

WEST COCALICO TOWNSHIP

Lancaster County, Pennsylvania

ORDINANCE NO. 123

AN ORDINANCE AMENDING ORDINANCE NO. 116, KNOWN AS THE WEST COCALICO TOWNSHIP ZONING ORDINANCE OF 2011, SO AS TO ADD PROVISIONS FOR ALTERNATIVE ENERGY SYSTEMS AND TO AMEND THE PROVISIONS REGARDING HOTEL/MOTELS.

WHEREAS, the West Cocalico Township Zoning Ordinance of 2011 includes provisions addressing accessory alternative energy sources, to wit, accessory solar energy units, and

WHEREAS, it is the opinion of the Supervisors of West Cocalico Township that it would be in the best interests of the citizens of the Township, and would enhance their general welfare, if the Zoning Ordinance of 2011 addressed the broader range of alternative energy systems, such as those for wind energy, geothermal energy, anaerobic digestion energy and outdoor hydronic heating energy, as well as solar energy, and

WHEREAS, the Supervisors of West Cocalico Township desire to encourage alternative energy systems that have a positive impact on energy production and conservation while not having an adverse impact on the community.

WHEREAS, it is also the opinion of the Supervisors that the definition for, and the provisions concerning, Hotel/Motels be amended to provide further clarification and to further provide for the public health, safety and welfare; and

NOW THEREFORE, BE IT ORDAINED AND ENACTED, by the Supervisors of West Cocalico Township on the day and year hereafter recorded, an amendment to the West Cocalico Township Zoning Ordinance of 2011, as follows:

PART A - ALTERNATE ENERGY

SECTION 1. Section 201, Terms, of Article II, Definitions, is amended to add the following terms and their definitions:

Alternative Energy System. A structure, equipment, or device used for the production of heat, cooling, or electricity or other forms of energy from renewable energy sources rather than fossil-fuel sources. May also be referred to as a renewable energy system.

Anaerobic Digester System. An alternative energy system, along with its appurtenant structures, buildings, and on-site electrical infrastructure and transmission lines, that uses anaerobic digestion or co-digestion processes to convert livestock and poultry manure (primary catalysts) and feedstock or other organic materials (secondary catalysts) into biogas that is burned on-site to produce electrical or thermal power. Types of anaerobic digester systems may include covered anaerobic lagoons, plug-flow or complete mix (or continually stirred) tank reactors.

Anaerobic Digester System, Accessory. An anaerobic digester system that supplies electrical or thermal power for on-site agricultural support use, is an accessory use to a principal agricultural use, and at least 75 percent of the primary catalyst used in the digester is generated on-site.

Anaerobic Digester System, Community. An accessory anaerobic digester system serving more than one farm that is accessory and subordinate to the principal agricultural use of the farm lot or parcel on which it is located, provides electrical or thermal power for the principal agricultural uses and customary accessory uses of the farms that it serves and at least 75 percent of the primary catalyst used in the digester is generated by one or more of the farms served by the digester.

Anaerobic Digester System, Principal. An anaerobic digester system that supplies electrical or thermal power primarily for off-site use, is not an accessory use to a principal agricultural use and more than 25 percent of the primary catalyst used in the digester is generated off-site.

Geothermal Energy System, Closed-Loop. A type of geothermal heating or cooling system, not designed or used for the generation of power, that utilizes a pressurized heat exchanger consisting of pipe, a circulating pump, and a water-source heat pump in which the heat transfer fluid is not exposed to the atmosphere. The heat transfer fluid is potable water and may have approved antifreeze added. There are two kinds of closed loop systems:

1. Closed Vertical Loop Geothermal System: A borehole that extends vertically beneath the surface. Pipes are installed with U-bends at the bottom of the

borehole. The pipes are connected to the heat exchanger and heat transfer fluid is circulated through the pipes.

2. Closed Horizontal Loop Geothermal System: A mechanism for heat exchange which consists of the following basic elements: underground loops of piping; heat transfer fluid; a heat pump; and an air distribution system. An opening is made in the earth. A series of pipes are installed into the opening and connected to a heat exchange system in the building. The pipes form a horizontal closed loop and are filled with a heat transfer fluid. The fluid is circulated through the piping from the opening into the heat exchanger and back.

Geothermal Energy System, Open Loop. A type of geothermal heating or cooling system that utilizes a water-supply well and a water pump to deliver ground water to a water-source heat pump. The discharge water from the water-source heat pump may be returned to the subsurface through a recharge well or infiltration bed or may be discharged into a pond, lake or stream. A spring may also be the source of the ground water supply.

Outdoor Hydronic Heating System. A fuel-burning device, also known as an outdoor wood-fired boiler, outdoor wood-fired furnace or outdoor wood-burning appliance, designed:

1. To burn clean wood or other fuels that have been approved in writing by the Pennsylvania Department of Environmental Protection;
2. By the manufacturer specifically for outdoor installation or installation in structures not normally intended for habitation by humans or domestic animals (e.g., garages); and
3. To heat building space or water via distribution, typically through pipes, of a fluid heated in the device, typically water or a water/antifreeze mixture.

Solar Energy System, Accessory. An alternative energy system consisting of one or more roof and/or ground mounted solar collector devices, including photovoltaic shingles and solar related equipment, which is intended primarily to reduce on-site consumption of utility power.

Solar Energy System, Principal. An alternative energy system used principally as a generator of power for off-site consumption and consisting of one or more ground- or roof-mounted solar collector devices, solar-related transmission and monitoring equipment, and other ancillary structures and buildings used for light reflectors, concentrators and heat exchangers, substations, electrical infrastructure, and transmission lines.

Wind Energy System, Accessory. An alternative energy system consisting of a wind turbine, tower, and associated control or conversion electronics, which is intended primarily to reduce on-site consumption of utility power.

Wind Energy System, Principal. An alternative energy system that is used principally as a power generator for off-site consumption and consists of one or more wind turbines and ancillary structures and buildings, substations, meteorological towers, electrical infrastructure, and transmission lines.

Wind Turbine. A wind energy system that converts wind energy into electricity through the use of a wind turbine generator. It includes the nacelle, rotor, tower, and pad transformer, if any.

SECTION 2. Section 401, Permitted Uses, of Article IV, ES Ecologically Sensitive District, is amended to add the following permitted uses:

11. Accessory Solar Energy Systems, subject to the requirements of section 2305-B
12. Accessory Wind Energy Systems, subject to the requirements of section 2305-D
13. Closed-loop Geothermal Energy Systems, subject to the requirements of section 2305-F
14. Outdoor Hydronic Heating Systems, subject to the requirements of section 2305-I

SECTION 3. Section 402, Special Exceptions, of Article IV, ES Ecologically Sensitive District, is amended to add the following special-exception use:

15. Principal Wind Energy Systems, subject to the requirements of section 2305-E

SECTION 4. Section 501, Permitted Uses, of Article V, A-1 Agricultural District, is amended to add the following permitted uses:

12. Accessory Solar Energy Systems, subject to the requirements of section 2305-B
13. Accessory Wind Energy Systems, subject to the requirements of section 2305-D
14. Closed-loop Geothermal Energy Systems, subject to the requirements of section 2305-F
15. Accessory Anaerobic Digester Systems, subject to the requirements of section 2305-G
16. Community Anaerobic Digester Systems, subject to the requirements of section 2305-G
17. Outdoor Hydronic Heating Systems, subject to the requirements of section 2305-I

SECTION 5. Section 502, Special Exceptions, of Article V, A-1 Agricultural District, is amended to add the following special-exception uses:

13. Principal Solar Energy Systems, subject to the requirements of section 2305-C
14. Principal Anaerobic Digester Systems, subject to the requirements of section 2305-H

SECTION 6. Section 601, Permitted Uses, of Article VI, A-2 Agricultural District, is amended to add the following permitted uses:

12. Accessory Solar Energy Systems, subject to the requirements of section 2305-B
13. Accessory Wind Energy Systems, subject to the requirements of section 2305-D
14. Closed-loop Geothermal Energy Systems, subject to the requirements of section 2305-F
15. Accessory Anaerobic Digester Systems, subject to the requirements of section 2305-G

16. Community Anaerobic Digester Systems, subject to the requirements of section 2305-G
17. Outdoor Hydronic Heating Systems, subject to the requirements of section 2305-I

SECTION 7. Section 602, Special Exceptions, of Article VI, A-2 Agricultural District, is amended to add the following special-exception uses:

16. Principal Solar Energy Systems, subject to the requirements of section 2305-C
17. Principal Anaerobic Digester Systems, subject to the requirements of section 2305-H

SECTION 8. Section 701, Permitted Uses, of Article VII, OS Woodland District, is amended to add the following permitted uses:

11. Accessory Solar Energy Systems, subject to the requirements of section 2305-B
12. Accessory Wind Energy Systems, subject to the requirements of section 2305-D
13. Closed-loop Geothermal Energy Systems, subject to the requirements of section 2305-F
14. Outdoor Hydronic Heating Systems, subject to the requirements of section 2305-I

SECTION 9. Section 801, Permitted Uses, of Article VIII, RR Rural Residential District, is amended to add the following permitted uses:

8. Accessory Solar Energy Systems, subject to the requirements of section 2305-B
9. Accessory Wind Energy Systems, subject to the requirements of section 2305-D
10. Closed-loop Geothermal Energy Systems, subject to the requirements of section 2305-F
11. Outdoor Hydronic Heating Systems, subject to the requirements of section 2305-I

SECTION 10. Section 901, Permitted Uses, of Article IX, VC Village Center District, is amended to add the following permitted uses:

15. Accessory Solar Energy Systems, subject to the requirements of section 2305-B
16. Accessory Wind Energy Systems, subject to the requirements of section 2305-D
17. Closed-loop Geothermal Energy Systems, subject to the requirements of section 2305-F

SECTION 11. Section 1001, Permitted Uses, of Article X, VR Village Residential District, is amended to add the following permitted uses:

13. Accessory Solar Energy Systems, subject to the requirements of section 2305-B
14. Accessory Wind Energy Systems, subject to the requirements of section 2305-D
15. Closed-loop Geothermal Energy Systems, subject to the requirements of section 2305-F

SECTION 12. Section 1101, Permitted Uses, of Article XI, SR Special Residential District, is amended to add the following permitted uses:

8. Accessory Solar Energy Systems, subject to the requirements of section 2305-B
9. Accessory Wind Energy Systems, subject to the requirements of section 2305-D
10. Closed-loop Geothermal Energy Systems, subject to the requirements of section 2305-F

SECTION 13. Section 1201, Permitted Uses, of Article XII, I-C Industrial/Commercial District, is amended to add the following permitted uses:

15. Accessory Solar Energy Systems, subject to the requirements of section 2305-B
16. Accessory Wind Energy Systems, subject to the requirements of section 2305-D
17. Closed-loop Geothermal Energy Systems, subject to the requirements of section 2305-F

SECTION 14. Section 2007, Accessory Alternative Energy Sources, of Article XX, Accessory Use Regulations, is deleted in its entirety, as follows:

SECTION 15. Section 2305, Alternative Energy Systems, is added to Article XXIII, Criteria for Special Exceptions and Other Selected Uses, as follows:

Section 2305 Alternative Energy Systems

A. Purpose

The purpose of this section is to encourage alternative energy systems that have a positive impact on energy production and conservation while not having an adverse impact on the community, in order to:

1. Promote rather than restrict the use of alternative energy systems by creating a clear regulatory path for approving alternative energy systems;
2. Create livable communities where development incorporates sustainable design elements such as resource and energy conservation and the use of renewable energy;
3. Encourage alternative energy development in locations where the technology can be environmentally, economically and socially compatible; and
4. Ensure the continued viability of the township's agricultural economy by promoting alternative energy systems that are farm-based and that minimize detrimental impacts on the productivity of agricultural lands.

B. Accessory Solar Energy Systems

1. Zoning Districts Allowed

Accessory solar energy systems are allowed in all zoning districts as an accessory use to a principal use of the lot.

2. General Requirements

- a. An accessory solar energy system shall provide power for only the principal use and customary, accessory uses of the lot or parcel on which located. The system shall be used solely for the generation of power for use on-site. Excess electric power generated incidentally may be sold to a power utility.
- b. A single assemblage of solar panels, regardless of the number, and supporting equipment constitutes an accessory solar energy system. Conduit and other utility

connections are not considered to be part of the system. More than one system may be installed on a lot.

- c. An accessory solar energy system shall not display advertising. The manufacturer's or installer's identification and appropriate warning or cautionary notices may be displayed, provided they comply with current municipal sign regulations.

3. Development Standards – Roof Mounted Systems

- a. Roof-mounted accessory solar energy systems shall only be located on an existing principal or accessory building and shall not be allowed on a structure constructed specifically for the purpose of accommodating an accessory solar energy system.
- b. Roof-mounted solar panels and shingles shall not exceed the highest peak of a pitched roof building. The tops of panels shall not exceed the height of the parapet or 4 feet, whichever is less, on a flat-roofed building.
- c. The accessory solar energy system shall be set back a minimum of three (3) feet from the perimeter of the building roof.
- d. All utility connections to the accessory solar energy system shall be trenched and undergrounded to the point of intersection with the support building, unless the applicant demonstrates to the satisfaction of the Township Code Official that it is not feasible to trench and underground a utility connection.

4. Development Standards – Ground-Mounted Systems

- a. Ground-mounted accessory systems are permitted only on lots larger than one acre within lot areas not subject to floodplain overlay restrictions.
- b. Ground-mounted accessory solar energy structures shall be located a minimum of three feet from the adjoining property line(s). The system is prohibited in the front yard of the lot for which the system is proposed.
- c. The surface area enclosing the ground-mounted solar energy system is considered impervious and is subject to the impervious coverage requirement of the applicable zone, unless the applicant can demonstrate by credible evidence that stormwater will infiltrate into the ground beneath the solar energy system at a rate equal to that of the infiltration rate of the existing condition of the subject surface area.

5. Required Permits and Construction Requirements

- a. Accessory solar energy systems require the approval and issuance of a building permit by the Township Code Official prior to the start of construction.
- b. The design and installation of accessory solar energy systems shall conform to applicable industry standards and the UCC. At the time of application for a building permit, the applicant shall submit manufacturer certificates of design compliance obtained by the accessory solar energy system manufacturer from a reputable certifying organization.

- c. The applicant for an accessory solar energy system that is to be connected to the power utility grid shall provide written authorization from the power utility. Interconnection and net metering shall be in accordance with the policies of the power utility.

C. Principal Solar Energy Systems

1. Zoning Districts Allowed

Principal solar energy systems are permitted as a special-exception use within the A-1 and A-2 zoning districts, subject to compliance with the following criteria:

- a. The principal solar energy system, with the exception of transmission lines, shall not be located on Class 1, 2 or 3 prime agricultural soils, as established by the Soil Survey of Lancaster County, Pennsylvania (latest edition), unless roof-mounted on an existing building. Such systems shall not be allowed on a structure constructed or converted for the purpose of accommodating a solar energy system on Class 1, 2 or 3 prime agricultural soils.
- b. More than one system may be installed on a lot, subject to the limitations of this section. Multiple, contiguous lots in the same ownership or control shall count as one lot for purposes of this section;
- c. The area devoted to the solar energy system shall be limited to a maximum of five acres or five percent of the total lot area, whichever is less, unless located on the roof of an existing building;
- d. All on-site utility and transmission lines shall be placed underground, unless demonstrated by the applicant to not be feasible.

2. General Requirements

- a. A single assemblage of solar panels, regardless of the number, and supporting equipment constitutes a solar energy system. Conduit and other utility connections are not considered to be part of the system.
- b. The solar energy system shall not display off-site advertising. The manufacturer's or installer's identification and appropriate warning or cautionary notices may be displayed, provided they comply with municipal sign regulations. On-site business signs are allowed in accordance with the sign regulations applicable to the zoning district.
- c. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.
- d. At the time of issuance of the permit for the construction of the facility, the owner shall provide financial security in a form and amount acceptable to the Township to secure the expense of decommissioning the solar energy system.

3. Development Standards – Roof-Mounted Systems

- a. Roof-mounted solar panels and shingles shall not exceed the highest peak of a pitched roof building. The tops of panels shall not exceed the height of the parapet or 4 feet, whichever is less, on a flat-roofed building.
 - b. Roof-mounted systems shall be set back a minimum of three feet from the perimeter of the building roof.
4. Development Standards – Ground-Mounted Systems
- a. Ground-mounted systems are permitted only on lots larger than one acre within lot areas not subject to floodplain or steep slope overlay restrictions.
 - b. Ground-mounted systems shall be located in accordance with the setback requirements for principal uses of the applicable zone.
 - c. For purposes of determining compliance with the lot coverage standards of the zoning district, the total surface area of all ground-mounted and free-standing solar collectors, including solar photovoltaic cells, panels, arrays, and solar hot air or water collector devices, in addition to any other related structures, shall be considered as impervious surface, unless the applicant can demonstrate by credible evidence that stormwater will infiltrate into the ground beneath the solar energy system at a rate equal to that of the infiltration rate of the existing condition of the subject surface area.
 - d. The perimeter of the area devoted to the solar energy system and related structures and mechanical equipment shall be secured by an 8-foot chain-link fence and screened in accordance with section 2110.3.
5. Required Permits and Construction Requirements
- a. Principal solar energy systems require the approval of a special-exception in accordance with the requirements of Articles XXIII and XXIV and the issuance of a building permit by the Township Code Official. The special-exception application shall be referred to the Township Planning Commission for review prior to consideration by the Township Zoning Hearing Board.
 - b. The Zoning Hearing Board, in approving the special-exception request, may attach conditions in accordance with Section 2405.2.
 - c. In addition to any other requirements for submittal of a special-exception request, the application shall include the following supplemental information:
 - 1) A detailed written description of the proposed project, including a general description of the project site;
 - 2) A legal description of the project site;
 - 3) A site plan drawn in sufficient detail to clearly depict the following:
 - a) On-site areas of Class 1, 2 or 3 prime agricultural soils;
 - b) Existing topographic features;

- c) Physical features of the project site, both before and after construction of the energy facility, including existing structures and land uses;
 - d) Dimensions of the project site;
 - e) Locations and approximate dimensions of all equipment, devices, structures and power transmission lines associated with the proposed system
 - e) Identification and area calculation of the area devoted to the solar energy system;
 - f) Identification of existing and proposed areas of impervious coverage;
 - g) Location of existing or proposed electrical transmission lines and facilities on the proposed location;
 - h) Setback in feet from the site property boundaries of each principal solar energy system and each proposed structure.
- 4) For roof-mounted systems, written certification from a structural engineer stating that the roof is structurally capable of supporting the additional load.
- d. Prior to the start of construction, principal solar energy systems require the submittal and approval of a land development plan and stormwater management plan in accordance with adopted township ordinances.
 - e. The design and installation of the principal solar energy system shall conform to applicable industry standards and the UCC. At the time of application for a building permit, the applicant shall submit manufacturer certificates of design compliance obtained by the system manufacturer from a reputable certifying organization.
 - f. The applicant shall provide written authorization from the power utility for connection to the power utility grid. Interconnection and net metering shall be in accordance with the policies of the power utility.
6. Decommissioning
- a. A principal solar energy system that is not in continuous and uninterrupted operation for twelve (12) consecutive months shall be deemed non-operational and abandoned, and shall constitute a public nuisance. Upon written notice thereof by the Township to the owner of the facility, the facility shall be decommissioned at the owner's expense within one year of said notice.
 - b. Decommissioning of the project site shall include removal of the entire solar energy system facility, including all poles, foundations, buildings, accessory structures, fences, transmission lines and all other appurtenances of and relating to the facility.
 - c. The removal of any ground-mounted solar facilities and ancillary structures shall require remediation of the site to its prior natural or agricultural state. Remediation shall be completed within one year of the initial written notice by the Township regarding abandonment of the solar facility. The method of remediation requires approval of an erosion and sedimentation control plan by the Lancaster County Conservation District.

D. Accessory Wind Energy Systems

1. Zoning Districts Allowed

Accessory wind energy systems are allowed in all zoning districts as an accessory use to a principal use of the lot.

2. General Requirements

- a. Allowable accessory wind energy systems shall only be the vertical-axis type of wind turbine, except that wind mills (horizontal-axis types of wind turbines) are exempted from this section when used in support of agricultural operations and farm housing.
- b. An accessory wind energy system shall provide power for only the principal use and customary, accessory uses of the lot on which located. The system shall be used solely for the generation of power for use on-site. Excess electric power generated incidentally may be sold to a power utility.
- c. No more than one accessory wind energy system is allowed per lot. A single assemblage of a rotor, gearbox and generator constitutes an accessory wind energy system. Conduit and other utility connections are not considered to be part of the system.
- d. An accessory wind energy system shall not exceed fifty-five (55) decibels under normal operating conditions, as measured at the property line. Sound levels, however, may be exceeded during short-term events out of anyone's control, such as utility outages or severe wind storms.
- e. An accessory wind energy system shall not display advertising. The manufacturer's or installer's identification and appropriate warning or cautionary notices may be displayed, provided they comply with current municipal sign regulations.

3. Development Standards

- a. Accessory wind energy systems shall only be ground-mounted.
- b. The maximum height of an accessory wind energy system shall not exceed the maximum allowable height of the zoning district for a principal use.
- c. Accessory wind energy systems shall be set back from property lines, buildings and off-site overhead utility lines in accordance with the setback requirements of the zoning district for accessory structures or at a ratio of 1.3:1 to the maximum height of the accessory wind energy system (i.e., a distance of 1.3 feet for every foot of height of the system), whichever is greater.

4. Required Permits and Construction Requirements

- a. Accessory wind energy systems require the approval and issuance of a building permit by the Township Code Official prior to the start of construction.

- b. The design and installation of accessory wind energy systems shall conform to applicable industry standards and the UCC. At the time of application for a building permit, the applicant shall submit manufacturer certificates of design compliance obtained by the accessory wind energy system manufacturer from a reputable certifying organization. The submittal shall include the manufacturer's specifications for sound levels under normal operating conditions.
- c. The applicant for an accessory wind energy system that is to be connected to the power utility grid shall provide written authorization from the power utility. Interconnection and net metering shall be in accordance with the policies of the power utility.

E. Principal Wind Energy Systems

1. Zoning Districts Allowed

Principal wind energy systems are permitted as a special-exception use within the ES zoning district, subject to compliance with the following criteria:

- a. The principal wind energy system, with the exception of transmission lines, shall not be located on Class 1, 2 or 3 prime agricultural soils, as established by the Soil Survey of Lancaster County, Pennsylvania (latest edition);
- b. More than one system may be installed on a lot, subject to the limitations of this section. Multiple, contiguous lots in the same ownership or control shall count as one lot for purposes of this section;
- c. The area devoted to the wind energy system shall be limited to a maximum of five acres or five percent of the total lot area, whichever is less;
- d. All on-site utility and transmission lines shall be placed underground, unless demonstrated by the applicant to not be feasible.
- e. The wind turbine shall be sited to prevent shadow flicker on any occupied existing building on adjacent property.

2. General Requirements

- a. The wind energy system shall be equipped with a redundant braking system. This includes both aerodynamic overspeed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Mechanical brakes shall be operated in a fail-safe mode. Stall regulation shall not be considered a sufficient braking system for overspeed protection.
- b. Principal wind energy systems shall not generate noise which exceeds fifty-five (55) decibels nor ten (10) decibels above ambient noise in any one hour, whichever is higher, as measured at the property line.
- c. The wind energy system shall not display off-site advertising. The manufacturer's or installer's identification and appropriate warning or cautionary notices may be displayed, provided they comply with municipal sign regulations. On-site business

signs are allowed in accordance with the sign regulations applicable to the ES zoning district.

- d. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.
- e. Wind turbines shall not be illuminated, except to the extent required by the Federal Aviation Administration or other applicable authority that regulates air safety.
- f. The perimeter of the area devoted to the wind turbine and related structures and mechanical equipment shall be secured by an 8-foot chain-link fence and screened in accordance with section 2110.3.
- g. Wind turbines shall not be climbable for a minimum of fifteen (15) feet above ground level or the highest point of any adjacent roof, whichever is more restrictive.
- h. At the time of issuance of the permit for the construction of the facility, the owner shall provide financial security in a form and amount acceptable to the Township to secure the expense of decommissioning the wind energy system.

3. Development Standards

- a. Wind turbines shall be set back from lot lines and from any on-site, non-system-related buildings a minimum of 1.1 times the turbine height, as measured from the center of the turbine base to the nearest point of the lot line or building foundation, or as otherwise required by the ES zone, whichever is more restrictive.
- b. Furthermore, wind turbines shall be set back from any off-site buildings a minimum of 2.5 times the turbine height, as measured from the center of the turbine base to the nearest point of the off-site building's foundation, or as otherwise required by the ES zone, whichever is more restrictive.
- c. Minimum setbacks and the maximum height of buildings and structures ancillary to the wind turbine shall be in accordance with the requirements of the ES zoning district for a principal use.

4. Required Permits and Construction Requirements

- a. Principal wind energy systems require the approval of a special-exception in accordance with the requirements of Articles XXIII and XXIV and the issuance of a building permit by the Township Code Official. The special-exception application shall be referred to the Township Planning Commission for review prior to consideration by the Township Zoning Hearing Board.
- b. The Zoning Hearing Board, in approving the special-exception request, may attach conditions in accordance with Section 2405.2.
- c. In addition to any other requirements for submittal of a special-exception request, the application shall include the following supplemental information:
 - 1) A detailed written description of the proposed project, including a general description of the project site;

- 2) A legal description of the project site;
 - 3) A site plan drawn in sufficient detail to clearly depict the following:
 - a) On-site areas of Class 1, 2 or 3 prime agricultural soils;
 - b) Existing topographic features;
 - c) Physical features of the project site, both before and after construction of the energy facility, including existing structures and land uses;
 - d) Dimensions of the project site;
 - e) Locations and approximate dimensions of all equipment, devices, structures and power transmission lines associated with the proposed system
 - e) Identification and area calculation of the area devoted to the wind energy system;
 - f) Identification of existing and proposed areas of impervious coverage;
 - g) Location of existing or proposed electrical transmission lines and facilities on the proposed location;
 - h) Setback in feet from the site property boundaries of each principal wind energy system and each proposed structure.
 - d. Prior to the start of construction, principal wind energy systems require the submittal and approval of a land development plan and stormwater management plan in accordance with adopted township ordinances.
 - e. The design and installation of the wind energy system shall conform to applicable industry standards and the UCC. At the time of application for a building permit, the applicant shall submit manufacturer certificates of design compliance obtained by the system manufacturer from a reputable certifying organization. The submittal shall include the manufacturer's specifications for sound levels under normal operating conditions.
 - f. The applicant shall provide written authorization from the power utility for connection to the power utility grid. Interconnection and net metering shall be in accordance with the policies of the power utility.
5. Decommissioning
- a. A principal wind energy system that is not in continuous and uninterrupted operation for twelve (12) consecutive months shall be deemed non-operational and abandoned, and shall constitute a public nuisance. Upon written notice thereof by the Township to the owner of the facility, the facility shall be decommissioned at the owner's expense within one year of said notice.
 - b. Decommissioning of the project site shall include removal of the entire wind energy system facility, including all poles, foundations, buildings, accessory structures, fences, transmission lines and all other appurtenances of and relating to the facility.
 - c. The removal of ground-mounted equipment and ancillary structures shall require remediation of the site to its prior natural or agricultural state. Remediation shall be

completed within one year of the initial written notice by the Township regarding abandonment of the facility. The method of remediation requires approval of an erosion and sedimentation control plan by the Lancaster County Conservation District.

F. Geothermal Energy Systems

1. Zoning Districts Allowed

Closed-loop geothermal energy systems are allowed in all zoning districts as an accessory use to a principal use of the lot. Open-loop geothermal energy systems are prohibited within the municipality.

2. General Requirements

- a. Geothermal energy systems shall use only nontoxic, biodegradable circulating fluids, such as food-grade propylene glycol.
- b. Geothermal energy systems shall not encroach on existing public, drainage, utility, roadway, trail or other recorded easements.

3. Development Standards

- a. A horizontal closed-loop system shall be installed a maximum of 20 feet below the average finished grade of the area in which located or as otherwise specified by the manufacturer, whichever is more restrictive.
- b. All vertical closed-loop geothermal energy systems shall have proper grout sealing with the following properties:
 - (1) High thermal conductivity to allow heat transfer;
 - (2) Low viscosity to allow the grout to wrap around the pipe;
 - (3) Low shrinkage volume to ensure that the grout will not pull away from the pipe; and
 - (4) Low permeability to prevent the migration of antifreeze solution in the event of a line breakage.
- c. Geothermal energy systems shall be located a minimum of 25 feet from all property lines, except as otherwise specified.
- d. Geothermal energy systems shall be located a minimum of 100 feet from existing potable water wells and a minimum of 25 feet from any existing septic system.
- e. Above-ground equipment associated with geothermal pumps shall not be installed in the front yard of any lot or the side yard of a corner lot adjacent to a public right-of-way and shall meet all minimum accessory structure setbacks required for the zoning district.
- f. All horizontal closed-loop geothermal energy systems shall be properly backfilled, including the removal of sharp-edged rocks before backfilling in order to prevent such rocks from coming into contact with the system pipe.

4. Required Permits and Construction Requirements

- a. Geothermal energy systems require the approval and issuance of a building permit by the Township Code Official prior to the start of construction.
- b. The design and installation of geothermal energy systems shall conform to applicable industry standards and the UCC. At the time of application for a permit, the applicant shall submit manufacturer certificates of design and circulating fluid compliance obtained by the geothermal energy system manufacturer from a reputable certifying organization.

5. Decommissioning

If a geothermal energy system remains nonfunctional or inoperative for a continuous period of one year, the system shall be deemed to be abandoned and shall constitute a public nuisance. The owner shall remove the abandoned system at their expense after a demolition permit has been obtained in accordance with the following:

- a. The heat pump and any external mechanical equipment shall be removed; and
- b. Pipes or coils below the land surface shall be filled with grout to displace the heat transfer fluid. The heat transfer fluid shall be captured and disposed of in accordance with applicable regulations. The top of the pipe, coil or boring shall be uncovered and grouted.

G. Accessory and Community Anaerobic Digester Systems

1. Zoning Districts Allowed

Accessory and community anaerobic digester systems are permitted as an accessory use to a principal agricultural operation within the A-1 and A-2 zoning districts.

2. General Requirements

- a. An accessory or community anaerobic digester system shall provide power for only the principal agricultural use and customary accessory uses of the lot or parcel on which located. The system shall be used solely for the generation of power for use on-site. Excess electric power generated may be sold to a power utility.
- b. Manure (primary catalysts) and feedstock or other organic materials (secondary catalysts) to be used for the anaerobic digestion or co-digestion process shall be stored in accordance with Pennsylvania Nutrient Management Program requirements, as may be amended.
- c. Accessory and community anaerobic digester systems shall be designed and constructed in accordance with the Pennsylvania Department of Environmental Protection's Bureau of Water Quality Management guidelines for such systems, as may be amended. Evidence of applicable Federal and State regulatory

agencies' written approvals shall be included with the building permit application.

- d. An accessory anaerobic digester system may serve more than one farm when operated as a community digester system.

3. Development Standards

- a. Anaerobic and community digester system structures shall be located in accordance with the requirements for accessory structures of the applicable agricultural zone.
- b. Anaerobic digester systems, except for appurtenant electrical wiring, shall be located a minimum of 100 feet from existing potable water wells and surface waters, such as streams, springs, ponds, and lakes.
- c. Manure storage in support of an anaerobic digester system shall be sited and operated as required under an approved nutrient and odor management plan.

4. Required Permits and Construction Requirements

- a. Accessory and community anaerobic digester systems require the approval and issuance of a building permit by the Township Code Official prior to the start of construction.
- b. The applicant for an accessory or community anaerobic digester system permit shall provide the following information at the time of application for the building permit:
 - 1) A sketch plan depicting the location of all structures, significant trees, existing potable water wells and surface waters, such as streams, springs, ponds, and lakes, within 100 feet of the proposed anaerobic digester system;
 - 2) Information provided by the manufacturer of the anaerobic digester system including, but not limited to, the make and model, the manufacturer's design data, construction plans and installation instructions;
 - 3) Documentation of the intent and proposed capacity of the digester system, including holding ponds, tanks, and/or pools;
 - 4) The type and quantity of wastes and supplemental feedstock for which the digester is designed;
 - 5) Evidence that the use, handling, and disposal of materials will be accomplished in a manner that complies with State and Federal regulations.
- c. The applicant for an accessory or community anaerobic digester system that is to be connected to the power utility grid shall provide written authorization from the power utility. Interconnection and net metering shall be in accordance with the policies of the power utility.

5. Decommissioning

- a. The owner/operator shall submit a plan for shutdown of the anaerobic digestion system when it becomes functionally obsolete or is no longer in use. The plan shall

- specify the dismantling and disposal of operational components and associated wastes.
- b. The owner/operator shall notify the Township at least 30 days prior to cessation or abandonment of the operation.
 - c. The owner/operator shall ensure that all pits, tanks, and pipes are empty and clean by removing the liquids and accumulated sludge. Tanks shall be covered securely with lids or hatch covers after content removal.
 - d. Insulation, piping, and similar materials that cannot be re-used or recycled shall be disposed of in the appropriate manner consistent with Pennsylvania DEP's waste management program requirements.

H. Principal Anaerobic Digester Systems

1. Zoning Districts Allowed

Principal anaerobic digester systems are allowed by special exception within the A-1 and A-2 agricultural zoning districts.

2. General Requirements

- a. In order to minimize potential community impacts, principal anaerobic digester systems shall be separated by a minimum distance of two miles from each other. For purposes of determining the separation distance, the area of a principal anaerobic digester system shall include the manure management facility, along with its appurtenant structures, buildings, and storage areas, associated stormwater management facilities and access drives that serve the facility.
- b. Manure (primary catalysts) and feedstock or other organic materials (secondary catalysts) to be used for the anaerobic digestion or co-digestion process shall be stored in accordance with Pennsylvania Nutrient Management Program requirements, as may be amended.
- c. Anaerobic digester systems shall be designed and constructed in accordance with the Pennsylvania Department of Environmental Protection's Bureau of Water Quality Management guidelines for such systems, as may be amended. Evidence of applicable Federal and State regulatory agencies' written approvals shall be included with the building permit application.

3. Development Standards

- a. A principal anaerobic digester system requires a minimum lot size of 10 acres. All structures associated with the system shall be located in accordance with the requirements for principal structures of the applicable agricultural zone.
- b. Anaerobic digester systems, except for appurtenant electrical wiring, shall be located a minimum of 100 feet from existing potable water wells and surface waters, such as streams, springs, ponds, and lakes.

- c. Manure storage in support of an anaerobic digester system shall be sited and operated as required under an approved nutrient and odor management plan.

4. Required Permits and Construction Requirements

- a. Prior to the start of construction, principal anaerobic digester systems require the application for and approval of a special-exception in accordance with the requirements of Articles XXIII and XXIV and the approval and issuance of a building permit by the Township Code Official. The special-exception application shall be referred to the Township Planning Commission for review prior to consideration by the Township Zoning Hearing Board.
- b. The Zoning Hearing Board, in approving the special-exception request, may attach conditions in accordance with Section 2405.2.
- c. In addition to any other requirements for submittal of a special-exception request, the application shall include the following supplemental information:
 - 1) A land development sketch plan that additionally includes the location of all structures, significant trees, existing potable water wells and surface waters, such as streams, springs, ponds, and lakes, within 100 feet of the proposed anaerobic digester system;
 - 2) Information provided by the manufacturer of the anaerobic digester system including, but not limited to, the make and model, the manufacturer's design data, construction plans and installation instructions;
 - 3) Documentation of the proposed capacity of the digester system, including holding ponds, tanks, and/or pools;
 - 4) The type and quantity of wastes and supplemental feedstocks for which the digester is designed;
 - 5) Evidence that the use, handling, and disposal of materials will be in compliance with State and Federal regulations;
 - 6) A letter from the Lancaster County Conservation District stating that the applicant's anaerobic digester system design has been reviewed and approved by the Lancaster County Conservation District or that no review is required;
 - 7) A stormwater management plan, as required under separate Township ordinance;
 - 8) A traffic analysis, as described in section I.4.d (below).
- d. The classification(s) of the road(s) providing access to the principal anaerobic digester system shall be appropriate for the anticipated volume and class of vehicle(s) generated by the operation as determined by a traffic impact study conducted in accordance with Article 4 of the West Cocalico Township Subdivision, Land Development and Storm Water Management Ordinance. The traffic evaluation study, at a minimum, shall include the following supplemental information:
 - 1) Existing traffic volume data for all roadways within one-thousand (1,000) feet of the subject site that provide access to the site;

- 2) Anticipated traffic volumes resulting from the proposed use, as well as background traffic growth, for all roadways within one-thousand (1,000) feet that provide access to the site;
 - 3) A physical analysis of all identified roadways, including cartway width, shoulder width, pavement condition, horizontal and vertical curves, anticipated stormwater drainage characteristics, sight distances and bridge weight capacities;
 - 4) An analysis of current and future levels of service for all intersections identified in subsection above;
 - 5) Demonstration that the site design of the facility shall provide stacking lanes of sufficient length into the facility such that the anticipated number of vehicles queuing to be loaded or unloaded will not encroach onto adjacent public roads.
 - 6) Proposed truck routing plans and alternate routing plans consistent with Pennsylvania, Lancaster County and Township posted weight limit requirements for highways and bridges.
- e. Prior to the start of construction, principal anaerobic digester systems require the submittal and approval of a land development plan and stormwater management plan in accordance with adopted township ordinances.
 - f. The applicant for a principal anaerobic digester system shall provide written authorization for interconnection from the power utility. Interconnection and net metering shall be in accordance with the policies of the power utility.
 - g. Principal anaerobic digester systems shall be designed and constructed in compliance with the Pennsylvania Department of Environmental Protection's Bureau of Water Quality Management guidelines for such systems, as may be amended. Evidence of applicable Federal and State regulatory agencies' written approvals shall be included with the building permit application.
5. Decommissioning
- a. The owner/operator shall submit a plan for shutdown of the anaerobic digestion system when it becomes functionally obsolete or is no longer in use. The plan shall specify the dismantling and disposal of operational components and associated wastes.
 - b. The owner/operator shall notify the Township at least 30 days prior to cessation or abandonment of the operation.
 - c. The owner/operator shall ensure that all pits, tanks, and pipes are empty and clean by removing the liquids and accumulated sludge. Tanks shall be covered securely with lids or hatch covers after content removal.
 - d. Insulation, piping, and similar materials that cannot be re-used or recycled shall be disposed of in the appropriate manner consistent with Pennsylvania DEP's waste management program requirements.

I. Outdoor Hydronic Heating Systems

1. Zoning Districts Allowed

Outdoor hydronic heating systems are allowed in the ES, A-1, A-2, OS and RR zoning districts.

2. The regulations of this section do not apply to:

- a. Grilling or cooking using charcoal, wood, propane or natural gas in cooking or grilling appliances;
- b. Burning in a stove, furnace, fireplace or other heating device within a building used for human or animal habitation;
- c. The use of propane, acetylene, natural gas, gasoline or kerosene in a device intended for heating, construction or maintenance activities; or
- d. Outdoor burning as may otherwise be regulated by the Township.

3. Definitions

For purposes of section 2305-I only, the following terms shall have the provided meanings:

- a. Phase 2 Outdoor Wood-fired Hydronic Heater. An outdoor wood-fired hydronic heater that has been certified or qualified by the EPA as meeting a particulate matter emission limit of 0.32 pounds per million British Thermal Units output, is labeled accordingly, and is identified with a white hang tag.
- b. Stack. Any vertical structure enclosing a flue or flues that carry off smoke or exhaust from a hydronic heater, including that part of a structure extending above a roof.

4. General Requirements

- a. Only new Phase 2 outdoor wood-fired hydronic heater systems shall be permitted.
- b. Outdoor hydronic heating systems shall not be operated between May 1 and September 30.
- c. An outdoor hydronic heater system permitted after [the effective date of this ordinance] shall have a permanent attached stack with a minimum stack height of 10 feet above the ground that also extends at least two feet above the highest peak of any residence located less than 150 feet from the hydronic heater.
- d. The use of an outdoor hydronic heater system installed prior to [the effective date of this ordinance] shall be discontinued immediately unless it has a permanent attached stack with a minimum stack height of 10 feet above the ground that also extends at least two feet above the highest peak of any residence located less than 500 feet from the outdoor hydronic heater. The use of an existing outdoor hydronic heater system may be continued provided that it is a Phase 2 outdoor wood-fired hydronic heater that conforms to the stack requirements of the preceding subsection.
- e. Allowable Fuels: New or existing outdoor hydronic heater systems shall only use the following fuel types:

- (1) Clean wood
 - (2) Wood pellets made from clean wood
 - (3) Home heating oil, natural gas, propane or that complies with all applicable sulfur limits and is used as a starter or supplemental fuel for dual-fired outdoor hydronic heaters.
- f. Prohibited Fuels: The following items are prohibited as fuel types for outdoor hydronic heater systems:
- (1) Treated or painted wood
 - (2) Furniture
 - (3) Garbage
 - (4) Tires
 - (5) Lawn clippings or other yard waste
 - (6) Material containing plastic or rubber
 - (7) Waste petroleum products, including paints, paint thinners or asphalt products
 - (8) Chemicals
 - (9) Any hazardous waste
 - (10) Coal
 - (11) Glossy colored paper
 - (12) Construction and demolition debris, including plywood or particleboard
 - (13) Salt water driftwood
 - (14) Manure or animal carcasses
 - (15) Any other material that may result in harmful or noxious emissions or residue.
5. Development Standards
- a. Outdoor hydronic heater systems shall be set back a minimum of 150 feet from all property lines.
 - b. Enclosures for outdoor hydronic heater systems shall comply with all standards as applicable to detached accessory buildings for the zoning district.
6. Required Permits and Construction Requirements
- a. Outdoor hydronic heating systems require the approval and issuance of a building permit by the Township Code Official prior to the start of construction.
 - b. New and existing outdoor hydronic heater systems shall comply with all applicable federal, state and local clean-air regulations.
 - c. The design and installation of outdoor hydronic heating systems shall conform to applicable industry standards and the UCC. At the time of application for a permit, the applicant shall submit manufacturer certificates of design compliance obtained by the outdoor hydronic heating system manufacturer from a reputable certifying organization. The submittal shall include the manufacturer's specifications for allowable fuels and maximum levels of emissions.

PART B - HOTEL/MOTELS

SECTION 16. Section 201, Terms, of Article II, Definitions, is amended to include the following term and definition:

Hotel: A building containing seven or more guest rooms in which lodging is provided and offered to the public for compensation and which is open to transient guests, together with commercial accessory uses, such as food and beverage services, recreational services, conference rooms and convention services, or laundry services, operated primarily for the convenience of the guests thereof. The term Hotel shall be deemed to include: motels, tourist courts, and inns.

SECTION 17. Section 1202 is amended to delete the existing section and replace same with the following:

12. Hotel, subject to the following restrictions:
 - a. The minimum lot area shall be 43,560 square feet;
 - b. The maximum lot area shall be ten acres;
 - c. The length of stay of any guest renting a room or sleeping at the premises shall not exceed 14 consecutive days in any 28-day period;
 - d. The Zoning Hearing Board may attach such conditions as it deems appropriate including: to limit the size, crowd capacity, or type of activity performed of, or in, any accessory use, such as a restaurant, snack bar, lounge, bar, meeting room, gym, internet center, etc., in order to protect the public, health, safety, or welfare.
 - e. Accessory uses other than a swimming pool shall be located within a fully enclosed portion of the hotel building;
 - f. Vehicles of any type without current license plates shall not be parked or stored other than in a completely enclosed accessory building;
 - g. The Hotel shall have at least one parking space for each room and for every four employees on duty at any time. If the Hotel also provides any accessory uses such as referenced in section 1202 d. above that are available to the general public in addition to overnight guests, it shall provide one additional parking space for every table and in regard to meetings and conventions, one parking space for every four guests allowed for the maximum crowd capacity. In the event that the general parking requirements provided hereinafter require more parking spaces than required here, the section requiring the greater number shall control.

PART C - RESPONSIBILITIES OF THE ZONING OFFICER

SECTION 18. Section 2501.1. is amended as follows:

a. The designation of the second subsections 2501.1 c. shall become d.; subsection d. shall become e.; section e. shall become f; section f shall become g.; and section g. shall become h.

b. The first sentence of former second section 2501. 1. c., herein re-designated 2501.1.d. is deleted and the following language is substituted in its place; "If the request is not acceptable, the Zoning Officer shall send to the applicant, by first class mail, a written statement explaining the reason or reasons why the permit cannot be issued, including the section or sections of the Ordinance upon which the decision is based."

SECTION 19. All provisions of the West Cocalico Township Zoning Ordinance of 2011 inconsistent with the foregoing amendments are hereby repealed, but the balance of said ordinance is hereby ratified and reaffirmed.

SECTION 20. This Ordinance take effect five (5) days after enactment.

ENACTED AND ORDAINED this 6th day of February, 2014, at a meeting of the Board of Supervisors of West Cocalico Township, Lancaster County, Pennsylvania.

BOARD OF SUPERVISORS
OF WEST COCALICO TOWNSHIP
LANCASTER COUNTY, PENNSYLVANIA

By: Jacqueline Smith (Vice) Chairman,
West Cocalico Township Board of Supervisors

By: Terry Scheetz
Supervisor

By: James J. Hoover
Supervisor