SOUTHERN GEORGIA REGIONAL COMMISSION

MODEL ORDINANCE FOR THE DEVELOPMENT OF SOLAR ENERGY SYSTEMS AND SOLAR ENERGY FACILITIES

RESOLUTION

ORDINANCE No._____
PROVIDING REGULATIONS FOR
RESIDENTIAL AND NON-RESIDENTIAL
SOLAR ENERGY SYSTEMS
AND SOLAR ENERGY FACILITIES

WHEREAS, [local government] is permitted by Georgia state law to exercise zoning powers, pursuant to Title 36, Chapter 66, Official Code of Georgia Annotated, as amended;

NOW, THEREFORE, BE IT ORDAINED that the [Mayor and Council/Board of County Commissioners] of [local government] hereby adopts the following provisions:

Chapter/Article/Division _____
RESIDENTIAL AND NON-RESIDENTIAL SOLAR ENERGY SYSTEMS AND SOLAR ENERGY PRODUCTION FACILITIES

1. Purpose

An ordinance of [local government], providing definitions relating to solar energy systems and solar energy production facilities, and standards to guide the development of solar energy systems and facilities in order to protect the public health, safety, and welfare and avoid significant impacts on resources and adjacent uses.

By enacting this ordinance it is the intent of [local government] to:

1. Encourage the use of existing buildings for the placement of solar energy systems;

2. Encourage the location of solar energy production facilities, to the extent possible, in areas where any potential adverse impacts on the community will be minimized;

3. Encourage the utilization of established public infrastructure for the development of solar energy systems and solar energy production facilities.

2. Definitions

Accessory Structure: A detached, permanent or semi-permanent subordinate structure, measuring [____] feet or more on one side, located on the same lot as the principal structure or use.

Accessory Use: A use customarily incidental and subordinate to the primary use of a property and located on the same lot.

Administrative Approval: Zoning approval that the Zoning Administrator or designee is authorized to grant after administrative review.

Administrative Review: Non-discretionary evaluation of an application by the Zoning Administrator. This process is not subject to a public hearing.

International Building Code (IBC): A model building code developed by the International Code Council. It has been adopted for use as a base code standard by most jurisdictions in the United States.

International Residential Code (IRC): Part of the International Building Code (IBC), the IRC sets buildings standards for residential structures.

Inverter: A device that converts Direct Current (DC) electricity into usable Alternating Current (AC) electricity for transmission to the power grid.

Mechanical Equipment: All items not listed in these definitions that are directly related to construction and operation of a solar energy system or facility including, but not limited to, onsite transmission lines, pumps, batteries, inverters, mounting brackets, framing, foundations or other structures, etc.

National Electric Code (NEC): A regionally adoptable standard for the safe installation of electrical wiring and equipment. It is developed by the National Fire Protection Association and is typically adopted by states and municipalities, sometimes with amendments, in an effort to standardize their enforcement of safe electrical practices.

Planning Commission: An appointed body that delivers recommendations to the local government regarding land use and development decisions.

Power grid: An interconnected network for delivering electricity from producers to consumers. In a power grid, generating stations produce electric power, which is then sent through a substation in order to adjust the voltage. The power is then sent from the substation to high-voltage transmission lines. From there, distribution lines provide power to individual consumers. In some cases, customers can receive a payment or credit for surplus electricity that is generated by their solar energy system and fed into the grid.

Setback: The area between the boundary of a land parcel and the part of the land parcel in which primary and accessory buildings may be constructed, as specified in the applicable local government regulations.

Solar Energy: Radiant energy (i.e., light) received from the sun that can be collected by solar panels and converted into electricity in a solar energy system or solar energy production facility.

Solar Energy Production Facility, also known as Solar Farm: A utility-scale facility for the collection and distribution of solar energy. These facilities are generally more than two acres in size and have capacities in excess of one megawatt. These facilities are typically connected to the local utility power grid in order to supply electricity to the grid and power multiple properties.

Solar Energy System: A system for converting solar energy into electricity, typically for on-site consumption.

Solar Energy System, Building-Integrated: A solar energy system that is built into, rather than installed onto, a structure.

Solar Energy System, Building-Mounted: A solar energy system that is added onto an existing structure, with solar panels typically located on the roof. Roof-mounted solar energy systems fall within this category.

Solar Energy System, Ground-Mounted: A solar energy system that is installed on the ground and is not attached or affixed to any structure.

Solar Panel: A device for the direct conversion of sunlight into electric power.

Substation: A set of equipment for converting the high-voltage electricity produced by a power plant or solar energy production facility into a voltage suitable for supply to consumers.

3. Applicability

3.1. This ordinance shall apply to all solar energy systems and solar energy production facilities (solar farms) installed, constructed, or modified or expanded in such a way that the footprint or height of the system is increased, after the effective date of this Ordinance.

3.2. Solar energy systems and solar energy production facilities (solar farms) constructed prior to the effective date of this ordinance shall not be required to meet the requirements of this ordinance.

3.3. All solar energy systems and solar energy production facilities (solar farms) shall be designed, erected, and installed in accordance with all applicable local, state, utility, and national codes, regulations, and standards.

4. General Requirements for Solar Energy Systems

4.1. Solar energy systems may not be connected to any electric utility grid without the approvable of the applicable electric utility. Off-grid solar energy systems shall be exempt from this requirement.

4.2. If solar storage batteries are included as part of the solar energy system, they must be installed according to all requirements set forth in the National Electric Code and State Fire Code when in operation. When no longer in operation, the batteries shall be disposed of in accordance with all local, state, and federal laws and regulations.

4.3. Prior to operation, electrical connections must be inspected by an appropriate electrical inspection person or agency, as determined by the local government.

4.4. Unless otherwise specified through a contract or agreement, the property owner of record will be presumed to be the responsible party for owning and maintaining the solar energy system. Decommissioning will be the responsibility of the owner unless otherwise specified.

4.5. The design of the solar energy system shall conform to applicable local, state, and national solar codes and standards, and to all local government regulations. All design and installation work shall comply with all applicable provisions in the National Electric Code (NEC), the International Residential Code (IRC), International Commercial Building Code, State Fire Code, and any additional requirements set forth by the local utility (for any grid-connected solar systems) or by the local government.

4.6. All applicable building permits shall be secured prior to beginning construction of a solar energy system. No solar energy systems may be installed that cannot be safely supported by the existing roof structure.

4.7. All solar energy systems shall comply with the local Floodplain Management Ordinance, as applicable.

4.8. Components of solar energy systems are not exempt from height requirements.

4.9. Solar energy systems located in historic districts shall not be constructed without prior approval, as applicable, from the appropriate governing body.

5. Specific Requirements for Solar Energy Systems

5.1. Building-Mounted Systems

A building-mounted solar energy system shall be subject to the following regulations:

i. No solar energy system shall be mounted or affixed to any freestanding wall or fence.

ii. A building-mounted, on-roof system shall not extend beyond the edge of the roof.

iii. Solar panels installed on a building with a sloped roof shall not project vertically more than 4 feet above the roof surface, ridge line, or highest point of the roof.

iv. Solar panels installed on a building with a flat roof shall not extend more than 4 feet above the highest point of the roofline.

5.2. Ground-Mounted Systems

A ground-mounted solar energy system shall be subject to the following regulations:

i. Ground-mounted components shall not be located in the required setbacks of the underlying zoning district.

ii. Ground-mounted solar energy systems shall not be located in the floodway.

iii. In the case of double frontage lots, ground-mounted components shall observe front yard requirements on both street frontages wherever there are any principal buildings fronting on said streets in the same block or adjacent blocks.

iv. The height of ground-mounted solar energy panels shall not exceed sixteen (16) feet above the ground, as measured from the point (on the ground) directly below the panel, when tilted at the highest aspect.

v. The area of solar components and accessory structures in the aggregate shall not exceed the ground floor area of the principal building for residential uses; for commercial uses, the aggregate may not exceed the lot coverage for the underlying zoning district. Areas zoned for agriculture or manufacturing are exempt from this requirement, but must meet the required setbacks of the district. Solar canopies covering permanent parking are exempt from this section but must meet the required setbacks of the district.

vi. Mechanical equipment and components of solar systems shall be screened from adjacent residential uses. The screen shall consist of shrubbery, trees, or other non-invasive plant species which provide a visual screen with a mature height of at least 6 feet. In lieu of a planting screen, an opaque fence may be used. The installed screen shall be maintained for the life of the usage of the ground-

mounted system. Maintenance of the screening shall be the responsibility of the owner or operator of the system.

6. Requirements for Solar Energy Production Facilities (Solar Farms)

6.1. Sections 4.1 – 4.4 of this Ordinance shall also apply to Solar Energy Production Facilities.

6.2. Solar Energy Production Facilities as a principal use shall be permitted by Special Exception in the following Zoning Districts: _____ (not in Residential districts), provided that requirements of this ordinance are met. The Standards for Special Exception Review, per Section _____ of the Zoning Ordinance, shall apply. The local government shall not take final action on the application until it has received a recommendation from the Planning Commission.

6.3. The design of the solar energy production facility shall conform to applicable local, state, and national solar codes and standards, and to all local government regulations. All design and installation work shall comply with all applicable provisions in the National Electric Code (NEC), the International Residential Code (IRC), International Commercial Building Code, State Fire Code, and any additional requirements set forth by the local utility (for grid-connected solar energy production facilities) or by the local government.

6.4. All applicable building permits shall be secured prior to beginning construction of a solar energy production facility.

6.5. Onsite power lines and interconnections shall be placed underground, to the greatest extent possible.

6.6. A solar energy production facility connected to the utility grid shall provide evidence from the applicable electric utility acknowledging the solar energy production facility will be interconnected to the utility grid in order to sell electricity to the utility.

6.7. Solar energy production facilities shall not be permitted in the floodway. All solar energy production facilities shall comply with the local Floodplain Management Ordinance, as applicable.

6.8. Minimum Lot Size: The minimum lot size for a solar energy production facility (solar farm) as a principal use is _____ acres.

6.9. Setbacks: Solar energy production facilities shall have a minimum setback of the underlying zoning district. Power inverters, transformers, and other related equipment related to the inversion of power shall have a setback of 50 feet from all property lines.

6.10. Height of collector: The height of ground-mounted collectors and mounts shall not exceed 20 feet in height. Components of solar energy production facilities are not exempt from height requirements.

6.11. Airports: Any solar energy production facility proposed within a 2-mile radius of an airport shall present evidence that they have gone through a review process with the Federal Aviation Administration (FAA). This review from the FAA shall indicate that the proposed facility shall not interfere with the normal operation of aircraft in the area.

6.12. Fencing: A security fence of chain link or similar material at a minimum height of 6 feet with a gate and locking mechanism shall enclose the perimeter of the solar energy production facility to deny access to any individuals not authorized to be on the property and for public safety. Signage should be included on the property alerting individuals to the risk from high voltage on the site.

6.13. Buffer: Areas that abut residentially zoned or residential uses shall be buffered by at least one of the following:

i. A double row of off-set evergreens absent mature vegetation, installed at a height of five (5) feet achieving opaqueness at time of installation and a minimum height of 10 feet in 5 years.

ii. On-site mature vegetation existing at a minimum height of 10 feet and a depth of 75 feet between the on-site security fence and adjacent properties or right-of-way.

iii. A single row of evergreens in combination with mature vegetation installed at a height of 5 feet achieving opaqueness and a minimum height of 10 feet in 5 years.

iv. The above requirement may be met by existing vegetation subject to administrative approval, as long as sufficient opaqueness and the required height are achieved.

v. Maintenance of the buffer shall be the responsibility of the property owner.

6.14. Decommissioning: The application to establish a solar energy production facility must include a decommissioning plan, containing the following:

i. The name, address, telephone number, and e-mail address of the person(s) or entity(ies) responsible for implementing the decommissioning plan;

ii. A statement of conditions that require the decommissioning plan to be implemented;

iii. Identification of all components of the solar energy production facility;

iv. A plan with timeline for removing all components of the solar energy production facility from the property in the event of decommissioning;

v. A plan for recycling or otherwise reusing all components to the greatest extent practicable.

7. Abandonment and removal

7.1. If a ground-mounted solar energy system is removed, any earth disturbance as a result of the removal shall be landscaped in accordance with local regulations.

7.2. A solar energy system or solar energy production facility is considered to be abandoned if it has not been in operation for a period of twelve (12) months or for the time period specified in the decommissioning plan. If abandoned, the system or facility shall be repaired by the owner to meet federal, state, and local safety standards, or be removed by the owner within a period of twelve (12) months or within the time period specified in the decommissioning plan. If the owner fails to remove or repair the abandoned system or facility, the local government may pursue a legal action to have the system or facility removed at the owner's expense.

7.3 If a solar energy system or facility is removed, all components shall be recycled or reused to the greatest extent practicable.

8. Application and Approval

8.1 Solar Energy Systems shall be permitted as an accessory use in the following Zoning Districts: _____, provided that the requirements of this ordinance are met and Administrative Approval or Approval with Conditions is granted by the Zoning Administrator. An application for a Solar Energy System as an accessory use shall include the following:

i. A site plan illustrating the location of principal building, accessory structures, and proposed location of solar panels.

ii. An elevation sketch illustrating the height and orientation of ground-mounted components, or profile of any roof-mounted solar panels

9. Appeals

9.1. If the owner of a solar energy system is found to be in violation of the provisions of this Ordinance, appeals should be made in accordance with the established procedures of the local government code.

10. Effectiveness, Interpretation, Separability

10.1. This ordinance shall become effective immediately upon its adoption.

10.2. All other portions, parts and provisions of the Zoning Ordinance of [local government], as heretofore enacted and amended, shall remain in force and effect.

10.3. All Ordinances, or parts of Ordinances, in conflict herewith are repealed.

10.4. If any part of this ordinance conflicts with any other applicable federal, state, or local regulation, the more restrictive regulation shall control.

10.5. If any section, clause, portion or provision of this ordinance is found unconstitutional, such invalidity shall not affect any other portion of this ordinance.