

# Large-Scale Solar Energy Systems

- Erie (Pennsylvania), City of. 2010. *Ordinance No. 4-2010*.
- Granville (North Carolina), County of. 2010. *Code of Ordinances*. Chapter 32, Land Development Code; Article III, Use Standards; Division 4, Limited, Conditional, and Special Uses; Section 32-233, Ground-Mounted Solar Power Energy System "Solar Farm" (NAICS 221119). Tallahassee, Fla.: Municipal Code Corporation.
- Huntersville (North Carolina), Town of. 2010. *Zoning Ordinance*. Article 9, Conditions for Certain Uses; Section 9.54(2), Solar Energy Facility – Major Solar Energy Facilities. Article 12, Definitions.
- Iron (Utah), County of. 2010. *County Code*. Title 17, Zoning; Chapter 17.16, Establishment of Zoning Districts; Section 17.16.030, Table of Uses. Chapter 17.20, Use Definitions; Section 17.20.010, Definitions. Chapter 17.33, Solar Power Plants. Chapter 17.84, Section 17.84.010, Definitions.
- Madera (California), County of, Resource Management Agency. 2010. "CZ #2009-008, Title 18 Revisions to Allow for Solar Farms." Staff report to Board of Supervisors. *Ordinance No. 525NW*.
- Port St. Lucie (Florida), City of. 2011. *Code of Ordinances*. Title XV, Land Usage; Chapter 158, Zoning Code; Article I, General Provisions; Section 158.006, Definitions. Article IV, General Use Districts; Section 158.060(C)(13), General Use Zoning District (GU) – Special Exception Uses. Article IX, Industrial Districts; Section 158.136(C)11, Industrial Zoning District (IN) – Special Exception Uses; Section 158.137(C)(4), Utility Zoning District (U) – Special Exception Uses. Article X, Supplementary Use Regulations; Section 158.230, Solar Energy. Tallahassee, Fla.: Municipal Code Corporation.
- Salisbury (Massachusetts), Town of. 2010. *Code of Ordinances*. Chapter 300, Zoning; Article XXIII, Solar Photovoltaic Installations Zoning Bylaw.
- San Antonio (Texas), City of. 2011. *Unified Development Code*. Article III, Zoning; Division 7, Supplemental Use Regulations; Section 35-398(b), Renewable Energy Systems – Solar Farms. Tallahassee, Fla.: Municipal Code Corporation.
- Santa Clara (California), County of. 2010. *Ordinance No. NS-1200.331: An Ordinance Of The Board Of Supervisors Of The County Of Santa Clara Amending Appendix I Of The County Of Santa Clara Ordinance Code Related To Commercial Solar Energy Conversion Systems*.
- Stearns (Minnesota), County of. 2010. *Land Use and Zoning Ordinance #209*. Section 3, Definitions. Section 6, Performance Standards; Part 6.50, Solar Energy Systems. Drafted by CR Planning, Minneapolis, Minn.
- Straban (Pennsylvania), Township of. 2010. *Ordinance 2010-02*.

CITY COUNCIL OF ERIE

INTRODUCED BY: MRS. HORAN-KUNCO

COUNCIL FILE NO. 15,700 OFFICIAL ORDINANCE NO. 4-2010

AN ORDINANCE

Amending Official Ordinance No. 80-2005 known as the Zoning Ordinance of the City of Erie, Pennsylvania by adding to Article 6 (Definitions) the definitions of "Solar Collection System" and "Urban Solar Farm"; by adding to Article 3 (General Regulations), Section 305 (Conditional Uses, Special Exceptions and Special Regulation Criteria) a new Section 305.54 (Solar Collection Systems); and by adding to Article 3 (General Regulations), Section 305 (Conditional Uses, Special Exceptions and Special Regulation Criteria) a new Section 305.55 (Urban Solar Farms).

WHEREAS, Erie City Council directed the City Solicitor to prepare an Ordinance amending Official Ordinance No. 80-2005 known as the Zoning Ordinance of the City of Erie, by providing definitions of "Solar Collection System" and "Urban Solar Farm"; by adding to Article 3 (General Regulations), Section 305 (Conditional Uses, Special Exceptions and Special Regulation Criteria) a new Section 305.54 (Solar Collection Systems); and by adding to Article 3 (General Regulations), Section 305 (Conditional Uses, Special Exceptions and Special Regulation Criteria) a new Section 305.55 (Urban Solar Farms) all as approved by the City Planning Commission.

WHEREAS, the Council of the City of Erie under the provisions of the Pennsylvania Municipalities Planning Code (53 P.S. 10303) finds the said amendments to be in accordance with the spirit and intent of the formally adopted Comprehensive Plan for the development of the City of Erie, said Plan being known as the Erie City Plan of the Future.

NOW THEREFORE, BE IT ENACTED BY THE COUNCIL OF THE CITY OF ERIE, PENNSYLVANIA:

**Section 1.** That Official Ordinance No. 80-2005, known as the Zoning Ordinance of the City of Erie the Zoning Ordinance of the City of Erie, Article 6 (Definitions) is hereby amended by adding the following definitions:

**SOLAR COLLECTION SYSTEM:** A panel or other solar energy device, the primary purpose of which is to provide for the collection, inversion, storage, and distribution of solar energy for electricity generation, space heating, space cooling or water heating.

**URBAN SOLAR FARM:** Energy generation facility or area of land principally used to convert solar energy to electricity.

**Section 2.** That Official Ordinance No. 80-2005, known as the Zoning Ordinance of the City of Erie, Article 3 (General Regulations), Section 305 (Conditional Uses, Special Exceptions and Special Regulation Criteria) is amended by adding new Section 305.54 (Solar Collection Systems) to read as follows:

**305.54 SOLAR COLLECTION SYSTEMS:** Solar Collection Systems shall be considered an accessory use in all Zoning Districts in accordance with the following requirements:

- a. Freestanding solar panels shall only be permitted in the rear and side yard.
- b. Freestanding solar panels located on the ground or attached to a framework located on the ground shall not exceed twenty (20) feet in height above the ground.
- c. Freestanding solar panels shall be set back as required for accessory uses in the districts in which they are located.
- d. The total coverage of a lot with freestanding solar panels cannot exceed the greater of 50% lot coverage or the maximum allowable coverage for the district in which they are located.
- e. Roof-mounted solar panels installed on a building or structure with a sloped roof shall not project vertically more than the height requirements for the district in which they are located. The panels shall not be located within three (3) feet of any peak, eave, or valley of the roof to maintain pathways of accessibility.
- f. Systems located on the roof shall provide, as part of their permit application, evidence of design review and structural certification if the slope of the panel differs from the roof pitch. All panels on commercial roofs shall provide this information regardless of slopes, as well as any residential roof with greater than 50% coverage.
- g. The manufacturers' or installers' identification and appropriate warning signage shall be posted on or near the panels in a clearly visible manner.
- h. No solar energy system shall be installed until evidence has been given to the City of Erie Code Enforcement Office that the electric utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.
- i. Any panels installed to be used by someone other than the owner of the property shall provide an affidavit or evidence of agreement between the lot owner and facility's owner or operator confirming the facility owner or operator has permission of the property owner to install and utilize solar panels.
- j. In addition to the requirements listed above, all panels must adhere to the "Solar Photovoltaic Installation Guideline" available in the Bureau of Code Enforcement.

**Section 3.** That Official Ordinance No. 80-2005, known as the Zoning Ordinance of the City of Erie, Article 3 (General Regulations), Section 305 (Conditional Uses, Special Exceptions and Special Regulation Criteria) is amended by adding new Section 305.55 (Urban Solar Farms) to read as follows:

**305.55 URBAN SOLAR FARMS:** Urban Solar Farms shall be permitted in M-1, M-2, and I-P Districts, and in W-M as a conditional use, in accordance with the following regulations:

- a. Solar farms shall be enclosed by perimeter fencing to restrict unauthorized access at a height of eight and a half (8.5) feet.
- b. The manufacturers' or installers' identification and appropriate warning signage shall be posted at the site in a clearly visible manner.
- c. On-site power lines shall, to the maximum extent practicable, be placed underground.
- d. Solar farms shall adhere to the setback, height, and coverage requirements of the district in which they are located.
- e. The following requirements shall be met for permit applications:
  - 1) A descriptive plot plan including setbacks, panel sizes, locations of property lines, buildings, and road right of ways.

- 2) No urban solar farm shall be installed until evidence has been given to the City of Erie that the electric utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.
- 3) An affidavit or evidence of agreement between lot owner and the facility's owner or operator confirming that the owner or operator has permission of the property owner to apply for necessary permits for construction and operation of the urban solar farm.
- 4) Any other relevant studies, reports, certificates and approvals as may be reasonably requested by the City of Erie, including but not limited to design review.

f. The following requirements shall be met for decommissioning:

- 1) Solar farms which have not been in active and continuous service for a period of one (1) year shall be removed at the owners or operators expense.
- 2) The site shall be restored to as natural condition as possible within six (6) months of the removal.

**Section 4.** That all Ordinances and parts thereof in conflict herewith are hereby repealed.

**Section 5.** That this Ordinance shall be effective twenty (20) days after final passage and approval by the Mayor.

We do hereby certify that the above ordinance was finally passed by the City Council on Feb. 3, 2010.

Attest: February 3, 2010

James Klemm  
\_\_\_\_\_  
City Clerk

SIGNED February 3, 2010

James N. Thompson  
\_\_\_\_\_  
President of Council

THIS ORDINANCE APPROVED THIS 4th DAY OF February, 2010.

s/ Joseph Sinnott Mayor



**Granville County, North Carolina  
Code of Ordinances (2010)  
Chapter 32, Land Development Code**

**ARTICLE III, USE STANDARDS  
DIVISION 4, LIMITED, CONDITIONAL, AND SPECIAL USES**

**Sec. 32-233. Ground-mounted solar power energy system "solar farm" (NAICS 221119).**

[Conditional use in I-1 district, Limited Approval use in I-2 district]

A ground-mounted solar power energy system "solar farm" (NAICS 221119) must meet the following standards:

- (1) Height. Solar power electric generation structures shall not exceed the height of 25 feet.
- (2) Setback. Active solar system structures must meet the following setbacks:
  - a. Ground-mounted solar systems. Ground-mounted solar energy systems shall meet the minimum zoning setback for the zoning district in which located, or 25 feet, whichever is strictest.
- (3) Visibility. Active solar systems shall be designed to blend into the architecture of the building or be screened from routine view from public right-of-ways or adjacent residentially-zoned property using the standards found in section 32-264.
- (4) Approved solar components. Electric solar system components must have a UL listing.
- (5) Compliance with building code. All active solar systems shall meet all requirements of the state building code and shall be inspected by a county building inspector.
- (6) Compliance with National Electric Code. All photovoltaic systems shall comply with the National Electrical Code, current edition.  
(Amd. of 8-3-2009, § 11)

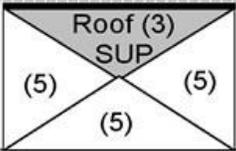
**Town of Huntersville, North Carolina  
Zoning Ordinance (2011)**

**Article 9, Conditions for Certain Uses**

**9.54 Solar Energy Facility**

**1. Minor Solar Energy Facilities:**

a. Residential Property (refer to illustration): Minor solar facilities shall be allowed in accordance with the provisions below:

<b>Minor Solar Facility on Residential Property</b>	
<b>Street/common access or yard</b>	<b>Street or Common Access</b>
	Front Yard Prohibited (1)
	Front Façade SUP (2)
	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">Side Yard (4)</div> <div style="text-align: center;">  <p>Roof (3) SUP</p> </div> <div style="text-align: center;">Side Yard (4)</div> </div>
	Rear Yard (4)

1. Front yard placement is prohibited.
2. Front façade placement (if facing street or common access) requires a Special Use Permit (SUP).
3. Front roof slope placement requires a Special Use Permit (SUP).
4. Side & rear yard placement permitted as by-right accessory use in all districts subject to the issuance of a zoning permit.
5. Side & rear yard roof slope placement permitted as a by-right accessory use in all districts subject to the issuance of a zoning permit.

b. Non-Residential Property: Minor solar facilities on non-residential property shall require a Special Use Permit (SUP).

c. Minor free-standing facilities must comply with accessory structure setbacks and spacing.

d. Minor free-standing facilities shall be a maximum of 5 feet in height as measured from the grade at the base of the structure to the apex of the structure.

e. Minor rooftop solar energy facilities shall not be considered as rooftop equipment on any building type and therefore, do not require screening and are not subject to any architectural standards that would prohibit reflective materials.

**1. Major Solar Energy Facilities**

a. Shall require the issuance of a Special Use Permit and in addition to the Special Use Permit requirements found in Article 11.4.10 shall include the following:

1. An existing features plan as described in the Subdivision Ordinance Article 6.300 1. 14. is required. Placement of solar panels shall be based on preserving existing features to the extent practical.

2. Major solar energy facilities are exempt from any parking requirements in the Huntersville Zoning Ordinance if there is no commercial or office building component.

3. Setbacks

i. Shall meet the minimum required setbacks for the underlying zoning district for installations in the R & TR zoning districts.

ii. Shall be a minimum of 20 feet from any property line in the SP zoning district.

4. Height:

i. Free standing major solar facilities shall be a maximum of 8 feet in height as measured from the grade at the base of the structure to the apex of the structure.

5. The minimum lot size requirement for major solar facilities is 10 acres.

b. Town of Huntersville to be given copies of any lease agreement and plan for removal of facility/equipment.

c. Glare resistant solar panels shall be used if the solar facility is adjacent to any airport.

d. Rooftop major solar energy facilities should not be considered as rooftop equipment on any building type and therefore, does not require screening and are not subject to any architectural standards that would prohibit reflective materials.

## **Article 12, Definitions and Rules of Construction**

### **12.2.1 General Definitions**

\* \* \*

Solar Energy Facility, Major: Solar farm that is not a minor solar energy facility.

Solar/Wind Energy Facility, Minor: A facility for the production of electrical energy or solar heat in which all of the following are met:

Is located on the power beneficiary's premises;

Is intended primarily to offset part or all of the beneficiary's requirements for electricity/gas; and

Is secondary to the beneficiary's use of the premises for other lawful purpose(s).

Solar Farm: See solar energy facility, major.

Solar Hot Water Heater: a solar heater(s), or solar thermal system that provides heat for water, space heating, and swimming pools by collecting the sun's energy to heat air or a fluid which transfers solar heat.

Solar Panel: a device which is used to convert energy contained within the sun's rays into electricity, PV (photovoltaic) panel.

Solar Power: The conversion of solar energy into another form of energy.

**Iron County, Utah  
County Code (2010)  
Title 17 ZONING**

**Chapter 17.16 Establishment of Zoning Districts**

**17.16.030 Table of uses. [excerpt]**

USES	ZONE DISTRICTS								
	A-20	R-5	R-2	R-1	R-1/2	C	L I	I	IA
Accessory solar energy system, concentrated solar thermal	C	C	C	C	C	C	C	C	C
Accessory solar energy system, photovoltaic or hot water	P	P	P	P	P	P	P	P	P
Solar power plant--Concentrated solar thermal	C (6)	X	X	X	X	X	X	X	C (6)
Solar power plant--Photovoltaic solar	C (6)	C (6)	X	X	X	C (6, 8)	C (6,8)	C (6)	C (6)

\* \* \*

(6) See also Chapter 17.33.

\* \* \*

(8) Photovoltaic solar power plants may only be located in the commercial and light industrial zones in conjunction with commercial or light industrial development of the site, and in a manner that preserves the primary purpose(s) of the zone.

**Chapter 17.20 USE DEFINITIONS**

**17.20.010 Definitions.**

\* \* \*

"Accessory solar energy systems" include any photovoltaic, concentrated solar thermal, or solar hot water devices that are accessory to, and incorporated into the development of an authorized use of the property, and which are designed for the purpose of reducing or meeting on-site energy needs.

\* \* \*

"Solar power plant" means a utility-scale commercial facility that converts sunlight into electricity, whether by photovoltaics (PV), concentrating solar thermal (CST) devices, or various experimental solar technologies, with the primary purpose of wholesale or retail sales of generated electricity.

\* \* \*

**Chapter 17.33 SOLAR POWER PLANTS\***

\*Editor's note: Section 3 of Ord. No. 2010-4, adopted April 26, 2010, amended Ch. 17.33 in its entirety to read as herein set out. Former Ch. 17.33 pertained to the same subject matter and derived from Ord. 8 of 2008.

**Sections:**

**17.33.010 Purpose.**

**17.33.020 Definitions.**

**17.33.030 Regulations and design standards, solar power plants.**

**17.33.040 Permit applications.**

**17.33.050 Provisions for conditional use permit review.**

**17.33.010 Purpose.**

The purpose of this Chapter 17.33 is to establish minimum requirements and regulations for the placement, construction and modification of solar power plants, as defined herein, while promoting the safe, effective and efficient use of such energy systems.

(Ord. No. 2010-4, § 3, 4-26-2010)

**17.33.020 Definitions.**

A. "Accessory Solar Energy Systems," include any photovoltaic, concentrated solar thermal, or solar hot water devices that are accessory to, and incorporated into the development of an authorized use of the property, and which are designed for the purpose of reducing or meeting on-site energy needs. Accessory Solar Energy Systems may be permitted as described in Section 17.16.030, Table of Uses, and are not subject to this Chapter 17.33.

B. "Concentrating Solar Thermal Devices," also known as "Concentrated Solar Thermal Power (CST)," are systems that use lenses or mirrors, and often tracking systems, to focus or reflect a large area of sunlight into a small area. The concentrated energy is absorbed by a transfer fluid or gas and used as a heat source for either a conventional power plant, such as a steam power plant, or a power conversion unit, such as a sterling engine. Although several concentrating solar thermal technologies exist, the most developed types are the solar trough, parabolic dish and solar power tower.

C. "Photovoltaics (PV)," is a technology that converts light directly into electricity. PV solar panels have been around for several years, although concentrated photovoltaic (CPV) technologies are now being developed. Both PV systems and CPV systems are included within this definition.

D. "Solar Power Plant," means a utility-scale commercial facility that converts sunlight into electricity, whether by photovoltaics (PV), concentrating solar thermal devices (CST), or various experimental solar technologies, for the primary purpose of wholesale or retail sales of generated electricity.

(Ord. No. 2010-4, § 3, 4-26-2010)

**17.33.030 Regulations and design standards--Solar power plants.**

All solar power plants shall comply with the following minimum regulations and design standards.

A. Permitted Locations. A solar power plant that complies with the provisions of this section may be permitted as described in Section 17.16.030, Table of Uses, Iron County Zoning Ordinance.

B. Design Standards.

1. Minimum Lot Size. No concentrated solar thermal power plant shall be erected on any lot less than forty acres in size. No photovoltaic solar power plant shall be erected on any lot less than five acres in size.

2. **Maximum Height.** The maximum height for all structures shall be established through the conditional use permit process, provided a structure height of thirty feet or less shall always be permitted.

3. **Setbacks.** Solar power plant structures shall be set back from all property lines and public road rights-of-way at least thirty feet, or one and one-half times the height of the structure, whichever is greater. In addition, solar power plant structures must be located at least one hundred feet from all residentially zoned lots and existing residences. Additional setbacks may be required to mitigate noise and glare impacts, or to provide for designated road or utility corridors, as identified through the review process.

4. **Safety/Access.**

a. An appropriate security/livestock fence (height and material to be established through the conditional use permit process) shall be placed around the perimeter of the solar power plant. Knox boxes and keys shall be provided at locked entrances for emergency personnel access.

b. Appropriate warning signage shall be placed at the entrance and perimeter of the solar power plant project.

5. **Noise.** No operating solar power plant shall produce noise that exceeds any of the following limitations. Adequate setbacks shall be provided to comply with these limitations.

a. Fifty dBA, as measured at the property line of any neighboring residentially-zoned lot;

b. Forty-five dBA, as measured at any existing neighboring residence between the hours of nine p.m. and seven a.m.

c. Sixty dBA, as measured at the property lines of the project boundary, unless the owner of the affected property and the planning commission agree to a higher noise level, as follows.

The owner of a neighboring property that would otherwise be protected by the sixty dBA noise limitation may voluntarily agree, in writing, to a higher noise level. Any such agreement must specifically state the noise standard being modified, the extent of the modification, and be in the form of a legally binding contract or easement between the landowner (including assignees in interest) and the solar power plant developer, effective for the life of the project. Notwithstanding any such voluntary noise agreement between the affected landowner and the solar power plant developer, the agreement shall only be effective and reflected in the County's authorization of the project when it has been reviewed and determined acceptable to the County. The County shall consider the likely impacts and consequences of the modified noise limit requested, based on the specific circumstances of the situation, in determining whether to grant the request. Any such noise agreement must be submitted with the conditional use permit application and if authorized by the County, must be filed with the County Recorder upon issuance of the conditional use permit.

6. Visual Appearance.

a. Solar power plant buildings and accessory structures shall, to the extent reasonably possible, use materials, colors, and textures that will blend the facility into the existing environment.

b. Appropriate landscaping and/or screening materials may be required to help screen the solar power plant and accessory structures from major roads and neighboring residences.

c. No solar power plant tower or other tall structure associated with a solar power plant shall be lighted unless required by the Federal Aviation Administration (FAA). When lighting is required by FAA, it shall be the red, intermittent, glowing-style, rather than the white, strobe-style, unless disclosed and justified through the application review process. Aircraft sensor systems to turn the lights on only when low-flying aircraft are in the area may be required.

d. Lighting of the solar power plant and accessory structures shall be limited to the minimum necessary and full cut-off lighting (e.g., dark sky compliant) may be required when determined necessary to mitigate visual impacts.

e. No solar power plant shall produce glare that would constitute a nuisance to occupants of neighboring properties or persons traveling neighboring roads.

7. Electrical Interconnections. All electrical interconnection and distribution lines within the project boundary shall be underground, unless determined otherwise by the planning commission because of severe environmental constraints (e.g. wetlands, cliffs, hard bedrock), and except for power lines that leave the project or are within the substation. All electrical interconnections and distribution components must comply with all applicable codes and public utility requirements.

8. Fire Protection. All solar power plants shall have a defensible space for fire protection in accordance with the Iron County Wildland-Urban Interface Code.

C. Local, State and Federal Permits. A solar power plant shall be required to obtain all necessary permits from the Utah Department of Environmental Quality, including the Utah Division of Air Quality and the Utah Division of Water Quality, applicable permits required by Iron County, and applicable Federal permits.

D. Agreements/Easements. If the land on which the project is proposed is to be leased, rather than owned, by the solar energy development company, all property within the project boundary must be included in a recorded easement(s), lease(s), or consent agreement(s) specifying the applicable uses for the duration of the project. All necessary leases, easements, or other agreements between the solar development company and the affected parties must be in place prior to commencing construction, unless specified otherwise by the conditional use permit.

(Ord. No. 2010-4, § 3, 4-26-2010)

**17.33.040 Permit applications.**

An application for a conditional use permit to establish a solar power plant shall include a complete description of the project and documentation to sufficiently demonstrate that the requirements set forth in Section 17.33.030 will be met. Supporting documentation for addressing the review criteria of Sections 17.33.050 and 17.28.050(A) is also to be

provided. The land use authority may require any information reasonably necessary to determine compliance with this chapter.

It is preferred that any related conditional use permit applications for substations or transmission lines be considered in conjunction with the conditional use permit application for the solar power plant; however, if the details of those improvements are not available at the time of application for the solar power plant, they may be considered later, through subsequent conditional use permit review. At a minimum, the intended route for connecting to the power grid and the alternative locations of any substation shall be disclosed with the application for the solar power plant.

Due to the complexity of large-scale solar power plant projects, the county may require a development agreement or other appropriate instrument to address taxing, land use, property assessment, and other issues related to the project. For example, the county is interested in preventing large tax shifts that may otherwise be incurred by county residents each year a centrally-assessed solar power plant is depreciated; therefore, cooperation to establish an agreement for payment in lieu of taxes (PILT), or other acceptable solution, may be necessary. A development agreement may be required as a condition of the permit, and must be approved by the board of county commissioners prior to commencing construction.

(Ord. No. 2010-4, § 3, 4-26-2010)

#### **17.33.050 Provisions for conditional use permit review.**

Following the provisions of Chapter 17.28, Iron County Code, additional or more thorough consideration shall be given to the following as the County determines whether the project needs to be approved, denied, or conditionally approved:

- A. **Project Rationale.** Project rationale, including estimated construction schedule, project life, phasing, and likely buyers or markets for the generated energy.
- B. **Siting Considerations.** Siting considerations, such as avoiding areas/locations with a high potential for biological conflict such as wilderness study areas, areas of environmental concern, county and state parks, historic trails, special management areas or important wildlife habitat or corridors; avoiding visual corridors that are prominent scenic viewsheds, or scenic areas designated by the county; avoiding areas of erodible slopes and soils, where concerns for water quality, landslide, severe erosion, or high storm runoff potential have been identified; and, avoiding known sensitive historical, cultural or archeological resources.
- C. **Site and Development Plans.** Site and development plans, which identify and/or locate all existing and proposed structures; setbacks; access routes; proposed road improvements; any existing inhabitable structures and residentially zoned lots within one-quarter mile of a photovoltaic solar project or one-half mile of a concentrated solar project; existing utilities, pipelines, and transmission lines; proposed utility lines; utility and maintenance structures; existing topographic contours; existing and proposed drainageways; proposed grading; areas of natural vegetation removal; revegetation areas and methods; dust and erosion control; any floodplains or wetlands; and other relevant items identified by the county staff or planning commission. All maps and visual representations need to be drawn at an appropriate scale.
- D. **Analysis of Local Economic Benefits.** Analysis of local economic benefits, describing estimated: Project cost, generated taxes, percent of construction dollars to be spent locally, and the number of local construction and permanent jobs.

E. Visual Impacts, Appearance, and Scenic Viewsheds. Potential visual impacts may be caused by components of the project such as mirrors, solar towers, cooling towers, steam plumes, aboveground electrical lines, accessory structures, access roads, utility trenches and installations, and alteration of vegetation. Those projects that are within a sensitive viewshed, utilize reflective components (e.g., exposed mirrors), or that propose structures taller than thirty feet must provide a viewshed analysis of the project, including visual simulations of the planned structures and analysis of potential glare impacts. The number of visual simulations shall be sufficient to provide adequate analysis of the visual impacts of the proposal, which shall be from no less than four vantage points that together provide a view from all sides of the project. More visually sensitive proposals (e.g., solar power towers or exposed mirrors in sensitive viewsheds) may require analysis from significantly more vantage points, such as different distances and sensitive locations. The planning commission may also require a Zone of Theoretical Visibility/Zone of Visual Impact (ZVI) Analysis, which is a three hundred sixty degree computer analysis to map the lands within a defined radius of a location that would likely be able to see an object. Significant visual impacts that cannot be adequately mitigated are grounds for denial.

F. Wildlife Habitat Areas and Migration Patterns. Specifically include information on any use of the site by endangered or threatened species and whether the project is in a biologically significant area. If threatened or endangered species exist in the area, consultation with United States Fish and Wildlife Service (USFWS) will be necessary.

G. Environmental Analysis. In the absence of a required state or federal agency environmental review for the project (e.g., NEPA), the planning commission may require an analysis of impacts to historic, cultural and archaeological resources, soil erosion (water and wind), flora, and water quality and water supply in the area, when there is reason to believe that adverse impacts to such may occur.

H. Solid Waste or Hazardous Waste. As applicable, the application must include plans for the spill prevention, clean-up, and disposal of fuels, oils, and hazardous wastes, as well as collection methods for solid waste generated by the project.

I. Height Restrictions and FAA Hazard Review. Compliance with any applicable airport overlay zoning requirements and the ability to comply with FAA regulations pertaining to hazards to air navigation must be demonstrated.

J. Transportation Plan for Construction and Operation Phases. Indicate by description and map what roads the project will utilize during the construction and operation/maintenance phases of the project, along with their existing surfacing and condition. Specify any new roads and proposed upgrades or improvements needed to the existing road system to serve the project (both the construction and O&M periods)--remember to identify needed bridges, culverts, livestock fence crossings (gates and cattle guards), etc. Also identify all areas where modification of the topography is anticipated (cutting/filling) to construct or improve the roadways. Address road improvement, restoration or maintenance needs associated with the construction, ongoing maintenance/repair, and potential dismantling of the project. Provide projected traffic counts for the construction period, broken down by the general type/size of vehicles, and identify approximately how many trips will have oversized or overweight loads. If significant impacts to the transportation system are anticipated, the County may require financial guarantees to ensure proper repair/restoration of roadways or other infrastructure damaged or degraded during construction or dismantling of the project. In such case, the "before" conditions of the roadways and other infrastructure must be documented through appropriate methods such as videos, photos, and written records, to provide a proper reference for restoration.

K. Public Safety. Identify and address any known or suspected potential hazards to adjacent properties, public roadways, communities, aviation, etc., that may be created by the project.

L. Noise limitations. Submit sufficient information regarding noise, so as to demonstrate compliance with Section 17.33.030(B)(5).

M. Decommissioning Plan. Describe the decommissioning and final land reclamation plan to be followed after the anticipated useful life, or abandonment, or termination of the project, including evidence of proposed commitments with affected parties (county, any lessor or property owner, etc.) that ensure proper final reclamation of the solar energy project. Among other things, revegetation and road repair activities should be addressed in the plan.

N. Other probable and significant impacts, as identified through the review process. (Ord. No. 2010-4, § 3, 4-26-2010)

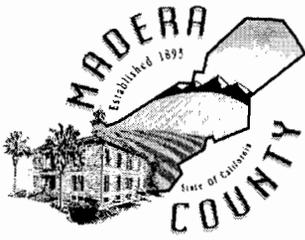
**Chapter 17.84 DEFINITIONS**  
**17.84.010 Definitions.**

\* \* \*

"Solar access" means the ability to receive sunlight across real property for any solar energy device.

"Solar energy device" means a device which converts the sun's radiant energy into thermal, chemical, mechanical or electric energy.

\* \* \*



# RESOURCE MANAGEMENT AGENCY PLANNING DEPARTMENT

2037 W. Cleveland Avenue  
Mail Stop G  
Madera, CA 93637-8720  
(559) 675-7821  
FAX (559) 675-6573  
Mc\_planning@madera-county.com

Norman L. Allinder, AICP  
Director

**DATE:** April 27, 2010  
**TO:** Board of Supervisors  
**FROM:** Norman Allinder, Planning Director *BB*  
**SUBJECT:** CZ #2009-008, Title 18 Revisions to allow for Solar Farms

### RECOMMENDATION

It is recommended that the Board approve the proposed amendments to sections of the Madera County Code, Title 18, to allow commercial solar farms.

### PUBLIC HEARING NOTICE

This hearing is to consider the request of the Madera County Planning Department for a Zoning Ordinance Text Change (CZ #2009-008) to amend sections of the Madera County Code, Title 18, to allow commercial solar farms.

### DISCUSSION

Within the past year, the Planning Department has been approached by several companies interested in locating commercial solar farms in large lot agricultural areas outside the cities of Madera and Chowchilla. Currently, County Ordinance does not include any reference to commercial solar farms. In response to this recent surge of interest in commercial solar farms, staff proposes to amend Title 18 to recognize and allow for commercial solar power generating facilities.

Research of other jurisdictions within California (San Bernardino County, Kings County, San Joaquin County, Imperial County, and the City of Tehachapi) was conducted to evaluate acceptable code language for solar farms. All jurisdictions include rural and agricultural areas similar to Madera County. Typical zone districts permitting commercial solar farms include open space/resource conservation, agricultural and industrial zone districts. Commercial solar farms are typically allowed in such areas due to the need for large parcels to accommodate the large amount of panels or arrays necessary for a commercial facility. Staff has also conducted research of solar facilities from Nevada to Spain to better understand their relationship with nearby development, connection to the electrical grid, and how potential impacts have been dealt with. A PowerPoint presentation has been prepared and is attached (Exhibit C).

Staff proposes the following revisions to Title 18 regarding solar farms:

- Amend Title 18, Chapter 18.04 to add a definition of a solar farm.

- Amend Title 18 to allow solar farms by a Conditional Use Permit, including the following zoning districts:
  - Chapter 18.50, Open Space (OS)
  - 18.52, Public Open Space (POS)
  - 18.54, Agricultural, Rural, Five Acre (AR-5)
  - 18.56, Agricultural, Rural, Exclusive, Twenty Acre (ARE-20)
  - 18.58, Agricultural, Rural, Exclusive, Forty Acre (ARE-40)
  - 18.60, Agricultural, Rural, Exclusive, 80 to 640 Acre (ARE-80 to 640)
  - 18.62, Agricultural, Rural, Valley, Twenty Acre (ARV-20)
  - 18.64, Agricultural, Rural, Foothills (ARF)
  - 18.42, Industrial, Light (IL)
  - 18.44, Industrial, Heavy (IH)
- Amend Conditional Uses Permitted, Chapter 18.94, to set common development standards for commercial solar farms. These standards will 1) reinforce the aforementioned lot coverage issue, 2) eliminate zone district height restrictions to allow for solar power towers, and 3) ensure the protection of parks and natural resource areas protected by local, state or federal agencies (in open space districts) when considering commercial solar farms.

In districts where solar will be allowed, commercial solar farms are proposed to be permitted by Conditional Use Permit (CUP). Through the CUP process, solar facilities will be evaluated for two common impacts, aesthetics and water use. Aesthetic impacts may result from glare or from high towers associated with solar "power towers". Water use impacts are associated with solar power towers, solar thermal power, and solar dishes, not photovoltaic solar farms (typical solar panel facilities). Other potential impacts may include biological, farmland, or land use.

#### Williamson Act Compatibility

Staff has engaged the State Department of Conservation (DOC) regarding commercial solar farms and compatibility issues with the Williamson Act Program. To date, DOC staff has maintained that the development of commercial solar farms not incidental to agricultural use on the same parcel would not be consistent with the provisions of the Williamson Act. Therefore, where a Williamson Act conflict may arise, the only remedy that remains for solar farm development is the cancellation process.

#### **PLANNING COMMISSION HEARING SUMMARY AND ACTION**

Scott Harmstead, Planner III, presented the staff report and recommended approval.

Chairman Wright opened the public hearing.

No one spoke in support or opposition.

The hearing was closed.

On motion by Commissioner Kellner, second by Commissioner Holley, it was ordered to approve the application of Madera County Planning Department requested a Zoning Ordinance Text Change (CZ #2009-008) to Title 18 of the Zoning Ordinance to allow solar farms, as presented. The motion carried on a vote of 4 to 0 in favor.

Board of Supervisors  
CZ #2009-008, Title 18 Revisions  
to allow for Solar Farms

April 27, 2010

**FISCAL IMPACT**

The Ordinance revision by itself will have no fiscal impact upon Madera County. However, the revisions will provide an opportunity for prospective solar companies to legally develop solar farms within Madera County. As a result, solar development will include many economic development benefits, including job creation and additional tax revenue.

**Attachments**

- Exhibit A Proposed Text Amendments
- Exhibit B Research of solar farms and other jurisdictions
- Exhibit C Solar farm research presentation slides
- Exhibit D Letter regarding solar needs and impacts

BEFORE  
THE BOARD OF SUPERVISORS  
OF THE COUNTY OF MADERA  
STATE OF CALIFORNIA

ORDINANCE NO. 525 nd

AN ORDINANCE AMENDING CHAPTER 18.04 TO THE MADERA COUNTY CODE BY ADDING SECTION 18.04.495 DEFINING SOLAR FARMS, AND AMENDING SECTIONS 18.42.010, 18.44.010, 18.50.010, 18.52.010, 18.54.010, 18.56.010, 18.58.010, 18.60.010, 18.62.010, 18.64.010, AND 18.94 TO ALLOW SOLAR FARMS IN CERTAIN INDUSTRIAL, OPEN SPACE AND AGRICULTURAL ZONES WITH A CONDITIONAL USE PERMIT

The Board of Supervisors of the County of Madera, State of California,

ordains as follows:

**SECTION 1**

Section 18.04.495 is added to Chapter 18.04 of the Madera County Code to read in its entirety as shown on the attached Exhibit "A."

**SECTION 2**

Subsections 18.42.010 C 11, 18.44.010 C 9, 18.50.010 C 7, 18.52.010 C 3, 18.54.010 C 11, 18.56.010 C 15, 18.58.010 C 17, 18.60.010 C 9, 18.62.010 C 15, and 18.64.010 C 12 are added to sections 18.42.010, 18.44.010, 18.50.010, 18.52.010, 18.54.010, 18.56.010, 18.58.010, 18.60.010, 18.62.010, and 18.64.010 respectively of the Madera County Code to read in their entirety as shown on the attached Exhibit "B."

**SECTION 3**

Section 18.94.180 is added to Chapter 18.94 of the Madera County Code to read in its entirety as shown on the attached Exhibit "C."

**SECTION 4**

This ordinance shall take effect thirty (30) days after its adoption.

\* \* \* \* \*

The foregoing Ordinance was adopted this 27<sup>th</sup> day of APRIL, 2010, by the following vote.

Supervisor Bigelow voted:	<u>yes</u>
Supervisor Moss voted:	<u>yes</u>
Supervisor Dominici voted:	<u>yes</u>
Supervisor Rodriguez voted:	<u>ABSENT</u>
Supervisor Wheeler voted:	<u>yes</u>



ATTEST:

*Yanna A Boyd*  
 Clerk, Board of Supervisors

*Tom Wheeler*  
 Chairman, Board of Supervisors

Approved as to Legal form:  
COUNTY COUNSEL

By *[Signature]*

# EXHIBIT "A"

## EXHIBIT "A"

18.04.495 Solar farm.

"Solar Farm" is a solar-power generating facility that converts solar energy (energy from the sun) into electrical power "Solar Farm." Includes, but is not limited to, both photovoltaic and concentrating solar power (CSP) methods utilized at a large scale for commercial purposes regulated by the Public Utility Commission.

# **EXHIBIT “B”**

**EXHIBIT "B"****18.42.010 - Land use regulations.**

Land use regulations are:

A. Permitted Uses.

1. Light industrial use;
2. General commercial establishment;
3. Customer service establishment;
4. Communication tower/wireless communications facility placed atop an existing structure, which will not increase the height of said structure above twenty additional feet, or exceed the height limit of this zone district, whichever is greater;
5. Motel;
6. Office.

B. Uses Allowed with Zoning Permit.

1. One single family dwelling;
2. Communications tower/wireless communications facility placed atop or adjacent to an existing structure in instances in which the height of the proposed facility will not exceed forty additional feet (sixty additional feet if the proposal provides for colocation) above the existing structure's height;
3. Mini storage facility (see Section 18.94.075).

C. Uses Allowed with Conditional Use Permit.

1. Restricted retail sales establishment;
2. Retail sales establishment;
3. Airports, landing fields and airstrips;
4. Cemeteries and mausoleums (see Chapter 18.94);
5. Laboratories for testing, experimental or analytical purposes (see Chapter 18.94);
6. Transit mix, concrete manufacturing or concrete goods manufacturing (see Section 18.94.120);
7. Outdoor theaters (see Section 18.94.090);

8. Junkyard (see Chapter 18.94);
9. Communications tower/wireless communications facility that does not meet the standards as specified in either subsection A or B of this section;
10. Bulk fuel storage for distribution and resale.
11. Solar farms.

**18.44.010 - Land use regulations.**

Land use regulations are:

A. Permitted Uses.

1. Heavy industrial use,
2. Light industrial use,
3. General commercial establishment,
4. Transit mix operations, concrete manufacture and concrete products manufacture, according to the requirements of Section 18.94.120,
5. Communication tower/wireless communications facility placed atop an existing structure, which will not increase the height of said structure above twenty additional feet, or exceed the height limit of this zone district, whichever is greater;

B. Uses Allowed with Zoning Permit.

1. One single family dwelling,
2. Communications tower/wireless communications facility placed atop or adjacent to an existing structure in instances in which the proposed facility will not exceed forty additional feet (sixty additional feet if the proposal provides for colocation) above the existing structure's height,
3. Mini storage facility (see Section 18.94.075);

C. Uses Allowed with Conditional Use Permit.

1. Restricted retail sales establishment,
2. Retail sales establishment,
3. Airports, landing fields and airstrips,
4. Cemeteries and mausoleums (see Chapter 18.94),
5. Laboratories for testing, experimental or analytical purposes (see Chapter 18.94),

6. Outdoor theaters (see Section 18.94.090),
7. Junkyards (see Chapter 18.94.),
8. Communications tower/wireless communications facility that does not meet the standards as specified in either subsection A or B of this section.
9. Solar farms.

**18.50.010 - Land use regulations.**

Land use regulations are:

A. Permitted Uses.

1. Agriculture,
2. Golf course,
3. Riding academy or riding club,
4. Irrigation canals, reservoirs and control devices,
5. Major transmission lines for greater than 70KV, interregional gas transmission lines, or trunk communication lines;

B. Uses allowed with zoning permit: one single family dwelling per farm;

C. Uses Allowed with Conditional Use Permit.

1. Commercial recreation area, camp, and resort,
2. Other single family dwellings per farm or ranch, in permanent structures,
3. Refuse disposal sites,
4. Airports, landing fields or airstrips,
5. Private clubs and outdoor recreational facilities (see Chapter 18.94.),
6. Communications tower/wireless communications facility.
7. Solar farms.

**18.52.010 - Land use regulations.**

Land use regulations are:

A. Permitted Uses.

1. Publicly owned uses, but not institutions,
2. Areas under public control for purposes of:

- a. Natural resources conservation,
  - b. Public recreation,
  - c. National defense,
  - d. Public instruction, other than schools,
  - e. Public transportation,
  - f. Aesthetic control in the public interest,
  - g. Public protection,
  - h. Public utilities;
3. Farming: forty acres or more per site,
  4. Sustained yield forestry,
  5. Grazing: forty acres or more per site,
  6. Public airports and airstrips;
- B. Uses Allowed with Zoning Permit. None specified;
- C. Uses Allowed with Conditional Use Permit.
1. Any private use involving an operation on open space and not requiring any buildings or structures,
  2. Communications tower/wireless communications facility.
  3. Solar farms.

18.54.010 - Land use regulations.

Land use regulations are:

- A. Permitted Uses.
1. Agricultural uses;
  2. One single family dwelling (permanent structure or manufactured home);
  3. Second single family dwelling (subject to parcel size requirements and development standards as per Section 18.04.153).
- B. Uses Allowed with Zoning Permit.
1. Guest house;
  2. Home occupation.

C. Uses Allowed with Conditional Use Permit.

1. Feed lots, pig farms, fur farms, poultry farms (see Chapter 18.94);
2. Any use allowed in Chapter 18.94, Conditional Uses;
3. Sand pit;
4. Roadside stand;
5. Animal hospitals, kennels, and laboratories using animals or animal products (see Chapter 18.94);
6. Cemeteries and mausoleums (see Chapter 18.94);
7. Laboratories for testing, experimental, or analytical purposes (see Chapter 18.94);
8. Churches, synagogues and other buildings for religious assembly;
9. Public and commercial refuse disposal sites (see Chapter 18.94);
10. Agriculturally oriented services.
11. Solar farms.

**18.56.010 - Land use regulations.**

Land use regulations are:

A. Permitted Uses.

1. All kinds of agricultural uses;
2. One single family dwelling (permanent structure or manufactured home);
3. Communication tower/wireless communications facility placed atop an existing structure, which will not increase the height of said structure above twenty additional feet, or exceed the height limit of this zone district, whichever is greater;
4. Second single family dwelling (subject to parcel size requirements and development standards as per Section 18.04.153.

B. Uses Allowed with Zoning Permit.

1. Guest house;
2. Home occupation;

3. Communications tower/wireless communications facility placed atop or adjacent to an existing structure in instances in which the desired height of the proposed facility will not exceed forty additional feet (sixty additional feet if the proposal provides for colocation) above the existing structure's height.

C. Uses Allowed with Conditional Use Permit.

1. Feed lots, poultry farms, fur farms, pig farms and rabbit farms (see Chapter 18.94);
2. Insecticide and pesticide services;
3. Airports, landing fields and airstrips;
4. Roadside stand;
5. Animal hospitals, kennels and laboratories using animals or animal products (see Chapter 18.94);
6. Cemeteries and mausoleums (see Chapter 18.94);
7. Laboratories for testing, experimental or analytical purposes (see Chapter 18.94);
8. Private clubs and outdoor recreational facilities (see Chapter 18.94);
9. Churches, synagogues and other buildings for religious assembly;
10. Public and commercial refuse disposal sites (see Chapter 18.94);
11. Agriculturally oriented services;
12. Mining;
13. Dairy;
14. Communications tower/wireless communications facility that does not meet the standards as specified in either subsection A or B of this section.
15. Solar farms.

18.58.010 - Land use regulations.

Land use regulations are:

A. Permitted Uses.

1. All kinds of agricultural uses;
2. One single family dwelling (permanent structure or one manufactured home);

3. Dormitory or attached (duplex, etc.) farm labor housing unit accommodating up to five families on parcels of thirty-six acres net (forty acres gross) or larger;
  4. Communication tower/wireless communications facility placed atop an existing structure, which will not increase the height of said structure above twenty additional feet, or exceed the height limit of this zone district, whichever is greater;
  5. Second single family dwelling (subject to parcel size requirements and development standards as per Section 18.04.153).
- B. Uses Allowed with Zoning Permit.
1. Guest house;
  2. Home occupation;
  3. Communications tower/wireless communications facility placed atop or adjacent to an existing structure in instances in which the height of the proposed facility will not exceed forty additional feet (sixty additional feet if the proposal provides for colocation) above the existing structure's height.
- C. Uses Allowed with Conditional Use Permit.
1. Feed lots, poultry farms, fur farms, pig farms and rabbit farms (see Chapter 18.94);
  2. Insecticide and pesticide services;
  3. Airports, landing fields and airstrips;
  4. Roadside stand;
  5. Animal hospitals, kennels and laboratories using animals or animal products (see Chapter 18.94);
  6. Cemeteries and mausoleums (see Chapter 18.94);
  7. Laboratories for testing, experimental or analytical purposes (see Chapter 18.94);
  8. Private clubs and outdoor recreational facilities (see Chapter 18.94);
  9. Churches, synagogues and other buildings for religious assembly;
  10. Public and commercial refuse disposal sites;

11. Agriculturally oriented services;
12. Mining;
13. Public stables;
14. Dairy;
15. Farm labor housing on parcels of thirty-six acres (forty acres gross) or larger;
16. Communications tower/wireless communications facility that does not meet the standards as specified in either subsection A or B of this section.
17. Solar farms.

18.60.010 - Land use regulations.

Land use regulations are:

A. Permitted Uses.

1. All kinds of agricultural uses;
2. Airstrip;
3. Poultry farms, fur farms, pig farms and feedlots;
4. One single family dwelling (permanent structure or one manufactured home);
5. All existing dwellings in this district shall be regularly permitted uses and not considered as nonconforming uses;
6. Dormitory or attached (duplex, etc.) Farm labor housing unit accommodating up to five families on parcels of thirty-six acres net (forty acres gross) or larger;
7. Communication tower/wireless communications facility placed atop an existing structure, which will not increase the height of said structure above twenty additional feet, or exceed the height limit of this zone district, whichever is greater;
8. Second single family dwelling (subject to parcel size requirements and development standards as per Section 18.04.153).

B. Uses Allowed with Zoning Permit.

1. Home occupation;
2. Communications tower/wireless communications facility placed atop or adjacent to an existing a structure in instances in which the height of the proposed facility will not exceed forty additional feet (sixty additional feet if the proposal provides for colocation) above the existing structure's height.

C. Uses Allowed with Conditional Use Permit.

1. Animal hospitals, kennels and laboratories using animals or animal products (see Chapter 18.94);
2. Laboratories for testing, experimental or analytical purposes (see Chapter 18.94);
3. Public and commercial refuse disposal sites (see Chapter 18.94);
4. Mining;
5. Additional dwelling units, not to exceed one unit per twenty acres of contiguous ownership of a ranch or farm, for occupancy by members of the immediate family, bound by ties of consanguinity, or employees of that ranch or farm; provided, that if the total number of dwelling units exceeds one unit per twenty acres for the parcel on which they are located, said parcel shall be combined with an adjacent parcel or parcels of the same ownership to create a single parcel of a size equal to twenty acres per dwelling unit unless otherwise authorized by the board of supervisors;
6. Farm labor housing on parcels of thirty-six acres net (forty acres gross) or larger;
7. Dairy;
8. Communications tower/wireless communications facility that does not meet the standards as specified in either subsection A or B of this section.
9. Solar farms.

**18.62.010 - Land use regulations.**

Land use regulations are:

A. Permitted Uses.

1. All kinds of agricultural uses;

2. One single family dwelling in (permanent structure or one manufactured home);
  3. Second single family dwelling (permanent structure or manufactured home) (subject to parcel size requirements and development standards as per Section 18.04.153);
  4. Guest house;
  5. All existing dwellings in this district shall be regularly permitted uses and not considered as nonconforming uses;
  6. Communication tower/wireless communications facility placed atop an existing structure, which will not increase the height of said structure above twenty additional feet, or exceed the height limit of this zone district, whichever is greater.
- B. Uses Allowed with Zoning Permit.
1. Home occupation;
  2. Communications tower/wireless communications facility placed atop or adjacent to an existing structure in instances in which the height of the proposed facility will not exceed forty additional feet (sixty additional feet if the proposal provides for colocation) above the existing structure's height.
- C. Uses Allowed with Conditional Use Permit.
1. Any other use allowed in Chapter 18.94;
  2. Additional houses, not to exceed a ratio of one dwelling unit per forty (40) acres in the ranch or farm;
  3. Animal hospitals, kennels and laboratories using animals or animal products (see Chapter 18.94);
  4. Cemeteries and mausoleums (see Chapter 18.94);
  5. Laboratories for testing, experimental or analytical purposes (see Chapter 18.94);
  6. Private clubs and outdoor recreational facilities (see Chapter 18.94);
  7. Churches, synagogues and other buildings for religious assembly;
  8. Public and commercial refuse disposal sites (see Chapter 18.94);
  9. Mine;
  10. Agriculturally oriented services;
  11. Airstrip;

12. Poultry farms, fur farms, pig farms and feedlots;
  13. Dairy;
  14. Communications tower/wireless communications facility that does not meet the standards as specified in either subsection A or B of this section.
15. Solar farms.

**18.64.010 - Land use regulations.**

Land use regulations are:

A. Permitted Uses.

1. Grazing and all other kinds of agricultural uses;
2. One single family dwelling (permanent structure or one manufactured home) (see Section 18.04.335 for manufactured housing);
3. Guest house;
4. Second single family dwelling (permanent structure or manufactured home) (subject to parcel size requirements and development standards as per Section 18.04.153);
5. All existing dwellings in this district shall be regularly permitted uses and not considered as nonconforming uses.

B. Uses Allowed with Zoning Permit.

1. Home occupation.

C. Uses Allowed with Conditional Use Permit.

1. Additional houses, not to exceed a ratio of one dwelling unit per forty acres in the ranch or farm;
2. Animal hospitals, kennels and laboratories using animals or animal products (see Chapter 18.94);
3. Cemeteries and mausoleums (see Chapter 18.94);
4. Laboratories for test, experimental or analytical purposes (see Chapter 18.94);
5. Private clubs and outdoor recreational facilities (see Chapter 18.94);
6. Churches, synagogues and other buildings for religious assembly;
7. Public and commercial refuse disposal sites (see Chapter 18.94);

8. Mine;
9. Agriculturally oriented services;
10. Poultry farms, fur farms and pig farms;
11. Airstrip.
12. Solar farms.

# EXHIBIT “C”

EXHIBIT “C”

## EXHIBIT "C"

### **Conditional Uses Permitted – 18.94.180 – Solar farms.**

Where solar farms are permitted by Conditional Use Permit, the following applies:

1. The building area to lot area ratio shall not apply to solar farms in Agricultural and Open Space zone districts.
2. Zone district height restrictions do not apply.
3. In the Open Space zone district (Chapter 18.50), consideration must first be given to the protection of parks or natural resources protected by a local, state, or federal agency.

**City of Port St. Lucie, Florida  
Code of Ordinances (2011)**

**TITLE XV LAND USAGE  
CHAPTER 158. ZONING CODE  
ARTICLE I. GENERAL PROVISIONS  
Sec. 158.006. Definitions.**

\* \* \*

SOLAR ACCESS. The access of a solar energy system to direct sunlight

SOLAR ENERGY SYSTEM. Any device or combination of devices or elements which rely upon direct sunlight as an energy source, including but not limited to any substance or device which collects sunlight for use in the heating or cooling of a structure or building, the heating or pumping of water, or the generation of electricity. A solar energy system may be used for purposes in addition to the collection of solar energy. These uses include, but are not limited to, serving as a structural member or part of the roof of a building or structure and serving as a window or wall. A solar energy system may be mounted on the building or on the ground and is not the principal use of the property.

SOLAR GENERATION STATION. An energy generation facility comprised of one or more freestanding, ground mounted devices that capture solar energy and convert it to electrical energy for use in locations other than where it is generated. Solar generation stations typically utilize photovoltaic solar cells, but can also be combinations of light reflectors, concentrators, and heat exchangers. A solar generation station is also known as a solar power plant, solar generation plant solar farm, solar power plant or solar thermal power plant.

**ARTICLE IV. GENERAL USE DISTRICTS  
Sec. 158.060. - General Use Zoning District (GU).**

\* \* \*

(C) Special Exception Uses. The following uses may be permitted only following review and specific approval thereof by the City Council:

\* \* \*

(13) Solar generation station subject to the requirements of section 158.230

**ARTICLE IX. INDUSTRIAL DISTRICTS  
Section 158.136 Industrial Zoning District (IN)**

\* \* \*

C. Special Exception Uses. The following uses may be permitted following the review and specific approval by the City Council and serve to implement heavy industrial land uses as contemplated in the Comprehensive Plan:

\* \* \*

11) Solar generation station subject to the requirements of section 158.230

**Section 158.137 Utility Zoning District (U)**

\* \* \*

(C) Special Exception Uses. The following uses may be permitted following the review and specifically approval thereof by the city council:

\* \* \*

(4) Solar generation station subject to the requirements of section 158.230

**ARTICLE XI. SUPPLEMENTARY USE REGULATIONS**  
**Sec. 158.230. - Solar Energy.**

The following provisions are intended to facilitate the commercial generation and distribution of solar power and the use of on-site solar energy systems to meet the energy demands of buildings and support facilities in the City. All solar equipment and devices shall comply with Florida Statutes and shall be certified by the Florida Solar Energy Commission.

(A) Solar Generation Station. In addition to other applicable sections of this Code, a solar generation station shall be subject to the following provisions:

(1) Solar generation stations shall require submittal of a site plan application concurrent with a special exception use application. The development shall be subject to the following supplemental criteria:

- a. Physical access to a solar generation station shall be restricted by fencing or walls. Razor wire is prohibited. All fencing and wall details shall be shown on the required site plan.
- b. The devices that capture energy and convert it to electricity shall not be placed in wetlands, environmentally sensitive resources or habitats, imperiled and critically imperiled habitats as defined by the Florida Natural Areas Inventory, and buffers. The development shall comply with the requirements of Chapter 157: Natural Resource Protection of the City Code.
- c. All devices that capture and convert energy to electricity shall be located at least fifty (50) feet from any lot line under separate ownership, unless otherwise approved by the City Council.
- d. All solar generation station sites must comply with the landscaping requirements of Chapter 153: Landscaping and Land Clearing of the City Code.
- e. On-site power lines shall be placed underground to the maximum extent possible.

(B) Solar Energy System. In addition to other applicable sections of this Code, a solar energy system shall be subject to the following provisions:

(1) All solar panels and devices are considered structures and subject to the requirements for such, together with all other applicable building codes and ordinances, unless otherwise provided for in this Code. Solar panels installed on roofs are exempt from the building height requirements. Solar panels installed on rooftops shall be located two (2) feet from the roof edge.

(2) Ground or pole mounted systems shall be limited to a height of ten (10) feet above the finished floor elevation of the principle structure.

(3) Solar energy systems shall not be located in front or side corner yards of any parcel unless the following are met: 1) the conditions of the side and back yards prohibit the installation of a system, and 2) adequate buffering along the adjacent roadway is provided and 3) the location is approved by the Director of Planning and Zoning.

(4) Solar ground and pole mounted systems may be located no closer than six (6) feet to any side lot line and ten feet to any rear lot line.

(5) Solar collectors may be co-located on communication towers, and parking lot and street light poles, in which case the height and setback requirements for said tower/pole shall apply.

(6) All new exterior electrical lines and utility wires connecting a ground or pole mounted solar system to the building it serves shall be buried underground.

(7) The City Council may allow for modification of these accessory use provisions when the solar energy system will serve buildings within a planned unit development project. The modification shall be identified in the PUD Document adopted by the ordinance granting approval to the planned unit development.

(8) Waiver. In the event any of the provisions in section 158.230 have the effect of prohibiting the installation of a solar energy system, the applicant shall have the right to apply for a waiver from these provisions to the Director of Planning and Zoning. The Director may grant a waiver upon determining that a strict application of the Code would result in prohibiting the installation of a solar energy system.

(9) Any approval of a solar energy system does not create any actual or inferred solar energy system easement against adjacent property and/or structures. The owner and/or property owner of a solar energy system shall not infer or claim any rights to protective writs to any caused shadows or operating ineffectiveness against future development adjacent to or higher than the property location of the solar energy system. The approval of any solar energy system granted by the City of Port St. Lucie shall not create any future liability or infer any vested rights to the owner and/or property owner of the solar energy system on the part of the City for any future claims against said issuance of approval of the solar energy system that result from reliance on this section or any administrative decision lawfully made thereunder.

(Ord. No. 11-14, § 1, 3-14-11)

4/22/10

## **ARTICLE XXIII**

### **Solar Photovoltaic Installations Zoning Bylaw**

#### **§300-144. Purpose**

The purpose of this bylaw is to promote the creation of new large-scale ground-mounted solar photovoltaic installations by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety and minimize impacts on scenic, natural and historic resources.

The provisions set forth in this section shall apply to the construction, operation, modification and/or removal large-scale ground-mounted solar photovoltaic installations.

##### **§300-144.1. Applicability**

This section applies to large-scale ground-mounted solar photovoltaic installations proposed to be constructed after the effective date of this section. This section also pertains to physical modifications that materially alter the type, configuration, or size of these installations or related equipment.

Nothing in this article should be construed to prevent the installation of accessory roof mounted solar photovoltaic installations.

#### **§300-145. General Requirements for all Large Scale Solar Power Generation Installations**

The following requirements are common to all large-scale solar photovoltaic installations to be sited in designated locations.

##### **§300-145.1. Compliance with Laws, Ordinances and Regulations**

The construction and operation of all large-scale solar photovoltaic installations shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements. All buildings and fixtures forming part of a large-scale solar photovoltaic installation shall be constructed in accordance with the State Building Code.

##### **§300-145.2. Permitting Process**

###### **A. Building Permit and Building Inspection**

No large-scale solar photovoltaic installation shall be constructed, installed or modified as provided in this section without first obtaining a building permit.

###### **B. Fees**

The application for a building permit for a large-scale solar photovoltaic installation must be accompanied by the fee required for a building permit.

###### **C. Site Plan Review**

4/22/10

Large-scale solar photovoltaic installations with 250 kW or larger of rated nameplate capacity shall undergo site plan review by the Planning Board prior to construction, installation or modification as provided in this section. A large-scale solar photovoltaic installation shall require site plan review as a major project under Article XVIII. An on-site photovoltaic installation shall require site plan review as a minor project under Article XVIII. The site plan review application shall be filed in accordance with Article XVIII.

The applicant shall demonstrate to the Planning Board's satisfaction that the following design process was followed in determining the layout of a proposed solar photovoltaic installation:

- (1) Understanding the development site. The first step is to inventory existing site features, taking care to identify sensitive and noteworthy natural, scenic and cultural resources on the site, and to determine the connection of these important features to each other.
- (2) Evaluating site context. The second step is to evaluate the site in its larger context by identifying physical (e.g., stream corridors, wetlands), transportation (e.g. road and bicycle networks), and cultural (e.g., recreational opportunities) connections to surrounding land uses and activities.

### **§300-146. Submission Requirements**

**§300-146.1.Required Documents** All plans and maps shall be prepared, stamped and signed by a Professional Engineer licensed to practice in Massachusetts.

**A.** Pursuant to the site plan review process, the project proponent of a Large Scale Solar Voltaic Installation shall provide the following documents:

- (a)** A site plan showing:
  - i.** Property lines and physical features, including roads, for the project site;
  - ii.** Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, and screening vegetation or structures;
  - iii.** Blueprints or drawings of the solar photovoltaic installation signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts showing the proposed layout of the system and any potential shading from nearby structures or vegetation
  - iv.** One or three line electrical diagram detailing the solar photovoltaic installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices;
  - v.** Documentation of the major system components to be used, including the PV panels, mounting system, and inverter;
  - vi.** Name, address, and contact information for proposed system installer;
  - vii.** Name, address, phone number and signature of the project proponent, as well as all co-proponents or property owners, if any;
  - viii.** The name, contact information and signature of any agents representing the project proponent; and

4/22/10

- (b) Documentation of actual or prospective access and control of the project site (see also §300-146.7.A);
- (c) An operation and maintenance plan (see also §300-146.3);
- (d) Landscape plan (see also Section §300-146.7.B
- (e) Zoning district designation for the parcel(s) of land comprising the project site (submission of a copy of a zoning map with the parcel(s) identified is suitable for this purpose);
- (f) Proof of liability insurance; and
- (g) Description of financial surety that satisfies §300-146.8.C.3

The Planning Board may waive documentary requirements as it deems appropriate.

### **§300-146.2. Site Control**

The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed large-scale solar photovoltaic installation.

### **§300-146.3. Operation & Maintenance Plan**

The project proponent shall submit a plan for the operation and maintenance of the large-scale ground-mounted solar photovoltaic installation, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operation and maintenance of the installation.

### **§300-146.4. Utility Notification**

No large-scale solar photovoltaic installation shall be constructed until evidence has been given to the Planning Board that the utility company that operates the electrical grid where the installation is to be located has been informed of the solar photovoltaic installation owner or operator's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

### **§300-146.5. Dimension and Density Requirements**

#### **A. Setbacks**

The purpose of setbacks is to mitigate adverse impacts on abutting properties. For large-scale, ground-mounted solar photovoltaic installations, front, side and rear setbacks shall be as follows:

- a. Minimum of 50 feet
- b. Every abutting property shall be visually screened from the project through any one or combination of the following location, distance, plantings, existing vegetation and fencing (not to exceed 6 feet)

#### **B. Appurtenant Structures**

All appurtenant structures to large-scale ground-mounted solar photovoltaic installations shall be subject to reasonable regulations adopted by the Planning Board after a public hearing concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant

4/22/10

structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures should be shielded from view by existing vegetation or plantings and/or joined or clustered to avoid adverse visual impacts.

### **C. Frontage**

The Planning Board may grant a waiver from the frontage requirements of the underlying zoning district if the applicant can demonstrate: (1) that failing to do so would render the siting of the large scale solar ground-mounted photovoltaic system unfeasible; and (2) that such waiver will not impede access or egress for maintenance personnel or emergency responders.

## **§300-146.6. Design Standards**

### **A. Lighting**

Lighting of large-scale ground-mounted solar photovoltaic installations shall be consistent with local, state and federal law. Lighting of other parts of the installation, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Where feasible, lighting of the solar photovoltaic installation shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

### **B. Signage**

Signs on large-scale ground-mounted solar photovoltaic installations shall comply with the town's sign bylaw. A sign consistent with the town's sign bylaw shall be required to identify the owner and provide a 24-hour emergency contact phone number.

Solar photovoltaic installations shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the installation.

### **C. Utility Connections**

Reasonable efforts, as determined by the Planning Board, 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.

## **§300-146.7. Safety and Environmental Standards**

### **A. Emergency Services Plan**

Prior to issuance of a building permit, the large-scale solar photovoltaic installation owner or operator shall provide a plan including but not limited to the project summary, electrical schematic, and site plan to the town's local safety officials including the Police Chief, Fire Chief and Building Inspector. Upon request the owner or operator shall cooperate with local safety officials in developing an

4/22/10

emergency response plan. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.

### **B. Land Clearing, Soil Erosion and Habitat Impacts**

Clearing of natural vegetation shall be limited to that which is necessary for the construction, operation and maintenance of the large-scale ground-mounted solar photovoltaic installation and per practices of best management of natural areas or good husbandry of the land or forest otherwise prescribed by applicable laws, regulations, and bylaws.

Applicant shall submit a landscape plan detailing all proposed changes to the landscape of the site, including temporary or permanent roads or driveways, grading, vegetation clearing and planting, exterior lighting and screening vegetation or structures. Lighting shall be designed to minimize glare on abutting properties and be directed downward with full cut-off fixtures to reduce light pollution.

## **§300-146.8. Monitoring and Maintenance**

### **A. Solar Photovoltaic Installation Conditions**

The large-scale ground-mounted solar photovoltaic installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the Fire Chief. The owner or operator shall be responsible for the cost of maintaining the solar photovoltaic installation and any access road(s), unless accepted as a public way.

### **B. Modifications**

All material modifications to a large-scale ground-mounted solar photovoltaic installation made after issuance of the required building permit shall require approval by the Planning Board through site plan review.

### **C. Abandonment or Decommissioning**

#### **1. Removal Requirements**

Any large-scale ground-mounted solar photovoltaic installation which has reached the end of its useful life or has been abandoned consistent with the Abandonment section of this bylaw shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Planning Board by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:

4/22/10

- (a) Physical removal of all large-scale ground-mounted solar photovoltaic installations, structures, equipment, security barriers and transmission lines from the site.
- (b) Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
- (c) Stabilization or re-vegetation of the site as necessary to minimize erosion. The Planning Board may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

## **2. Abandonment**

Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the solar photovoltaic installation shall be considered abandoned when it fails to operate for more than two year without the written consent of the Planning Board. If the owner or operator of the large-scale ground-mounted solar photovoltaic installation fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the town may enter the property and physically remove the installation

## **3. Financial Surety**

Proponents of large-scale ground-mounted solar photovoltaic projects shall provide a form of surety, either through escrow account, bond or otherwise, to cover the cost of removal in the event the town must remove the installation and remediate the landscape, in an amount and form determined to be reasonable by the Planning Board, but in no event to exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein, as determined by the project proponent. Such surety will not be required for municipally- or state-owned facilities. The project proponent shall submit a fully inclusive estimate of the costs associated with removal, prepared by a qualified engineer. The amount shall include a mechanism for calculating increased removal costs due to inflation.

## **§300-147. Severability**

The invalidity of any section or provision of this bylaw shall not invalidate any other section or provision thereof.

**City of San Antonio, Texas  
Unified Development Code (2010)**

**ARTICLE III - ZONING  
DIVISION 7. - SUPPLEMENTAL USE REGULATIONS**

**Sec. 35-398. - Renewable Energy Systems**

**b. Solar Farms:**

**1. Applicability.** The purpose of this subsection is to provide standards for fixed-panel photovoltaic solar farms consisting of ground-mounted solar panels that capture energy from the sun and convert it to electricity. The provisions of this section are based on a ground-mounted photovoltaic facility using a rammed post construction technique and panels that support the flow of rainwater between each module and the growth of vegetation beneath the arrays and limiting the impacts of stormwater runoff. The rammed post construction technique allows for minimal disturbance to the existing ground and grading of the site. Based on the assumed solar farm design, the City of San Antonio finds the use to be low intensity with minimal trip generation, low amounts of impervious cover, and low emission thus the use is compatible in non-urbanized, low-density areas with other agricultural and scattered industrial uses.

**2. Site Development Standards:**

a. Lot coverage: No more than one (1) percent of the gross site area shall be occupied by enclosed buildings and structures.

b. Setbacks: A thirty-foot side and rear setback shall apply only to the setback area measured from a lot line that abuts a residential use or residential zoning district. The side or rear setback shall be eliminated where the use does not abut a residential use or residential zoning district or the two districts are separated by a public right-of-way.

c. Height: The average height of the solar panel arrays shall not exceed twelve (12) feet. The height regulations for all other structures are included in the Unified Development Code, Article III Zoning, Table 310-1.

d. Landscaping Buffer: The primary use of the property shall determine the buffer requirement. Where a ground-mounted photovoltaic solar farm is the primary use the property shall be considered agricultural for the purposes of buffer requirements. There is no requirement for screening from public streets.

e. Stormwater Management: Fixed panel solar arrays shall be considered pervious and any fee in lieu of detention shall be considered based on impervious cover. The impervious cover calculation shall include the support posts of the panels, any roads or impervious driveway surfaces, parking areas and buildings on the site.

f. Subdivision: A property developed pursuant to this subsection shall be required to plat however water and sewer connections shall not be required. Suitable fire department access shall be required. Outside of the city limits the county fire marshall shall make the determination of required fire access.

g. Signage: Signage shall conform to Chapter 28 of the Municipal Code as well as any sign limitations of the zoning district.

h. Customer owned on-site power lines shall be buried except where connecting to existing overhead utility lines. This requirement shall not apply to fiber optic connections.

i. Fencing: Due the unique security requirements of this land use, and to facilitate the educational value of seeing this land use, fencing up to eight (8) feet in height is permitted provided the fencing material is predominantly open as defined in Appendix A.

j. All Municipal Code provisions not specified in this subsection are required including but not limited to tree preservation, traffic impact analysis and historic preservation.

**3. Permitted Use.** Ground-mounted fixed-panel photovoltaic solar farms shall be permitted ("P") by right in the following zoning districts: L, I-1, I-2, MI-1, MI-2, ED, RD, FR, QD and SGD. Ground-mounted fixed-panel photovoltaic solar farms shall require a specific use authorization ("S") in the following zoning districts: NC, C-1, C-2, C-3, O-1, O-1.5, O-2, UD, MH, MXD, FBZD and TOD. Ground-mounted fixed-panel photovoltaic solar farms are prohibited in all other residential base zoning districts, neighborhood preservation districts and the D Downtown District.

**4. Submittal Requirements:** Building permits are required for solar farms. Plans shall contain the following:

a. A plot plan, drawn to scale, of the property indicating the total site acreage, landscape and buffer areas, tree preservation, location of all structures, the proposed location of the solar panels, the distances of the solar panels to structures on the property as well as distances to the property lines. The plot plan shall include any roads, electric lines and/ or overhead utility lines.

b. A description of the electrical generating capacity and means of interconnecting with the electrical grid as coordinated and pre-approved with CPS Energy.

c. Drawings or blueprints of solar panels and arrays in conjunction with the application for a building permit for a solar farm/solar power plant.

d. Structural engineering analysis for a solar panel, array and its foundation, as applicable.

e. Manufacturer's recommended installations, if any.

f. Documentation of land ownership and/or legal authority to construct on the property.

**5. Compliance With Other Regulations:**

1. Building permit applications for solar farms shall be accompanied by a line drawing of electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the city's adopted electrical code and that has been pre-approved by CPS Energy as meeting their Distribution Generation Requirements and Guidelines.

2. Within the city limits, an executed interconnection agreement with CPS Energy is required prior to certificate of occupancy. In the ETJ the interconnection agreement shall be provided prior to utility connection.

This subsection does not waive any requirements of the city's building code, electrical code or other technical codes as applicable.

**6. Discontinuation.** A solar farm shall be considered abandoned after one (1) year without energy production. The property owner shall remove all solar farm equipment and appurtenances within ninety (90) days of abandonment.  
(Ord. No. 2010-11-18-0985, § 2, 11-18-10)

**ORDINANCE NO. NS-1200.331**

**AN ORDINANCE OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SANTA CLARA AMENDING APPENDIX I OF THE COUNTY OF SANTA CLARA ORDINANCE CODE RELATED TO COMMERCIAL SOLAR ENERGY CONVERSION SYSTEMS**

**SUMMARY**

This ordinance revises the use classification and amends supplemental development standards for Solar Energy Conversion Systems – Commercial.

**THE BOARD OF SUPERVISORS OF THE COUNTY OF SANTA CLARA ORDAINS AS FOLLOWS:**

**SECTION 1:** Section 2.10.040 of Chapter 2.10, Article 2 of Appendix I, Zoning, of the County of Santa Clara Ordinance Code, is amended to read as follows (additions are underlined):

**§ 2.10.040 Non-Residential Use Classifications**

[ For illustrative purposes only, the entire text of § 2.10.040 has not been included in this version of the Ordinance. ]

**Solar Energy Conversion Systems – Commercial (Infrastructure).** Commercial facilities for the conversion of solar energy to electricity. Does not include systems that ancillary in nature and supply energy to a primary on-site use. All uses within this classification shall fit within one of the following subcategories:

1. **Minor.** Facilities covering eight (8) acres or less, and involving only minor structures other than energy conversion equipment. Structures must be 35 feet or less in height. Land coverage calculations shall include the gross land area utilized by the systems (whether enclosed or unenclosed by security fences) including all areas covered by access roadways and parking used exclusively to support the facility. Multiple facilities proposed in conjunction that cover greater than eight acres shall not meet this definition..
2. **Major.** Facilities that do not meet the definition of *Solar Energy Conversion Systems – Commercial – Minor.*

[Criteria/Findings § 4.10.345]

**SECTION 2:** Section 2.20.020 of Chapter 2.20, Article 2 of Appendix I, Zoning, of the Ordinance Code of the County of Santa Clara, is amended to read as follows (additions are underlined):

**§ 2.20.020 Use Regulations**

[ For illustrative purposes only, the entire text of § 2.20.020 has not been included in this version of the Ordinance. ]

**Table 2.20-2**

USE CLASSIFICATIONS	ZONING				Supplemental Regulations
	A	AR	HS	RR	
<u>Solar Energy Conversion Systems – Commercial</u>					
<u>Minor</u>	<u>A</u>	<u>U</u>	<u>U</u>	<u>A</u>	<u>§ 4.10.345, Note 4, 13</u>
<u>Major</u>	<u>U</u>	<u>U</u>	<u>U</u>	<u>U</u>	<u>§ 4.10.345, Note 4, 13</u>

**NOTES:**

4. Not a permitted use in areas with the Agriculture-Large Scale land use plan designation of the General Plan. [existing note]

13. Not a permitted use in areas with the –d1 (Santa Clara Valley Viewshed) or –d2 (Milpitas Hillside) Design Review Combining Zoning Districts.

**SECTION 3:** Section 2.50.020 of Chapter 2.50, Article 2 of Appendix I, Zoning, of the Ordinance Code of the County of Santa Clara, is amended to read as follows (additions are underlined):

**§ 2.50.020 Use Regulations**

For illustrative purposes only, the entire text of § 2.50.020 has not been included in this version of the Ordinance.

**Table 2.50-1**

USE CLASSIFICATIONS	ZONING			Supplemental Regulations
	A1	RS	O/SF	
<u>Solar Energy Conversion Systems – Commercial</u>				
<u>Minor</u>	<u>A</u>	<u>–</u>	<u>–</u>	<u>§ 4.10.345</u>
<u>Major</u>	<u>U</u>	<u>–</u>	<u>–</u>	<u>§ 4.10.345</u>

**SECTION 4:** Section 4.10.345 of Chapter 4.10, Article 4 of Appendix I, Zoning, of the Ordinance Code of the County of Santa Clara, is added to read as follows:

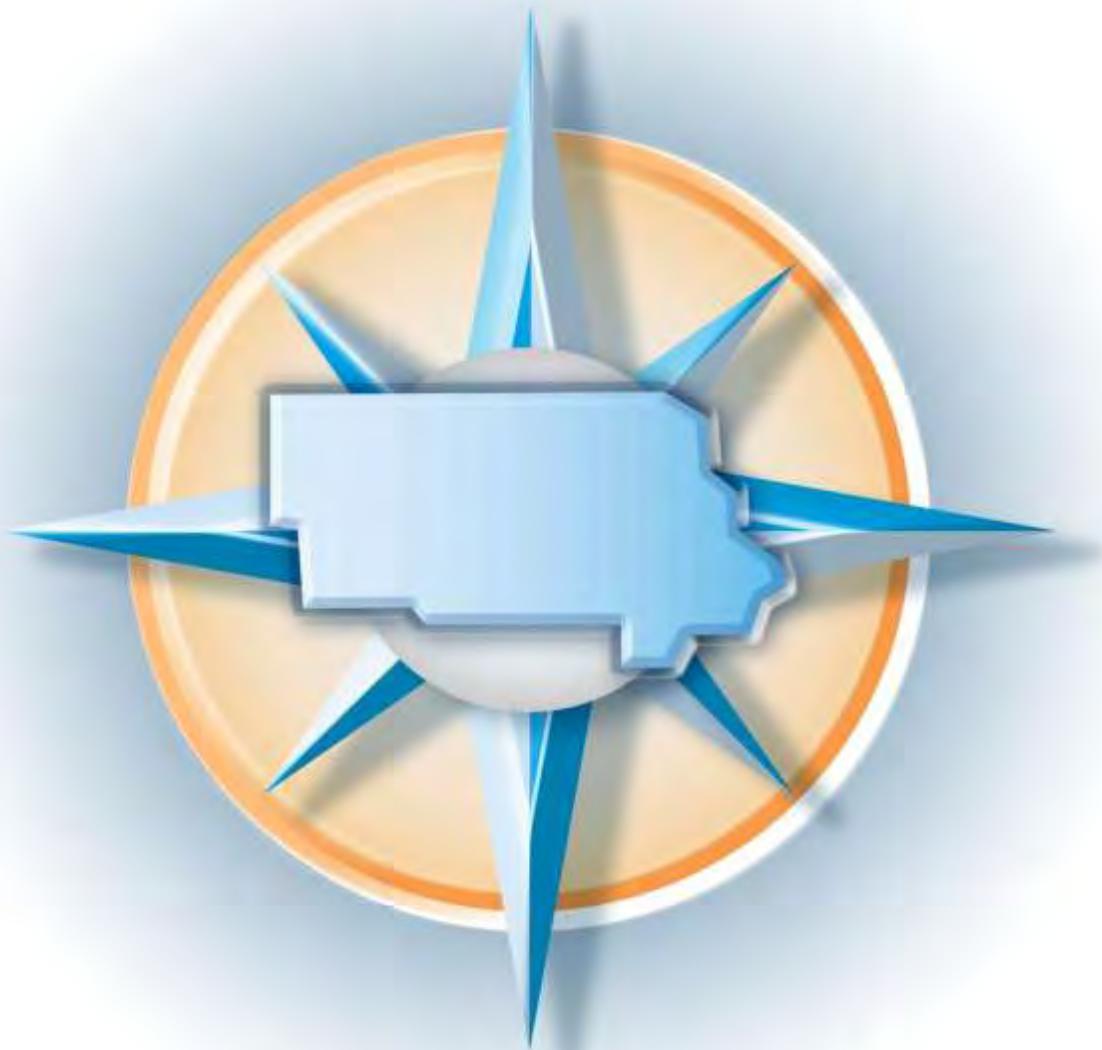
**§4.10.345 Solar Energy Conversion Systems–Commercial**

This section refers to uses classified as Solar Energy Conversion Systems - Commercial, as described in § 2.10.040. Commercial solar energy conversion systems shall comply with all of the requirements of this section.

A. **Exclusive Agriculture Zoning District.** Such uses shall be subject to all of the following provisions in the A, Exclusive Agriculture, Zoning District:

1. **Prohibited in Agriculture–Large Scale.** Such uses are not allowed on any land designated Agriculture–Large Scale by the general plan;

2. **Agriculture–Medium Scale Lands.** Such uses may be allowed on lands with a general plan designation of Agriculture–Medium Scale, provided that the subject lot is deemed by the decision-maker to be of marginal quality for agricultural purposes because of one or more of the following conditions: poor soil type, lack of water availability, or an abundance of surrounding incompatible non-agricultural uses. Projects must also demonstrate consistency with the provisions of Section 2.20.250, A Districts: Agricultural Preservation Criteria.
- B. **Prohibited in Certain Design Review Combining Districts.** Not allowed on any land located within the -d1 (Santa Clara Valley Viewshed) and -d2 (Milpitas Hillsides) Design Review Combining Districts.
  - C. **Criteria.** Commercial solar energy systems are subject to all of the following provisions:
    1. **Setbacks.** All structures shall have a minimum setback of thirty (30) feet.
    2. **Signage.** Signs visible from a public road shall only identify the manufacturer, installer, or owner of the system, or public health and safety information applicable to the installed systems. A facility shall be limited to two signs and aggregate sign area shall be no greater than 200 square feet..
    3. **Wildlife Passage.** In areas identified as containing important wildlife habitat, the facility shall be designed, to the maximum extent feasible, to allow continued use of the site for wildlife habitat and migration across the site.
    4. **Construction and Operation.** The design, construction and operation of the facility shall minimize soil disturbance to the maximum extent possible, and shall not substantially alter drainage from the site.
  - D. **Williamson Act Limitation.** No system shall be allowed on lands subject to a California Land Conservation Act (Williamson Act) contract unless permitted as a compatible use.
  - E. **Termination and Decommissioning.** Solar energy conversion systems and all related equipment and accessory structures shall be removed following cessation of use as defined in either § 5.40.070 or § 5.65.050 of the Zoning Ordinance.



## **LAND USE AND ZONING ORDINANCE #439**

**Printed December 28, 2010**

Effective: June 22, 2010

**Sign**

A name, identification, description, display, illustration or device which is affixed to or represented directly or indirectly upon a building, structure or land in view of the general public and which directs attention to a product, place, activity, person, institution or business.

**Sign, Off-premise (Billboard)**

A sign which directs attention to a business, commodity, service, activity or entertainment not necessarily conducted, sold or offered upon the premises where such sign is located.

**Significant Historic Site**

Any archaeological site, standing structure or other property that meets the criteria for eligibility to the National Register of Historic Places or is listed in the State Register of Historic Sites or is determined to be an unplatted cemetery that falls under the provisions of *Minnesota Statutes, section 307.08; or successor statutes*. A historic site meets these criteria if it is presently listed on either register or if it is determined to meet the qualifications for listing after review by the Minnesota State Archaeologist or the Director of the Minnesota Historical Society. All unplatted cemeteries are automatically considered to be significant historic sites.

**Single Family Dwelling Unit**

A residential building containing one residential dwelling unit.

**Ski Areas and Lodges**

An area developed for snow skiing, with trails and lifts, including ski rentals and sales, instruction and eating facilities.

**Solar Energy Systems – Accessory**

A solar panel or array mounted on a building, pole or rack that is secondary to the primary use of the parcel on which it is located and which is directly connected to or designed to serve the energy needs of the primary use.

**Solar Farms**

A solar array composed of multiple solar panels on ground-mounted rack or poles which is the primary land use for the parcel on which it is located.

**Solid Manure**

Animal manure that does not flow and which can be effectively stacked or handled using a loader equipped with forks. This shall not include frozen liquid manure.

**Solid Waste**

Solid waste means garbage, refuse, sludge from a water supply treatment plant or air contaminant treatment facility, and other discarded waste materials and sludges, in solid, semisolid, liquid or contained gaseous form, resulting from industrial, commercial, mining and agricultural operations, and from community activities, but does not include hazardous waste; animal waste used as fertilizer; earthen fill, boulders, rock; sewage sludge; solid or dissolved material in domestic sewage or other common pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents or discharges

## 6.49 Seasonal Produce Sales Stands, Accessory

### 6.49.1 Performance Standards

Seasonal produce sales stands shall comply with the following standards:

- A. Seasonal produce stands shall be an accessory use to a principle agricultural use.
- B. Operation of produce stands shall be limited to the growing season in Minnesota.
- C. No sale of product shall take place in the public right-of-way of any Federal, State, County or Township roadway unless approved by the road authority.
- D. Off-street parking shall be provided outside of any road right-of-way.
- E. Any temporary structure placed on the property for seasonal produce sales shall be removed at the end of the selling season. The size of the temporary structure shall not exceed one hundred twenty (120) square feet.
- F. All structures, including temporary structures, shall meet the minimum setback requirements of the district in which it is located.
- G. Signs shall meet the requirements of *Section 7.24 of this Ordinance*.

## 6.50 Solar Energy Systems

### 6.50.1 Comprehensive Plan Reference

The purpose of this Section is to set forth standards for large and small solar energy systems. Stearns County has determined that development of solar energy is in the public interest and consistent with the Comprehensive Plan, including the following goals:

- A. Natural Resource Plan, Goal 2, Objective 4: Encourage use of renewable energy systems, including wind energy and solar energy, which reduce the footprint of development on local and global natural systems.
- B. Economic Development Plan, Goal 3, Objective 3: Encourage and promote the use of “green” architecture design principles that minimize impacts to the natural and cultural environments and reduce long-run risk to business.

### 6.50.2 Standards for Solar Farms

Solar Farms shall be subject to the administrative requirements of *Section 4.8 of this Ordinance* and the following performance standards:

- A. Solar farms are the primary land use for the parcel on which the array is located and are distinguished from solar arrays that are a secondary or accessory use. Solar farms are composed of multiple solar panels on multiple mounting systems (poles or racks), and generally have a Direct Current (DC) rated capacity greater than one hundred (100) kilowatts.
- B. Stormwater management shall meet the requirements of *Section 7.25 of this Ordinance*.
- C. Erosion and sediment control shall meet the requirements of *Section 7.10 of this Ordinance*.
- D. **Foundations.** The manufacturer’s engineer or another qualified engineer shall certify that the foundation and design of the solar panels is within accepted professional standards, given local soil and climate conditions.

- E. **Other standards and codes.** All solar farms shall be in compliance with any applicable local, state and federal regulatory standards, including the State of Minnesota Uniform Building Code, as amended; and the National Electric Code, as amended.
- F. **Power and communication lines.** Power and communication lines running between banks of solar panels and to electric substations or interconnections with buildings shall be buried underground. Exemptions may be granted by the Department in instances where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines.
- G. **Application requirements.** The following information shall be provided to the Department prior to issuance of the conditional use permit:
- (1) A site plan of existing conditions showing the following:
    - (a) Existing property lines and property lines extending one hundred (100) feet from the exterior boundaries, including the names of the adjacent property owners and current use of those properties
    - (b) Existing public and private roads, showing widths of the roads and any associated easements
    - (c) Location and size of any abandoned wells, sewage treatment systems and dumps
    - (d) Existing buildings and any impervious surface
    - (e) Topography at two (2) foot intervals and source of contour interval, unless determined otherwise by the Department. A contour map of the surrounding properties may also be required
    - (f) Existing vegetation (list type and percent of coverage; i.e. grassland, plowed field, wooded areas, etc.)
    - (g) Waterways, watercourses, lakes and public water wetlands
    - (h) Delineated wetland boundaries
    - (i) The one hundred (100)-year flood elevation and Regulatory Flood Protection Elevation, if available
    - (j) Floodway, flood fringe and/or general flood plain district boundary, if applicable
    - (k) The shoreland district boundary, if any portion of the project is located in a shoreland overlay district
    - (l) In the shoreland overlay district, the ordinary high water level and the highest know water level
    - (m) In the shoreland overlay district, the toe and top of any bluffs within the project boundaries
    - (n) Mapped soils according to the Stearns County Soil Survey
    - (o) Surface water drainage patterns
    - (p) LESA score for the parcel, if located within an agricultural zoning district.
  - (2) Site Plan of Proposed Conditions
    - (a) Location and spacing of solar panels
    - (b) Location of access roads

- (c) Planned location of underground or overhead electric lines connecting the solar farm to the building, substation or other electric load
  - (d) New electrical equipment other than at the existing building or substation that is the connection point for the solar farm
  - (e) Proposed erosion and sediment control measures as required in *Section 7.10 of this Ordinance*.
  - (f) Proposed stormwater management measures as required under *Section 7.25 of this Ordinance*
  - (g) Sketch elevation of the premises accurately depicting the proposed solar energy conversion system and its relationship to structures on adjacent lots (if any);
- (3) Manufacturer's specifications and recommended installation methods for all major equipment, including solar panels, mounting systems and foundations for poles or racks;
  - (4) The number of panels to be installed;
  - (5) A description of the method of connecting the array to a building or substation;
  - (6) A copy of the interconnection agreement with the local electric utility or a written explanation outlining why an interconnection agreement is not necessary;
  - (7) A decommissioning plan shall be required to ensure that facilities are properly removed after their useful life. Decommissioning of solar panels must occur in the event they are not in use for twelve (12) consecutive months. The plan shall include provisions for removal of all structures and foundations, restoration of soil and vegetation and a plan ensuring financial resources will be available to fully decommission the site. Disposal of structures and/or foundations shall meet the provisions of *Stearns County Solid Waste Ordinance Number 171; or successor ordinance*. The Board may require the posting of a bond, letter of credit or the establishment of an escrow account to ensure proper decommissioning.

**6.50.3 Standards for Solar Energy Systems, Accessory.** Solar energy systems are a permitted accessory use in all zoning districts, subject to the following standards.

- A. **Accessory Building Limit.** Solar systems, either roof or ground-mounted, do not count as an accessory building for the purpose of meeting limits on the number of accessory structures allowed per residential lot or the coverage limits, as set in *Section 6.2 of this Ordinance*.
- B. **Height.** Active solar systems are subject to the following height requirements:
  - (1) Building or roof-mounted solar systems shall not exceed the maximum allowed height in any zoning district. For purposes of height measurement, solar systems other than building-integrated systems shall be considered to be mechanical devices and are restricted consistent with other building-mounted mechanical devices for the zoning district in which the system is being installed.
  - (2) Ground or pole-mounted solar systems shall not exceed fifteen (15) feet in height when oriented at maximum tilt.

- C. Location within Lot. Solar systems must meet the accessory structure setback for the zoning district. If the lot is located in agricultural zoning districts or a Natural Resource Conservation Overlay the solar system must be placed within the designated building envelope or obtain a conditional use permit as specified in *Section 7.32 of this Ordinance*.
- (1) Roof-mounted Solar Systems. In addition to the building setback, the collector surface and mounting devices for roof-mounted solar systems that are parallel to the roof surface shall not extend beyond the exterior perimeter of the building on which the system is mounted or built. The collector and racking for roof-mounted systems that have a greater pitch than the roof surface shall be set back from all roof edges by at least two (2) feet. Exterior piping for solar hot water systems shall be allowed to extend beyond the perimeter of the building on a side yard exposure.
  - (2) Ground-mounted Solar Systems. Ground-mounted solar energy systems may not extend into the side-yard or rear setback when oriented at minimum design tilt.
  - (3) Large Ground-mounted Systems. Ground-mounted solar systems that result in the creation of one (1) or more acres of impervious surface must comply with *Sections 7.10 and 7.25 of this Ordinance*.
- D. Maximum Coverage. Roof or building mounted solar systems, excluding building-integrated systems, shall not cover more than eight (80) percent of the south-facing or flat roof upon which the panels are mounted. The total collector surface area of pole or ground mount systems in non-agricultural districts shall not exceed one percent of the lot area.
- E. Approved Solar Components. Electric solar system components must have a Underwriters Laboratory (UL) listing.
- F. Compliance with State Electric Code. All photovoltaic systems shall comply with the Minnesota State Electric Code.
- G. Utility Notification. No grid-intertie photovoltaic system shall be installed until evidence has been given to the Department that the owner has notified the utility company of the customer's intent to install an interconnected customer-owned generator. Off-grid systems are exempt from this requirement.

## 6.51 Solid Waste Composting Facility

### 6.51.1 Performance Standards

A solid waste composting facility shall be subject to the administrative requirements of *Section 4.8 of this Ordinance* and the following performance standards:

- A. The site shall be served by a minor arterial or higher functional class of roadway, except that the proposed use may be served by a lesser functional class roadway if the responsible road authority grants written permission for such use at the proposed location.
- B. The parcel shall have a lot area no less than four (4) times the area of the building footprint.

ORDINANCE NO. 2010 - 02

AN ORDINANCE OF STRABAN TOWNSHIP, ADAMS COUNTY, PENNSYLVANIA, AMENDING CHAPTER 140 (Zoning) OF THE STRABAN TOWNSHIP CODE OF ORDINANCES TO: AMEND SECTION 140-5 (Definitions) TO ADD DEFINITIONS FOR THE TERMS "SOLAR ELECTRIC SYSTEM" AND "SOLAR ELECTRIC FACILITY"; AMEND SECTIONS 140-7 AND 140-8 TO PROVIDE THAT SOLAR ELECTRIC FACILITIES ARE USES PERMITTED BY RIGHT IN THE RESIDENTIAL RURAL DISTRICT (RR) AND THE RESIDENTIAL LOW DENSITY DISTRICT (R-I); AMEND SECTION 140-21 (Public or Utility Uses) TO ADD A SUBSECTION D. (Solar Electric Facility) PROVIDING STANDARDS FOR AND REGULATION OF SOLAR ELECTRIC FACILITIES; AND AMEND SECTION 140-61.B. (Zoning Hearing Board; Hearings) BY ADDING A NEW SUBPARAGRAPH (15) TO PROVIDE THAT THE GRANT OF A SPECIAL EXCEPTION OR A VARIANCE SHALL NOT BE DEEMED TO SUPERCEDE ANY APPLICABLE SUBDIVISION AND LAND DEVELOPMENT REQUIREMENTS. THE AMENDMENTS SHALL BECOME EFFECTIVE IMMEDIATELY.

The Board of Supervisors of Straban Township hereby ordains as follows:

Section 1. **§ 140-5. Definitions** is amended to add the following:

SOLAR ELECTRIC SYSTEM - The components and subsystems that, in combination, convert solar energy into electric energy suitable for use. The term includes, but is not limited to, photovoltaic and concentrated solar power systems.

SOLAR ELECTRIC FACILITY - An electric generating facility whose main purpose is to generate and supply electricity and which consists of one or more solar electric systems and other accessory structures and buildings, including substations, electrical infrastructure, transmission lines and other appurtenant structures and facilities.

Section 2. **§ 140-7. Residential Rural District (R-R)** is amended to add the following as a Public/Transportation/Utility Uses in §140-7B(1):

Type of Use		Use Regulations
Solar Electric Facility	P	§140-21D

Section 3. **§ 140-8. Residential Low Density Districts (R-1)** is amended to add the following as a Public Transportation/Utility Uses in §140-8B(1):

Type of Use		Use Regulations
Solar Electric Facility	P	§140-21D

Section 4. §140-21. Public or Utility Uses is amended to add the following as §140-21D:

D. Solar Electric Facility.

(1) The design of the solar electric system shall conform to applicable industry standards, including those of the American National Standards Institute. The applicant for a building permit and land use permit shall submit certificates of design compliance obtained by the equipment manufacturers from Underwriters Laboratories (UL), IEEE, Solar Rating and Certification Corporation (SRCC), BTL, or other similar certifying organizations.

(2) The solar electric facility and the solar electric system shall be constructed to and comply with the Pennsylvania Uniform Construction Code, Act 45 of 1999, as amended, and any regulations adopted by the Pennsylvania Department of Labor & Industry as they relate to the Uniform Construction Code except where an applicable standard has been approved by the Department of Labor & Industry under its regulatory authority.

(3) The solar electric facilities shall not be artificially lighted except to the extent required by safety or by any applicable federal, state or local authority.

(4) Solar electric facilities shall not display advertising except for reasonable identification of the panel, inverter, or other equipment manufacturer, and the facility owner.

(5) On-site power collection lines shall, to the maximum extent practical, be placed underground.

(6) The solar electric facility shall be enclosed by a fence, barrier, or other appropriate means with a maximum height of eight (8) feet to prevent or restrict unauthorized persons or vehicles from entering the property.

(7) Clearly visible warning signs shall be placed on the fence, barrier, or facility perimeter to inform individuals of potential voltage hazards.

(8) A solar electricity facility shall be sited in such a way that it presents minimal impact to traffic and no impact to public health and safety.

(9) The solar electric facility or individual solar electric system shall be completely decommissioned by the facility owner within twelve (12) months after the end of the useful life of such facility or system. Decommissioning shall include removal of all solar electric systems, buildings, cabling, electrical components, roads, foundations, pilings, and any other associated facilities, so that any agricultural ground upon which the facility and/or system was located is again tillable and suitable for agricultural uses. Disturbed earth shall be graded and

re-seeded unless the land owner requests in writing that the access roads or other land surface areas not be restored. The owner of the facility shall secure the costs of decommissioning by appropriate Bond, Letter of Credit, or Escrow Agreement satisfactory to Straban Township. Such estimate of costs shall be submitted by the owner and subject to approval by Straban Township prior to issuance of any permits required.

(10) Other provisions of this Ordinance and the Straban Township Subdivision and Land Development Ordinance notwithstanding, for a solar electric facility permitted under this Ordinance, the following regulations shall apply:

(A) Minimum setback requirements shall be:

Front	50 feet
Side	25 feet
Rear	25 feet

(B) There shall be no requirement for a minimum amount of open space.

(C) In calculating the maximum impervious surface coverage, no surface of undisturbed turf to which storm water runoff has access shall be considered impervious.

(D) Any identification sign of maximum of six (6) square feet/sign side shall be permitted.

(E) The structures comprising the solar electric facility shall be constructed and located in a manner so as to minimize the necessity to remove existing trees upon the lot, and in no event shall wooded acreage comprising more than 2% of the deeded acreage of the lot or portion of the lot devoted to the solar electric facility use be removed without demonstrating that such removal is necessary for the reasonable construction and efficient performance of the use.

Section 5. Subsection B. (Hearings) of §140-61. (Zoning Hearing Board) of Article IX (Administration and Enforcement) of Chapter 140 (Zoning) of the Code of Ordinances of Straban Township is hereby amended to add a new sub-paragraph (15) which shall read as follows:

(15) The decision by the Zoning Hearing Board to grant a special exception or a variance shall not in any way be deemed to affect the applicability of any provision of the Subdivision and Land Development Ordinance or any other non-zoning land use ordinance applicable to the applicant's plan or project. If the application of provisions of any other land Use ordinance significantly changes the plan or application submitted to the Zoning Hearing Board and upon which the special exception and/or variance was granted, the variance and/or special exception shall be deemed inoperative and must be reviewed again by the Zoning Hearing Board to determine if the special exception and/or variance is justified. The term "significantly changes" means such a

change in the plan or application (including but not limited to: new lot lines; different access points; number of lots; location of structures; availability of water, sewer, or utilities; a change in proposed use) as is determined by the Zoning Officer to require a new presentation to the Zoning Hearing Board.

Section 6. This Ordinance shall take effect immediately (meaning 5 days after adoption pursuant to the law of the Commonwealth).

ENACTED AND ORDAINED this 2 day of August, 2010.

Attest:

  
Its Secretary

STRABAN TOWNSHIP

  
Its Chair

  
Supervisor