plan(s) may address, but shall not be limited to the following recognized community benefits:

(a) Workforce Development: The plan(s) may describe how the proposal promotes workforce development in the community, including the creation of jobs, collaboration with local workforce partners, and shall give priority in any workforce development initiatives to residents of Lexington-Fayette County.

(b) Developer Community Fund: Appropriate Community Fund purposes may include, but are not limited to, providing relief from high energy costs to low-income households; supporting environmental restoration and climate resiliency efforts; funding local agricultural programs; providing community education opportunities; and promoting health, welfare, well-being, and economic livelihood of local communities.

4) The community benefits plan must be in compliance with all local, state, and federal codes, statutes, and regulations.

i) *Decommissioning*. Whenever an application for an intermediate or large scale ground mounted SES is submitted for review, such application shall include a decommissioning plan that shall describe how the use will be decommissioned and dismantled following the discontinuance of the use. A SES shall be considered discontinued after ~~one year~~ six months of no energy production. Such a plan shall be reviewed and updated every five (5) years and contain the following:

1) The anticipated life of the project and defined conditions upon which decommissioning will be initiated;

2) The estimated decommissioning cost, including removal of the SES and related foundations, pads, underground collector lines, and roads, and the salvage value of any equipment in current dollars, and the calculations supporting the decommissioning estimate. The estimated salvage value of the material using current, publicly available material indices and/or firm quotes from a decommissioning or recycling company experienced in the decommissioning of SES, shall be provided. The Board of Adjustment or other authority having jurisdiction shall consider the salvage value identified in computing the amount, if any, of financial assurance required under subsection 5 below.

3) ~~The manner in which the project will be decommissioned, including provision and timetable for the removal of all structures, equipment, and foundations up to a depth of 36 inches, and for the revegetation and restoration of the property to its original condition.~~ For all Ground Mounted SES, all structures and facilities, including foundations and conduit, associated with the SES shall be removed within six (6) months of the beginning of decommissioning. All materials shall be recycled or otherwise reused to the extent reasonably practicable and the disturbed areas shall be reclaimed, revegetated, and restored consistent with the zoning classification of the property.

4) The party responsible for decommissioning;

5) A performance bond, letter of credit, or other financial assurance sufficient to cover the net costs identified in ~~subsection F.2~~ section (i)(2) and to assure that decommissioning of the site can be achieved by a third party in the event that a permittee defaults in that obligation, which financial assurance shall be provided prior to commencement of construction. The amount of the proposed bond or similar security shall be determined by an independent, licensed engineer. The proposed amount of the bond or similar security shall be the net present value of the total estimated cost of completing the decommissioning plan, less the current net salvage value of the SES's components.

Sec. 31-7. Conditional Use Permit Application Requirements

a) Applications for an SES requiring a conditional use permit shall include the following information:

1) Name, address, telephone number, and email address (if available) of the applicant, the project owner, and the project operator.

2) The address of the property on which the SES will be located and the property owner's name, address, telephone number, and email address if available.

3) Documentation, such as a deed, lease, or other agreement with the landowner, demonstrating the applicant's right to use and control the property.

4) A topographic map that depicts vegetative cover, watersheds, floodplains, and other geographic information about the property and surrounding area.

5) A conceptual description of the project, including the maximum number of modules, mounting type (fixed-tilt or tracking), system height, system capacity, installation method, total land area covered by the system, and information about all associated structures or facilities such as transformers, substations, feeder lines, and battery storage.

6) A conceptual site plan including property lines, zoning classification of the property and all adjacent properties, existing buildings and proposed structures, the proposed location of the solar equipment, transmission lines, any associated structures and facilities, and substations. The conceptual site plan shall also identify proposed roads, drives, and parking, fencing, or other methods to ensure public safety

7) A screening plan demonstrating how the use is proposed to be visually buffered. The plan shall include renderings of the proposal from all adjoining rights-of-way, as well as any adjoining residential uses. Additional buffering may be required by the Board of Adjustment to ensure the development does not negatively impact adjoining uses.

8) A map from the Natural Resources Conservation Service identifying prime farmland and farmland of statewide importance ~~(if in a district zoned as agricultural)~~, documentation from the U.S. Fish and Wildlife Service regarding the presence of any identified critical habitat for rare or endangered federal or state species. The application shall also contain a Federal Emergency Management Agency map delineating floodplains, shall include evidence of any water quality or stormwater permit needed for the project, ~~1~~ and shall contain a letter from the State Historic Preservation Office regarding known archaeological or cultural resources listed or eligible for listing on the National Register

9) Proof of adequate casualty and liability insurance covering installation and operation of the SES;

10) ~~For Conditional Use Permits for SES within an Agricultural zone, T~~the Board shall consider the impact of the proposal on the existing soils and topography as well as the compatibility of the proposed SE~~S~~s with adjacent ~~agricultural use of the~~ land uses. Developments should work with the existing topography, with grading, compaction, and tree removal minimized to the extent possible. When grading is approved, topsoil shall be retained on-site and re-established as a part of the decommissioning plan.

11) Where the applicant for a Conditional Use Permit is also seeking a construction certification pursuant to KRS 278.700 - 278.716, the applicant may submit a copy of a complete state siting board application and site assessment report meeting the requirements of KRS 278.706 and 278.7008 in lieu of the above requirements of Section 7(a) 1-7.

12) ~~For Conditional Use Permits for large-scale SES, the Board of Adjustment shall acknowledge the impact of the proposal and the benefits it may have on the community, including any Community Benefit Plan (CBP) in place.~~

~~(i) The applicant may enter into a Community Benefits Plan with the city or one or more community-based organizations Lexington-Fayette Urban County.~~

~~(ii) The amount suggested for the CBP is $750/megawatt sold, annually, for 15 years.~~

~~(iii) The Community Benefits Plan shall prioritize alleviating energy costs to low-income households.~~

For conditional use permits for Large Scale SES, applicants may provide the Board of Adjustment with information pertaining to any Community Benefits Plans (CBP) or other binding agreements that they have entered into related to their proposal.

13) If the SES will include a battery storage system (BESS), the application shall include a hazard assessment regarding the potential risks associated with the proposed battery storage. The assessment shall include a clarification that the BESS conforms to NFPA 1: Fire Code, NFPA 70: National Electric Code, NFPA 855: Standard for the Installation of Stationary Energy Storage Systems.

b) All dimensional standards, height restrictions, lighting, farmland conservation, and setbacks, and other requirements for siting, construction, operation, and decommission of Small, Intermediate, or Large Scale Ground-Mounted SES required to obtain a Conditional Use Permit pursuant to this ordinance, shall be applicable to any battery energy storage

(BESS) proposed to be sited and located in conjunction with the ground mounted system.

Sec. 31-8. Exception for Brownfield properties

a) Ground Mounted Solar Energy Systems shall be permitted within any zone if the project is located entirely within the boundaries of an identified Brownfield, including but not limited to potentially contaminated land, landfills, and mine sites.

b) Applicants seeking a Brownfield Exception must provide one of the following:

   i. An Environmental Site Assessment conducted by a Qualified Environmental Professional (QEP) to determine if the site meets the criteria for a brownfield property.

   ii. Formal state or federal certification confirming the property's status as a brownfield.