

The Georgia Model Solar Zoning Ordinance

Version 1.0 – July 2018

Representatives from Emory Law School, Georgia Institute of Technology, and University of Georgia developed this Model Ordinance in response to the rapid development of solar energy in Georgia. It is based on current best practices from across the nation and tailored to meet Georgia's unique needs.

BEFORE USING THE MODEL ORDINANCE, IT IS IMPORTANT TO REMEMBER:

- **It is a model document that should be voluntarily adapted and adopted.** That means:
 - It is not law, and therefore it is not enforceable unless adopted by a county or city;
 - It will not be a perfect fit for every county and city, and therefore it should not be adopted wholesale without considering existing local ordinances and land use plans; and
 - Bracketed text signals placeholder language or a range of acceptable alternatives that must be selected before being adopted.
- **It should be read in conjunction with the Georgia Model Solar Zoning Ordinance Guide.** The Guide provides:
 - The necessary background information to understand how and why choices were made in developing the Model Ordinance; and
 - Reasonable alternatives to help counties and cities adapt the Model Ordinance to fit their community's needs.
- **Solar energy systems can and should be treated no differently than similar land uses.** While the Model Ordinance provides a wide-range of provisions, a county or city should first look to the requirements in its existing zoning code before adopting a provision from the Model Ordinance. Often, existing provisions will be sufficient.
- **The Model Ordinance is provided for informational purposes only.** Although every reasonable effort has been made to provide current and accurate information, Emory Law School, Georgia Institute of Technology, and University of Georgia make no guarantees of any kind.

AN ORDINANCE AMENDING THE [COUNTY/CITY] ZONING CODE TO PROVIDE COMPREHENSIVE GUIDELINES FOR THE SAFE AND ORDERLY DEVELOPMENT OF SOLAR ENERGY IN [COUNTY/CITY].

WHEREAS it is in the best interest of [County/City] to facilitate the siting, construction, installation, and decommissioning of solar energy systems (SESs) in [County/City] in a manner that encourages local economic development and protects the health, safety, and welfare of the citizens of [County/City], and at the same time mitigates any adverse impacts to wildlife, agricultural lands, forests, and other natural landscapes; and

WHEREAS the intent of [County/City] is to increase energy security and diversify the energy portfolio, to promote the use of Georgia-based energy resources, to decrease the cost of energy, to bolster local economic development and employment prospects, to increase consumers' choices in energy consumption, to encourage the use of a renewable energy resource, to support [Georgia's/County's/City's] sustainability agenda, and to reduce air and water pollution; and

WHEREAS the intent of [County/City] is not to compromise or contradict the health, safety, or environmental requirements contained in other federal, state, and local laws, nor is it to create heightened standards for the siting, construction, installation, and decommissioning of SESs that would discriminate against SESs relative to other similar commercial, industrial, or utility projects within [County/City];

BE IT ORDAINED by the [zoning authority] of [County/City] as follows:

[Definitions to be added to “Definitions” article of County/City’s zoning code:]

- ***Solar Energy System (SES)*** means a device or structural design feature that provides for the collection of solar energy for electricity generation, consumption, or transmission, or for thermal applications.

For purposes of the [County/City] zoning code, SES refers only to (1) photovoltaic SESs that convert solar energy directly into electricity through a semiconductor device or (2) solar thermal systems that use collectors to convert the sun’s rays into useful forms of energy for water heating, space heating, or space cooling.

SES as used in the [County/City] zoning code excludes concentrated solar power, which uses mirrors to focus the energy from the sun to produce electricity.

- ***Integrated Solar Energy System*** means an SES where solar materials are incorporated into building materials, such that the two are reasonably indistinguishable, or where solar materials are used in place of traditional building components, such that the SES is structurally an integral part of a house, building, or other structure. An Integrated SES may be incorporated into, among other things, a building facade, 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. For purposes of the [County/City] zoning code, any solar canopy that does not qualify as an Integrated SES shall be considered a Ground Mounted SES, regardless of where it is mounted.

The ***Footprint*** of a Ground Mounted SES is calculated by drawing a perimeter around the outermost SES panels and any equipment necessary for the functioning of the SES, such as transformers and inverters. The Footprint does not include any visual buffer or perimeter fencing. Transmission lines (or portions thereof) required to connect the SES to a utility or consumer outside the SES perimeter shall not be included in calculating the Footprint.

Ground Mounted SESs shall be delineated by size as follows:

- ***Small Scale Ground Mounted Solar Energy System (Small Scale SES)*** means a Ground Mounted SES with a Footprint of less than [1 – 5*] acres.
- ***Intermediate Scale Ground Mounted Solar Energy System (Intermediate Scale SES)*** means a Ground Mounted SES with a Footprint of between [1 – 5*] and [15 – 50*] acres.
- ***Large Scale Ground Mounted Solar Energy System (Large Scale SES)*** means a Ground Mounted SES with a Footprint of more than [15 – 50*] acres.

* There is no single best practice for designating sizes of Ground Mounted SESs. Rather, the appropriate size designations will vary by jurisdiction. This Model Ordinance therefore only provides reasonable ranges. Counties and cities should select a specific number within this range—jurisdictions with larger average lot sizes may consider selecting numbers on the larger end of the range, while jurisdictions with smaller average lot sizes may consider selecting numbers on the smaller end. For further information on how to select the appropriate designations, and for additional alternatives, please see the Georgia Model Solar Zoning Ordinance Guide.

[Uses to be added to “Permitted Uses by District” tables of County/City’s zoning code:]

Accessory Use	Residential	Commercial	Industrial	Agricultural
<i>Integrated SES</i>	A	A	A	A
<i>Rooftop SES</i>	A	A	A	A
<i>Ground Mounted SES</i>				
<i>Small Scale SES</i>	A	A	A	A
<i>Intermediate Scale SES</i>	SUP	A	A	SUP
<i>Large Scale SES</i>	SUP	SUP	SUP	SUP
Primary Use				
<i>Integrated SES</i>	-	-	-	-
<i>Rooftop SES</i>	-	-	-	-
<i>Ground Mounted SES</i>				
<i>Small Scale SES</i>	A	A	A	A
<i>Intermediate Scale SES</i>	SUP	A	A	SUP
<i>Large Scale SES</i>	SUP	SUP	SUP	SUP
A: Allowed Use. The SES is allowed in this district.				
SUP: Special Use Permit Required. If the applicant first obtains a Special Use Permit in accordance with the [County/City] zoning code, the SES is allowed in this district.				

[To be added to “Uses” articles of County/City’s zoning code:]

<p>RESIDENTIAL DISTRICT</p> <ul style="list-style-type: none"> • The following primary uses are allowed: <ul style="list-style-type: none"> – <i>Small Scale SES</i> • The following accessory uses are allowed: <ul style="list-style-type: none"> – <i>Integrated SES</i> – <i>Rooftop SES</i> – <i>Small Scale SES</i> • The following primary or accessory special uses are allowed, after receiving a Special Use Permit: <ul style="list-style-type: none"> – <i>Intermediate Scale SES</i> – <i>Large Scale SES</i> 	<p>AGRICULTURAL DISTRICT</p> <ul style="list-style-type: none"> • The following primary uses are allowed: <ul style="list-style-type: none"> – <i>Small Scale SES</i> • The following accessory uses are allowed: <ul style="list-style-type: none"> – <i>Integrated SES</i> – <i>Rooftop SES</i> – <i>Small Scale SES</i> • The following primary or accessory special uses are allowed, after receiving a Special Use Permit: <ul style="list-style-type: none"> – <i>Intermediate Scale SES</i> – <i>Large Scale SES</i>
<p>INDUSTRIAL DISTRICT</p> <ul style="list-style-type: none"> • The following primary uses are allowed: <ul style="list-style-type: none"> – <i>Small Scale SES</i> – <i>Intermediate Scale SES</i> • The following accessory uses are allowed: <ul style="list-style-type: none"> – <i>Integrated SES</i> – <i>Rooftop SES</i> – <i>Small Scale SES</i> – <i>Intermediate Scale SES</i> • The following primary or accessory special uses are allowed, after receiving a Special Use Permit: <ul style="list-style-type: none"> – <i>Large Scale SES</i> 	<p>COMMERCIAL DISTRICT</p> <ul style="list-style-type: none"> • The following primary uses are allowed: <ul style="list-style-type: none"> – <i>Small Scale SES</i> – <i>Intermediate Scale SES</i> • The following accessory uses are allowed: <ul style="list-style-type: none"> – <i>Integrated SES</i> – <i>Rooftop SES</i> – <i>Small Scale SES</i> – <i>Intermediate Scale SES</i> • The following primary or accessory special uses are allowed, after receiving a Special Use Permit: <ul style="list-style-type: none"> – <i>Large Scale SES</i>

[A new article “Solar Energy Systems” to be added to County/City’s zoning code:]

Section 1. – Applicability

- (a) This article applies to the siting, construction, installation, and decommissioning of any new SES to be constructed or installed after [the effective date of this ordinance] within the jurisdiction of [County/City].
- (b) Any SES that, prior to [the effective date of this ordinance]:
 - 1. is in operation;
 - 2. is being lawfully sited, constructed, or installed; or
 - 3. has caused the incurrence of substantial liabilities relating to siting, construction, or installation;

shall be exempt from complying with this [ordinance], unless the surface area of an Integrated SES or Rooftop SES or the Footprint of a Ground Mounted SES is increased by more than [5 – 25*]% after [the effective date of this ordinance].

- (c) Unless otherwise expressly stated herein, an SES shall comply with all applicable federal, state, and local laws, including the requirements of the [County/City] zoning code and applicable building, fire, electric, and plumbing codes. If a provision in this [ordinance] directly conflicts with a requirement of the [County/City] zoning code, this [ordinance] shall control.

Section 2. – Requirements for Integrated Solar Energy Systems

- (a) **Solar Access.** Consistent with O.C.G.A. § 44-9-20 *et seq.*, a property owner may obtain a solar easement from another property owner for the purpose of ensuring the Integrated SES adequate exposure to sunlight.
- (b) **Tree Removal.** The removal of trees or natural vegetation for an Integrated SES shall be avoided to the extent reasonably practicable and shall comply with the requirements of the [County/City] zoning code.

Section 3. – Requirements for Rooftop Solar Energy Systems

- (a) **Solar Access.** Consistent with O.C.G.A. § 44-9-20 *et seq.*, a property owner may obtain a solar easement from another property owner for the purpose of ensuring the Rooftop SES adequate exposure to sunlight.

* There is no single best practice for this percentage. Rather, the appropriate designation will vary by jurisdiction. This Model Ordinance therefore only provides a reasonable range. Counties and cities should select a specific number within this range—a smaller number will subject more existing SESs to the requirements of this Model Ordinance (after they expand), while a larger number will subject less. For further information on how to select the appropriate designation, and for additional alternatives, please see the Georgia Model Solar Zoning Ordinance Guide.

- (b) **Tree Removal.** The removal of trees or natural vegetation for a Rooftop SES shall be avoided to the extent reasonably practicable and shall comply with the requirements of the [County/City] zoning code.
- (c) **Height.** A Rooftop SES shall be given an equivalent exemption, if any, to the applicable zoning district's height restrictions for roof-mounted mechanical devices or equipment, except a Rooftop SES mounted on a sloped roof shall not vertically exceed the highest point of the roof to which it is attached.

Section 4. – General Requirements for All Ground Mounted Solar Energy Systems

The following requirements apply to all Ground Mounted SESs, in addition to the specific requirements in this [ordinance] that apply to Intermediate and Large Scale SESs respectively.

- (a) **Solar Access.** Consistent with O.C.G.A. § 44-9-20 *et seq.*, a property owner may obtain a solar easement from another property owner for the purpose of ensuring a Ground Mounted SES adequate exposure to sunlight.
- (b) **Impervious Surface.** Ground mounted structures and components of the Ground Mounted SES, including transformers and foundations, shall be considered impervious. However, for purposes of compliance with the [County/City] zoning code's impervious surface coverage requirements, the panels of a Ground Mounted SES shall be considered pervious if they maintain sheet flow and allow for water to infiltrate under and around them through a pervious surface and into the subsoil.
- (c) **Lighting.** To reduce light pollution, lighting of a Ground Mounted SES shall:
 - 1. be limited to the minimum reasonably necessary for its safe operation;
 - 2. be directed downward where reasonably feasible;
 - 3. incorporate full cut-off fixtures; and
 - 4. reasonably utilize motion sensors.
- (d) **Tree Removal.** The removal of trees or natural vegetation for a Ground Mounted SES shall be avoided to the extent reasonably practicable and shall comply with the requirements of the [County/City] zoning code.
- (e) **Decommissioning.** Unless otherwise approved by the [zoning authority], decommissioning shall begin no later than 12 months after a Ground Mounted SES has ceased to generate electricity or thermal energy:
 - 1. for a Ground Mounted SES allowed without a permit, within 6 months of the beginning of decommissioning, the SES and all structures associated with it shall be removed, all materials shall be recycled or otherwise reused to the extent reasonably practicable, and the property shall be returned to its condition prior to the installation of the SES or to some other condition reasonably appropriate for the designated land use; and
 - 2. for a Ground Mounted SES allowed with a permit, the SES shall be decommissioned in accordance with the most recent decommissioning plan approved by the [zoning authority], and as further described in the Special Use Permit provision of this [ordinance].

Section 4A. – Specific Requirements for Intermediate Scale Solar Energy Systems

The following requirements apply to Intermediate Scale SESs, in addition to the general requirements in this [ordinance] that apply to all Ground Mounted SESs.

(a) Setbacks. An Intermediate Scale SES shall comply with the following setback requirements:

1. the Intermediate Scale SES shall be located no closer than the lesser of (a) 15 feet from any property line, or (b) the required setback for the applicable zoning district, if any;
2. the Intermediate Scale SES shall be located no closer than the lesser of (a) 20 feet from any public right-of-way, or (b) the required setback for the applicable zoning district, if any; and
3. the Intermediate Scale SES shall be located no closer than 50 feet from any residential dwelling unit on an adjacent lot.

(b) Visual Buffers. An Intermediate Scale SES in a residential or agricultural district shall have, to the extent reasonably practicable, a visual buffer of natural vegetation, plantings, earth berms, and/or fencing that provides a reasonable visual and lighting screen to reduce the view of the SES from residential dwelling units on adjacent lots (including those lots located across a public right-of-way). The existing natural tree growth and natural land forms along the SES perimeter may create a sufficient buffer and shall be preserved when reasonably practicable. Any visual buffer must be established and maintained in accordance with the most recent visual buffer plan approved by the [zoning authority], and as further described in the Special Use Permit provision of this [ordinance].

(c) Signage. An Intermediate Scale SES:

1. shall display signs (a) stating the risks that may result from contact with an Intermediate Scale SES, (b) identifying the owner or operator of the Intermediate Scale SES, and (c) providing a 24-hour emergency contact phone number;
2. shall comply with the requirements of the applicable zoning district for displaying any advertisement; and
3. may have signs that contain educational information about the Intermediate Scale SES.

Section 4B. – Specific Requirements for Large Scale Solar Energy Systems

The following requirements apply to Large Scale SESs, in addition to the general requirements in this [ordinance] that apply to all Ground Mounted SESs.

(a) Setbacks. A Large Scale SES shall comply with the following setback requirements:

1. the Large Scale SES shall be located no closer than the lesser of (a) 15 feet from any property line, or (b) the required setback for the applicable zoning district, if any;
2. the Large Scale SES shall be located no closer than the lesser of (a) 20 feet from any public right-of-way, or (b) the required setback for the applicable zoning district, if any; and
3. the Large Scale SES shall be located no closer than 100 feet from any residential dwelling unit on an adjacent lot.

(b) Visual Buffers. A Large Scale SES shall have, to the extent reasonably practicable, a visual buffer of natural vegetation, plantings, earth berms, and/or fencing that provides a reasonable visual and lighting screen to reduce the view of the SES from residential dwelling units on

adjacent lots (including those lots located across a public right-of-way). The existing natural tree growth and natural land forms along the SES perimeter may create a sufficient buffer and shall be preserved when reasonably practicable. Any visual buffer must be established and maintained in accordance with the most recent visual buffer plan approved by the [zoning authority], and as further described in the Special Use Permit provision of this [ordinance].

(c) Signage. A Large Scale SES:

1. shall display signs (a) stating the risks that may result from contact with a Large Scale SES, (b) identifying the owner or operator of the Large Scale SES, and (c) providing a 24-hour emergency contact phone number;
2. shall comply with the requirements of the applicable zoning district for displaying any advertisement; and
3. may have signs that contain educational information about the Large Scale SES.

Section 5A. – Special Use Permit Application

In addition to the general requirements for a Special Use Permit application set forth in the [County/City] zoning code, the following shall be contained in any Special Use Permit application for an SES:

(a) Basic Information. The applicant shall submit a document that lists the following:

1. the address of the property on which the SES will be located;
2. the applicant's name, address, telephone number, and email address;
3. the property owner's name, address, telephone number, and email address;
4. if known, the SES operator's name, address, telephone number, and email address;
5. if known, the installation company's name, address, telephone number, email address, and license number; and
6. evidence of the applicant's control of the property, such as a deed, lease, or option agreement with the landowner.

(b) Planning. The applicant shall submit the following, based on the most current and accurate information reasonably available:

1. a site plan of the property that depicts the locations of all existing and proposed structures (including solar arrays, inverters, transformers, electrical substations, and buildings), property lines, rights-of-way, roads, required setbacks, and visual buffers;
2. a topographic map that depicts vegetative cover, watersheds, or wetlands on the property;
3. a visual buffer plan that demonstrates that any visual buffer (a) minimizes impacts of the SES on adjacent residential dwelling units, as required by this [ordinance], (b) preserves natural tree growth and natural land forms along the SES perimeter, as required by this [ordinance], and (c) adheres to any additional visual buffer requirements of the [County/City] zoning code that may further minimize impacts of the SES on the community character;
4. a list that identifies (a) federal or state endangered, threatened, or candidate species that may be present on the property or within 1,000 feet of the property, and (b) critical habitat on the property or within 1,000 feet of the property;

5. if the SES is located in an agricultural district, a map that identifies prime farmland and farmland of statewide importance on the property; and
6. a decommissioning plan that contains the following:
 - a. the name, address, telephone number, and e-mail address of the person(s) or entity(ies) responsible for implementing the decommissioning plan;
 - b. a statement of conditions that require the decommissioning plan to be implemented;
 - c. as part of decommissioning, a removal plan that identifies all structures, components, and non-utility owned equipment that shall be removed;
 - d. as part of decommissioning, a plan for recycling or otherwise reusing all materials to the extent reasonably practicable;
 - e. as part of decommissioning, a restoration plan to return the property to its condition prior to the installation of the SES or to some other condition reasonably appropriate for the designated land use after the SES is removed; and
 - f. a timeline to complete decommissioning.

(c) Certifications. The applicant shall submit an affidavit that provides, to the best of the applicant's knowledge:

1. construction and operation of the SES will comply with all applicable federal and state laws;
2. construction and operation of the SES will comply with all local laws, including the requirements of the [County/City] zoning code, unless waived by the [zoning authority]; and
3. commercial general liability insurance will be maintained throughout the siting, construction, installation, operation, and decommissioning of the SES.

Section 5B. – Special Use Permit Review

- (a)** Upon receiving a Special Use Permit application for an SES, the [zoning authority] shall conduct permitting proceedings in accordance with the requirements of the [County/City] zoning code.
- (b)** A Special Use Permit application may be denied if the [zoning authority] determines the SES does not comply with the requirements of the [County/City] zoning code.
- (c)** The applicant's appeal rights are consistent with those rights expressed in the [County/City] zoning code.