

**Sec. 320.415. Solar Energy Systems (SES).**

**Sec. 320.415.01. Purpose.**

The purposes of [section 320.415] are to:

- (A) Facilitate the siting, development, construction, installation, and decommissioning of solar energy systems, hereinafter referred to as SES, in the City of Richmond in a predictable manner that promotes and protects the safety, health and welfare of the community; and
- (B) Provide a framework for the development for SES, which balances the benefits of renewable energy production and economic development with the protection of local agriculture, existing residential uses and the existing built environment, and historic, natural, and other sensitive areas and;
- (C) To harmoniously integrate SES to ensure consistency with the Comprehensive Plan.

**Sec. 320.415.02. Intent.**

To provide a regulatory framework for the siting, construction and operation of SES within the City of Richmond.

**Sec. 320.415.03. Applicability.**

The provisions of this section are applicable to those districts which permit SES within the City of Richmond and governs the siting of SES and related substations, maintenance facilities and other accessory facilities, as defined, that are ancillary to SES. Any reference to applicant, operator or successor is intended to refer to an entity that is a responsible party in terms of being continually required to abide by the provisions of this chapter and similarly is bound by any agreement entered into with the City of Richmond. Routine maintenance and repair, including the replacement of solar panels, which does not increase the SES footprint or modifications to an existing SES alone or in combination that increases the total SES footprint by no more than five percent of the original footprint does not require subsequent applications under this section.

**Sec. 320.415.04. Prohibition.**

No entity or applicant shall construct, operate, or locate an SES within the City of Richmond, without first having applied for and obtained a permit under this section 320.415 and having fully complied with the provisions hereof.

**Sec. 320.415.05. Conflict with other regulations.**

Nothing in this chapter is intended to preempt other applicable state and federal laws or regulations, including compliance with all Federal Aviation Administration rules and regulations. Nor are they intended to interfere with, abrogate, or annul any other ordinance, rule, or regulation, statute or other provisions of law. In the event that any provision of these regulations imposes restrictions different from any other ordinance, rule, regulation, statute, or provision of law, the provisions that are more restrictive or that imposes higher standards shall govern.

**Sec. 320.415.06. Definitions.**

*Agricultural district* means any land that is zoned AG, Agricultural.

*Agricultural solar energy system (Ag SES)* means a SES that is used to provide the energy needs of a farm consisting of at least five contiguous acres conducting an agricultural land use described in KRS 100.111. SES that qualify as merchant electric generating facilities as defined in and regulated by KRS 278.704 are not considered Ag SES.

*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 100.324.

*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.

*Floodplain* means any land area susceptible to being inundated by flood waters from any source.

*Floodway* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

*Footprint of the SES* is calculated by drawing a perimeter around the outermost SES panels and any fencing or equipment necessary for the equipment to function, such as transformers, inverters, and storage batteries as well as all leased and purchased land, visual buffers, and transmission lines or portions thereof that are required to connect the SES to a utility or customer outside the SES perimeter.

*Net metering* means allowing residential, commercial and industrial customers who generate their own energy from a solar system to sell any excess energy back to their provider.

*Operator* means any person or entity responsible for the daily operation and/or that claims ownership and benefits economically from the operation of an SES facility.

*Planning commission* means the Richmond Planning Commission, the local land use planning body for the City of Richmond.

*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 for these uses.

*Siting board regulated SES* means an SES that constitutes a "merchant electric siting facility" under KRS 278.700(2), 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

(MW) or more and sell the electricity produced in the wholesale market, at rates and charges not regulated by the Kentucky Public Service Commission.

*Solar array* means one or more rows or sections of solar panels.

*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 in turn divided into three types depending on how the system is incorporated into the existing land use:

- *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.
- *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.
- *Ground mounted solar energy system* means an SES that is structurally mounted to the ground and does not qualify as an integrated SES or rooftop SES. Ground mounted SESs are subcategorized as follows:
  - *Small scale ground mounted energy system (small scale SES)* which is a ground mounted SES with a footprint of less than 2,500 square feet.
  - *Large scale ground mounted energy system (intermediate scale SES)* which is a ground mounted SES with a footprint of between 2,501 square feet and ten acres. Large scale SES are considered SES in [section 320.415].

*SES structure* is anything constructed or made for use with SES, and which requires a permanent location in or on the ground or attachment to something having a permanent location in or on the ground.

#### **Sec. 320.415.07. District regulations.**

SES are permitted only in districts as specified in Land Use and Development Code Section 406, Land Use Classification and Designation.

##### **Roof Mounted SES**

The owner shall provide evidence certified by an appropriately licensed professional that the roof is capable of supporting the collateral load of the SES. SES mounted on roofs of any building shall be subject to the maximum height regulations specified for principal and accessory buildings within the applicable zoning district. All SES shall be situated to eliminate concentrated glare onto nearby structures or roadways. All roof buffer zones must comply with the applicable building code. All reasonable efforts, as determined by the Department of Codes and Planning, shall be made to ensure any SES is consistent with the character of the community via consistency with local neighborhood area, maintenance of scenic views,

maintenance of open space land and farms, and Richmond’s Comprehensive Plan, and associated Land Development Code.

Where an integrated or rooftop SES is proposed to be installed on a structure located within a designated historic district, the proposed installation may require a Certificate of Appropriateness issued by the Board of Architectural Review. Large-scale SES are prohibited within the incorporated limits of the City of Richmond.

**Ground Mounted SES**

Ground mounted shall not be permitted within residential districts of the City of Richmond. All SES should be designed and located to ensure solar and physical access without reliance on and/or interference to/from adjacent properties.

Components of a ground mounted SES shall not be placed within any legal easement or right-of-way location, or be placed within any stormwater conveyance system, or in any other manner that would alter or impede stormwater runoff from collecting in a constructed stormwater conveyance system.

Ground mounted SES must be ancillary to a primary structure on the same lot.

**Sec. 320.415.08. Setback and buffer requirements.**

(A) *Minimum setback distances and buffer widths for ground-mounted SES structures.*

Horizontal distance from a...	Minimum Setback Distance (measured in feet)
Private property line of any land used for Business or Industrial purposes, measured from the nearest edge of the project footprint to the property line	50 15-foot vegetative buffer
Residential dwellings, institutional buildings, public or semi-public institutions such as schools and churches and historical landmarks measured from the nearest edge of the project footprint to the nearest corner of the structure.	500 50-foot vegetative buffer
Public road right-of-way, measured from the nearest edge of the project footprint to the edge of the right-of-way	100 <sup>1</sup> 25-foot vegetative buffer
Other rights-of-way, such as railroads and public utility easements, measured from the nearest edge of the project footprint to the edge of the right-of-way	50 15-foot vegetative buffer
Public conservation lands, measured from the nearest edge of the project footprint to the nearest point of the public conservation land in question	250 50-foot vegetative buffer

Regulatory floodways or floodplains, as defined by the Federal Emergency Management Agency, measured from the nearest edge of the project footprint to the nearest point of the floodplain or floodway in question.	250 25-foot vegetative buffer
Wetlands, as defined by the U.S. Army Corps of Engineers, measured from the nearest edge of the project footprint to the nearest point of the Wetland in question.	250 25-foot vegetative buffer

<sup>1</sup>The setback shall be measured from future public rights-of-way width if a planned public road improvement or expansion is known at the time of application. An exception to this setback requirement may be made if SES are located behind the primary structure and are not visible from the public way.

(B) *SES ancillary structure setback.*

(1) SES primary structures and ancillary structures, such as substations and maintenance and operation facilities, are considered principal structures and subject to principal structure setbacks unless otherwise specified herein or if specifically identified as an accessory structure in Land Use and Development Code Section 408.2.

(2)

(C) *Secondary use setbacks.*

(1) Any SES located within the incorporated limits of the City of Richmond and located on a property with one or more existing primary uses is considered a secondary use and is subject to the setbacks detailed in section 320.415.08.

(2) Net metering on these locations is permitted.

**Sec. 320.415.09. Safety design and installation standards.**

(A) *Equipment type.* All solar panels shall be constructed of commercially available equipment.

(B) *Industry standards and other regulations.* All SES shall conform to applicable industry standards, as well as all local, state and federal regulations. An applicant shall submit certificate(s) of design compliance that solar panel manufacturers have obtained from Underwriters Laboratories, DNV-GL, or an equivalent third party.

(C) *Electrical components.*

(1) *Standards.* All electrical components of all SES shall conform to applicable local, state and national codes, and any relevant national and international standards.

(2) *Collection cables.* All electrical collection cables between each solar array and/or ancillary structures shall be located underground wherever possible unless organized with a cable management system that prioritizes safety and that loses none of the benefits of underground cable collection.

- (3) *Transmission lines/distribution lines.* All transmission and/or distribution lines that are buried should be at a depth consistent with or greater than local utility and telecommunication underground lines standards. Reasonable efforts shall be made to place all utility connections from the solar photovoltaic installation underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.
  - (4) *Batteries.* The installation of batteries must occur at the time of initial development; installation of batteries after initial development shall require additional permits.
- (D) *Reflective surfaces.* All surfaces shall be matte or non-reflective. Solar panels shall be as non-reflective as possible and conform to any Federal Aviation Administration requirements for SES near airports. All SES shall be situated to eliminate concentrated glare onto nearby structures or roadways.
- (E) *SES warnings and notices.* The following notices shall be clearly visible on SES facilities:
- (1) "No Trespassing" signs shall be attached to every perimeter fence.
  - (2) "Danger" signs shall be posted at a height of five feet on SES accessory structures.
  - (3) A sign shall be posted on SES structures showing an emergency telephone number, which shall be updated and current.
  - (4) The manual electrical and/or shutdown disconnect switch(es) shall be clearly labeled.
  - (5) Sign or signs shall be posted on the pad-mounted transformer and the substation(s) warning of high voltage.
  - (6) Private roads providing access to SES shall have posted an Emergency-911 address private road sign.
- (F) *Materials handling, storage and disposal.*
- (1) *Solid wastes.* All solid wastes whether generated from supplies, equipment, parts, packaging, operation or maintenance of the SES, including old parts and equipment related to the construction, operation and/or maintenance of the SES shall be removed from the site and disposed of in accordance with all federal, state, and local laws.
  - (2) *Hazardous materials.* All hazardous materials or waste related to the construction, operation and/or maintenance of any SES shall be handled, stored, transported and disposed of in accordance with all applicable local, state and federal laws.
- (G) *Maintenance*
- (1) The SES owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, vegetative screening, fences, landscaping and plantings, and integrity of security measures. The SES must be properly maintained and be kept free from all hazards, including, but not limited to faulty wiring, loose fastenings, being in an unsafe condition or detrimental to public health, safety, or

general welfare. Site access shall be maintained to a level acceptable to the fire marshal for emergency response. The owner or operate shall be responsible for the cost of maintaining the SES and any access road(s), including regular plowing of snow to maintain road access.

**Sec. 320.415.10. Other applicable standards.**

- (A) *Solar access.* Consistent with KRS 381.200(2), a property owner or developer may obtain a solar easement from another property owner for the purpose of ensuring adequate exposure to sunlight for a ground-mounted SES. Such easement shall be recorded.
- (B) *Lighting.* The lighting of SES shall be limited to the minimum necessary for safe operation, and shall be directed downward, incorporate full cut-off features, and incorporate motion sensors where feasible. Lighting shall be designed to avoid light trespass and prevent glare. Nothing in [section 320.415] is intended to preclude the installation of lighting required by the Federal Aviation Administration. Lighting shall be limited to that required for safety and operation and shall be shielded from interference with abutting properties. Lighting of the SES shall be directed downward and shall incorporate full cut-off-fixtures to reduce light pollution and shall otherwise comply with the provisions of Section 414 of the City of Richmond Land Use and Development Code.
- (C) *Height requirements.*
  - (1) Ground-mounted SES shall not exceed 10 feet in height as measured from the highest natural grade below each solar panel without approval by the appropriate Board of Adjustment. The height restriction excludes utility poles, substation structures, and antennas constructed for the project. A ground-mounted SES may exceed 15 feet in height upon a finding that the SES would be more productive, use less land, or provide other environmental, economic, or other benefits if the height limitation is increased.
  - (2) Rooftop SES shall conform to any height restrictions for roof-mounted mechanical devices or equipment for the applicable zoning district and may exceed the maximum permitted height for the structure type by no more than five feet. A rooftop SES shall be positioned on the roof so as not to extend above or beyond the edge of any ridge, hip, valley, or eave, provided that where it is mounted on a sloped roof, the SES shall not vertically exceed the highest point of the roof to which it is attached by more than five feet.
- (D) *Sewer and water.* All facilities or structures that are part of the SES project shall comply with the existing sewer, water, and gas regulations.
- (E) *Noise and vibration.*
  - (1) No SES or ancillary structure shall be located so as to create a decibel level greater than 30 dB at the property line of the parcel in which an SES is located and also less than 50 dB(C) at the property lines of the parcel in which an SES is located. These noise limits shall apply only to the normal operation of SES and supporting equipment, excluding the use of equipment inherent to general human habitation, such as automobiles. Any SES located within the incorporated limits of the City of

Richmond shall be subject to the City of Richmond Code of Ordinances which shall have primacy over the above noise limits.

- (2) The application shall include a pre-construction sound study that establishes the ambient sound conditions in the proposed project area and surrounding the project area with a perimeter of one mile. The sound study shall be performed by a certified independent acoustical engineer. The sound study must provide a description of the testing, sampling and process methodology used in determining the ambient measurement. The firm with which the engineer is associated shall be a member of the National Council of Acoustical Consultants (NCAC) with a specialty in environmental noise, and the independent acoustical engineer shall be a Member, Board Certified of the Institute of Noise Control Engineering of the USA.
- (3) Within 12 months after the date when the project is fully operational the operator shall conduct a two-phase post-construction sound study conducted by an independent accredited sound engineer chosen by the Planning Commission and paid for by the applicant/operator. Post-construction sound level measurements shall be taken both with all SES systems running and with all SES systems off. The post-construction sound measurements shall be reported to the Planning Commission and made available for public review.
- (4) If sound measurements from the post-construction analysis show levels above what is permitted by [section 320.415], the operator shall take all necessary steps to remediate the problem.

(F) *Protection of farmland and revegetation of disturbed areas.*

- (1) Compaction of soil associated with the location of roads and installation staging areas for ground-mounted SES on land zoned for agricultural use shall be minimized to the extent possible. Compaction of soil associated with the location of roads and installation staging areas for all ground-mounted SES on land zoned for agricultural use that is classified either as prime farmland or farmland of statewide importance shall be avoided to the extent possible, and the soils shall be de-compacted as part of the decommissioning process.
- (2) Upon completion of construction and installation of the ground-mounted SES, all temporary roads constructed by the applicant shall be removed, and all disturbed areas shall be graded and reseeded with short-term cover crops and sustainable, non-weed native vegetation in order to establish an effective ground cover and to minimize erosion and sedimentation. The permanent location of solar arrays on impermeable surfaces, including but not limited to gravel and asphalt, is prohibited. Temporary roads may remain upon request by the property owner.

(G) *Water runoff.* Concentrated discharge of stormwater runoff from SES facility solar arrays shall be carefully managed to prevent soil scouring, erosion, and contamination, the details of which shall be described in the Erosion Control/Stormwater Runoff Plan required in Section 415.17(D). Water runoff, soil scouring, erosion, and contamination shall be managed from design through the decommission of the project.



- (H) *Historic preservation.* Where an integrated or rooftop SES is proposed to be installed on a structure located within a designated historic district, the proposed installation may require a certificate of appropriateness issued by the Board of Architectural Review.
- (I) *Signage.* All signs pertaining to a SES project must comply with section 411, sign regulations, unless otherwise specified or elsewhere in [section 320.415]:
  - (1) No sign shall exceed 16 square feet in surface area except development signs.
  - (2) No sign shall exceed eight feet in height.
  - (3) The manufacturer's or operator's company name and/or logo may be placed upon the compartment containing the electrical equipment in accordance with customary practice.
  - (4) An identification sign relating to the SES project development shall be located on each side of the total SES project area. There shall be at least one sign for every quarter-mile of fencing along the edge of the project footprint. Development signs must be sized and placed in compliance with section 411 and must include seven day per week contact information to reach a responsible representative of the operator with authority to resolve problems associated with the development of an SES project.
  - (5) No other advertising signs or logos shall be placed or painted on any structure or facility with the exception of an identifying sign at the operation and maintenance facility. Solar energy systems shall not be used for displaying any advertising.
- (J) *Feeder lines.* Feeder lines (lines at distribution levels) installed as part of any SES shall not be considered an essential service. To wit, all communications and feeder lines installed as part of any SES shall be buried underground wherever possible unless organized with a cable management system that prioritizes safety and that loses none of the benefits of underground cable collection.
- (K) *Other appurtenances.* No appurtenances other than those associated with the SES construction, operations, maintenance, decommissioning/removal, and permit requirements shall be connected to any SES structure except with express, written permission by the Board of Adjustment.

**Sec. 320.415.11. Operation and maintenance of ground mounted SES.**

- (A) *Physical modifications.* In general, any physical modification to any SES that alters major electrical components shall require re-certification. Like-kind replacements shall not require re-certification. Therefore, prior to making any physical modification, the operator shall confer with the Planning and Zoning Administrator/Building Official for the City of Richmond to determine whether the physical modification requires re-certification.
- (B) *Communications interference.* Prior to construction, a communications study to determine whether the proposed SES will have any adverse impacts on any public or public serving utility microwave transmissions shall be completed. If necessary, the applicant or successor shall mitigate interference with electromagnetic communications, such as Wi-

Fi, radio, telephone, microwaves, or television signals caused by any SES. In addition, the applicant or successor shall comply with the following:

- (1) *Post-construction.* If, after construction of the SES, the operator receives a written complaint that can be substantiated through an independent review related to interference with the broadcast of residential television, Wi-Fi, telecommunication, communication or microwave transmissions that existed prior to construction of the SES, the operator shall take reasonable steps to mitigate said interference. Interference with private telecommunications systems such as GPS shall be between the company and the complainant.
  - (2) *Failure to remedy a complaint.* If an agreement to remedy a known interference is not reached within 60 days, appropriate action will be taken. If further negotiations and/or mitigation measures to reduce or eliminate the interference do not remedy the problem it may result in requiring the SES to become inactive. This section does not apply to interference with private telecommunications systems. See complaint procedure in subsection (D) below.
- (C) *Declaration of public nuisance.* Any SES declared to be a hazard to public safety (unsafe) by the City of Richmond by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, damage or abandonment is hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal in accordance with the approved decommissioning plan.
- (D) *Complaint procedure.*
- (1) All complaints regarding SES operation shall be logged by the operator. At minimum the log shall describe the name and address of the complainant, contact information of the complainant, when the complaint is received, a detailed description of the nature of the complaint, action taken to resolve the complaint and the date the complaint is resolved. If any complaint is considered by the operator to not be the responsibility of the operator a reason shall be provided to the complainant and so noted on the log. The log must be sent to the Planning and Zoning Administrator and the operator at a frequency no less than once per quarter. Upon receipt of a formal complaint regarding noise, the SES operator shall be responsible for conducting a specific focused sound study to ascertain facts associated with a specific study to address the concern of the complainant and shall be financially responsible for the study. The acoustical engineering firm that conducts the complaint generated sound study must be different than that of the firm that conducted the pre- and post-construction studies and must also be similarly accredited.
  - (2) If after 60 days there is no resolution of a registered complaint the complainant may provide notice to the Planning and Zoning Administrator accompanied by a fee of \$250.00 that they intend to enter into binding arbitration of the unresolved complaint. Failure by the operator to perform an action specified by the arbitrator will be considered a violation of the zoning ordinance and subject to the applicable enforcement penalties and remedies. Upon receipt of a request for arbitration the Planning and Zoning Administrator will arrange for a time and place to meet with the arbitrator. Upon approval of a SES project the operator shall continually fund a non-reverting fund (for arbitration only), which will contain no less than \$5,000.00 at any

time, for the life of the SES project. Notification by certified mail of a deficiency in the balance of the fund to the operator shall be the responsibility of the Planning and Zoning Administrator. If upon notification that the fund is deficient, the operator shall have 60 days to bring the fund back to the prescribed minimum amount. If the payment is not satisfied within the 60 days, the SES project will be deemed in violation of the permit. The arbitrator shall be a member of the Kentucky Bar Association, be on the Roster of Court-Approved Mediators in the State of Kentucky and not be a citizen of the City of Richmond. The Planning and Zoning Administrator may appear and present evidence on behalf of a complainant if requested to do so.

**Sec. 320.415.12. Screening and buffering plan of ground mounted SES.**

Prior to filing an application for a permit under [section 320.415], the applicant shall formulate a screening and buffering plan. Ground mounted SES shall have or have installed a visual buffer that will provide an effective visual and lighting screen between participating and non-participating properties and roadways. Existing buffers along the edge of an SES footprint shall be preserved and utilized when reasonably practical. Vegetative screening and buffers are preferred.

- (A) *Content of screening and buffering plan.*
  - (1) *Vegetation types/disposition.* Detailed maps with renderings of the proposed vegetation used for screening and buffering, including timelines for the maturation of vegetative screening.
  - (2) *Modification/replacement of vegetation.* Procedure outlined for the replacement of vegetative screening that has become damaged or has died due to natural or man-made causes.

**Sec. 320.415.13. Decommissioning plan of ground mounted SES.**

Prior to filing an application for a permit under [section 320.415], the appropriate executive authority with jurisdiction and the applicant or successor shall formulate a decommissioning plan outlining the responsibility for and anticipated means and cost of removing an SES at the end of their serviceable life or upon becoming a discontinued or abandoned use in order to ensure that the SES is properly decommissioned.

- (A) *Content of decommissioning plan.*
  - (1) *Assurance.* Written assurance that the SES will be properly decommissioned upon the expiration of the project life or in the event that the SES project is abandoned.
  - (2) *Cost estimates.* The applicant or successor shall provide a contractor cost estimate for demolition and removal of the SES, and for the subsequent reclamation of the land within the project boundary. The cost estimates shall be made by a competent independent party, such as a professional engineer, a contractor capable of decommissioning or a person with suitable expertise or experience with decommissioning SES.

- (3) *Financial assurance.* Prior to commencement of construction the applicant or its successor, as defined, will provide to the executive of the appropriate jurisdiction a financial assurance for the cost of decommissioning SES facilities and related improvements to be constructed under the permit. The financial assurance shall be in the form of a performance bond, surety bond, letter of credit or other security instrument mutually acceptable to the executive and the applicant or applicant's successor. The amount of the bond or other similar security shall be set by the executive and shall be at least equal to the estimated cost of fully completing the decommissioning plan approved by the Planning Commission, less the salvage value for the decommissioned facilities and components. In proposing the amount of the bond, the applicant shall provide evidence of the decommissioning costs and the salvage value as determined by an independent, third-party person with experience and expertise in decommissioning an SES. The bond or other similar security shall be provided by an insurance company or surety that shall at all times maintain at least an "A" rating as measured by the A.M. Best rating agency and shall be noncancelable by the provider or the customer until completion of the decommissioning plan or until a replacement bond is secured.

If the SES facility for which a bond or similar security has been furnished is located on leased property or on land owned by the party responsible for completing the decommissioning plan, the bond or similar security shall name the governing body of the local municipality in which the SES facility is located as the primary beneficiary of the bond. If the SES facility for which the bond or similar security has been furnished is located on leased property, the bond or similar security shall name the landowner(s) where the bonded facility is located as the secondary beneficiaries of the bond.

The executive of the appropriate jurisdiction shall be regularly notified by the applicant, the applicant's successor and the provider of financial assurance of any continuing financial obligation by the applicant or applicant's successor to keep said financial assurance in good standing. Any notice issued by the provider of financial assurance of failure or potential failure by the applicant or the applicant's successor to keep said financial assurance in good standing shall give the executive of the appropriate jurisdiction valid cause to exercise the financial assurance to effect a decommissioning.

- (4) *Abandonment by the applicant or successor.* Written assurance that in the event of abandonment by the applicant or successor, the applicant or successor will provide an affidavit to the executive of the appropriate jurisdiction representing that all easements and/or property leases for SES facilities shall contain terms that provide financial assurances, including access to the salvage value of the equipment, for the property owners to ensure that SES facilities are properly decommissioned within one year of expiration or earlier of termination of the SES project. The bond or similar security shall be forfeited if the party responsible for completing the decommissioning plan either fails to begin work on the plan within one year of the date that the SES facility ceases to produce electricity for sale or fails to complete the decommissioning plan within two

years of the date that the SES facility ceases to produce electricity for sale. The local governing body may extend either of the deadlines for good cause shown. Any funds from a bond or similar security that are forfeited for failure to begin or complete a decommissioning plan promptly shall only be used to complete the decommissioning of SES facilities on the property or properties for which the bond or similar security was posted.

- (5) *Revegetation and soil de-compacting.* Procedures for the removal of any temporary roads constructed for the purposes of decommissioning, the grading and reseeded of any disturbed areas with short-term cover crops and sustainable, non-weed native vegetation, and the de-compaction of soils on land zoned for agricultural use.
  - (6) *Updates.* The decommissioning plan and the bond or similar security shall be reviewed, revised, and updated every five years by the operator to reflect any significant change in circumstances, including but not limited to planned SES project life and property easements and leases, and changes to the estimated costs of effectuating the decommissioning plan or to the salvage value of the SES facility or its components. An update of the decommissioning plan shall be required upon the change of ownership of any SES facility.
- (B) *Discontinuation and abandonment.* All SES shall be considered a discontinued use after one year without energy production unless a plan is developed and submitted to the Planning and Zoning Administrator outlining the steps and schedule for returning the SES to service. The Planning Commission may, at its discretion after one year of discontinued production, initiate an action to recommend to the executive authority that it act to exercise the financial assurance to affect a decommissioning.
- (1) *Removal.* An applicant or successor's obligations shall include the removal of all physical material pertaining to the project improvements to no less than a depth of four feet below ground level within 365 days of the discontinuation or abandonment of the SES or SES project, and restoration of the project area to as near as practicable to a condition similar to its previous use immediately before construction of such improvements. Below ground level is understood to be from the existing grade. Covering with fill material does not constitute removal. Removal obligations shall be completed by the applicant or successor or by the city at the applicant's expense.
  - (2) *Written notices.* Prior to implementation of procedures to affect the financial guarantee the appropriate executive authority shall provide notice to the operator according to the terms of the required decommissioning plan. The operator of the project must provide notice to the appropriate executive authority and to the Planning and Zoning Administrator of its intention to change ownership, abandon, decommission or suspend operations of a SES project.
  - (3) *Costs incurred by the city.* If the city removes an SES structure and appurtenant facilities, it may sell the salvage to defray the costs of removal. By acceptance of a building permit, the applicant or operator grants a license to the appropriate executive authority to enter the property to remove SES structures and

appurtenant facilities pursuant to the terms of an approved decommissioning plan.

**Sec. 320.415.14. Liability insurance.**

The operator of any ground-mounted SES shall maintain a current general liability policy covering bodily injury and property damage and shall be required to name the City of Richmond as an additional insured with dollar amount limits not less than \$2,000,000.00 per occurrence, \$5,000,000.00 in the aggregate, and a deductible which is reasonably available and which is mutually suitable to the applicant or successor and the city.

**Sec. 320.415.15. Environmental insurance.**

The operator of any ground-mounted SES shall maintain a current environmental insurance policy covering loss and damages associated with the unexpected release of pollutants and subsequent environmental contamination, and shall be required to name the City of Richmond as an additional insured with dollar amount limits not less than \$2,000,000.00 per occurrence, \$5,000,000.00 in the aggregate, and a deductible which is reasonably available and which is mutually suitable to the applicant or successor and the city.

**Sec. 320.415.16. Application procedures for ground mounted SES.**

- (A) Within 90 days of receipt of an application to construct a SES:
  - (1) Local government staff and elected officials shall review the application;
  - (2) The Board of Adjustment (BOA) shall hold a public hearing, at which it shall address the contents of the application and the staff report, and render a final decision to approve or deny the application. If minor changes are needed to the application, such as the unintentional omission of one or more of the application requirements described in 415.16(B), the BOA may enter into a written agreement with the applicant for the submission of minor amendments to the application without requiring a new application for a specified date, at which a final decision will be rendered to approve or deny the amended application. If the application is denied, the BOA shall state the reasons for the denial in its decision.
  
- (B) An application for a SES shall include the following information:
  - (1) Contact information of the project applicant including the name(s), address(es), and phone number(s) of the applicant(s), as well as a description of the applicant's business structure and overall role in the proposed project.
  - (2) Contact information of the current project operator including the name(s), address(es), and phone number(s) of the operator(s), as well as a description of the operator's business structure and overall role in the proposed project, and including documentation of land ownership or legal control of the property on which the SES is proposed to be located. The Planning and Zoning Administrator shall be informed of any changes in ownership.

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- (3) *Legal description.* The legal description, address, and general location of the project.
- (4) A general SES project description, including to the extent possible, information on solar panels to be used, including:
- a. Number of solar panels/arrays;
  - b. Manufacturer of solar panels with brochure depiction;
  - c. Name plate generating capacity;
  - d. Solar panel/array heights;
  - e. Installation depths of solar arrays and any associated underground cabling;
  - f. The means of interconnecting with the ancillary use;
  - g. All related accessory structures.
- (5) *Site layout plan.* A site layout plan, drawn at an appropriate scale, showing distances pertaining to all applicable setback requirements. The site layout plan must be certified by a registered KY Civil Engineer, and depict:
- a. Property lines, including identification of adjoining properties, with a notation indicating participating and non-participating landowners;
  - b. SES access roads;
  - c. Substations(s), and operational support meteorological tower(s) location;
  - d. Operation and maintenance building location (building to be permitted separately);
  - e. Electrical cabling;
  - f. Ancillary equipment, including batteries;
  - g. Occupied structures within a quarter mile of all proposed SES project areas;
  - h. Distances from SES arrays to each setback requirement;
  - i. Location of all existing and planned public roads which abut or traverse the proposed site;
  - j. The location of all above-ground utility lines within a distance of one mile of any proposed SES structure;
  - k. The location of any historic or heritage sites within the SES project area;
  - l. The location of any wetlands based upon a delineation plan prepared in accordance with the applicable U.S. Army Corps of Engineers requirements and guidelines;
  - m. The location of any floodplain, floodway, or flood-prone areas based on flood maps prepared by the Federal Emergency Management Agency; and
  - n. A topographical map of the project area and a one-mile perimeter with contours of not more than ten-foot intervals.

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- o. An erosion control/stormwater runoff plan compliant with any stormwater quality management plan adopted by the state or local applicable jurisdiction.
  - p. A dust control plan detailing reasonable measures to be employed to control dust during construction of a utility scale SES project. This may be incorporated into the road use and services maintenance agreement.
  - q. A light reflection modeling study that identifies all known occupied structures and the effect of any SES array on those structures as per section 320.415.10(B).
- (6) A map from the Natural Resources Conservation Service identifying prime farmland and farmland of statewide importance (if in a district zoned as agricultural).
  - (7) *Sound study.* A sound study that identifies all known occupied structures within 1,000 feet of every proposed SES project area, including a description of the potential sonic impacts of any SES arrays or structures and on adjacent properties as per standards indicated in section 415.10(E).
  - (8) *Communications study.* A communications study as required by section 320.415.11(B).
  - (9) *Utility notification.* Evidence that the pertinent electric utility company has granted approval for interconnection.
  - (10) *Statement of Federal Aviation Administration compliance.* A statement of compliance with all applicable Federal Aviation rules and regulations, including any necessary approvals for installations within proximity to an airport, and/or studies/compliance related to glare effects from SES.
  - (11) *Statement of Kentucky Airport Zoning Commission compliance.* A statement of compliance with all applicable Kentucky Airport Zoning Commission rules and regulations and any necessary approvals for installations within proximity to an airport.
  - (12) *Compliance with Fish and Wildlife Requirements.* Proof of correspondence and cooperation with wildlife agencies for the purposes of preventing harm to endangered or protected wildlife species and migratory birds and in compliance with the Endangered Species Act and the Migratory Bird Treaty Act. Applicants shall provide documentation that they are in communication and cooperation with the U.S. Fish and Wildlife Service and the Kentucky Department of Natural Resources.
  - (13) *Compliance with National Electrical Code.* A line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code. This information is typically supplied by the manufacturer.
  - (14) *Compliance with Commonwealth of Kentucky Department for Environmental Protection Standards.* Statements and results from environmental impact studies, including but not limited to geological surveys/studies, air quality studies, water quality studies, and waste studies. If no detailed geological survey or study is required by the Commonwealth of Kentucky Department for Environmental Protection, the applicant must provide such a study or survey using a certified independent geologist; the report of such a study or survey must draw conclusions regarding the anticipated geological effects of SES development.



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- (15) *Good Neighbor Notice*. An affidavit of service along with supporting documentation that indicates notification was given to all property owners (as per current records of the Madison County, PVA) in and within a quarter mile of the proposed footprint of the SES project no less than 30 days prior to the date of the public hearing. The notice shall contain at minimum:
- a. A map showing the general layout of the project.
  - b. An opportunity to meet with the petitioner or contact information whereby questions may be asked by the public.
  - c. A list of steps that will be required to accomplish the project.
- (16) Any other item reasonably requested by the Planning and Zoning Administrator or the Planning Administrator.
- (C) Dimensional variance applications for proposed SES facilities shall be reviewed and decided by the relevant Board of Adjustment through the process outlined in KRS Ch. 100 and section 404 of this [chapter].

**Sec. 320.415.17. Pre-construction requirements of ground mounted SES.**

Prior to the commencement of construction but subsequent to the issuance of a permit as provided for in section 415.16 herein, the following shall be required and materials submitted and reviewed by local government staff and elected officials, who shall certify that the submissions are in compliance with all applicable regulations:

- (A) Federal Aviation Administration permits application and approval, if applicable.
- (B) Decommissioning plan as described in section 320.415.13.
- (I) *Emergency management plan*. A site plan that requires the local emergency management director's approval and which describes emergency service access to SES arrays, related structures, batteries, and ancillary equipment and detailed procedures for any potential hazardous emergencies caused by natural or man-made disasters that could occur within the SES facility, such as battery fires due to lightning strikes or equipment failures. This plan includes but is not limited to procedures for the evacuation of local citizens within the affected area and the clean-up of hazardous materials and waste created by any such disasters.
- (J) A building permit, as required per the Kentucky Building Code or Kentucky Residential Code. Submitted construction documents should include the manufacturer's installation instructions for the solar panels and associated hardware, a license Kentucky structural engineer's letter of recommendation or approval on the existing roof structure for Roof Mounted SES, a foundation design for Ground Mounted SES, and all applicable design load information.

**Sec. 320.415.18. Post-construction requirements of ground mounted SES.**

- (A) Post-construction, the operator shall comply with the following provisions:

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- (1) *Road repairs.* Any road damage caused by the construction of project equipment, the installation of the same, or the removal of the same, shall be repaired as per city ordinance. (3) *Staging area remediation.* Any and all areas temporarily used for storage, parking, and administration during the construction of SES facilities must be returned to their previous conditions and all negative environmental externalities must be remediated.
  - (4) *Post construction sound study.* Within 12 months after the date when the project is fully operational, the operator shall conduct a two-phased post-construction sound study conducted by an independent accredited sound engineer chosen by the Planning Commission and paid for by the operator. Post-construction sound level measurements shall be taken both with all SES systems running and with all SES systems off. The post-construction sound measurements shall be reported to the Planning Commission and made available for public review.
  - (5) *Change in ownership.* It is the responsibility of the operator listed in the application to inform the Planning and Zoning Administrator of all changes in ownership and operation of the SES facility during the life of the project, including the sale or transfer of ownership or change in operator.