

## XYZ County

### **Draft of Local Law No. 3 of the year 2021** {revision 9/28/21}

*[Note: Consequential changes from prior recent versions are in green.]*

#### **Be it enacted by the County Commissioners of XYZ County as follows:**

*{Note: this sample law uses North Carolina as the state where XYZ County is located. You have permission to copy and paste any parts that you and your attorney find are helpful. Please start by reading the last two pages of Notes — which are not part of the proposed law.}*

#### **Section 1. Local Law Repealed**

Local Law No. \_\_\_ of the year \_\_\_\_\_, is hereby repealed in its entirety and replaced with this Local Law.

*{Note: this would be applicable if there's an existing solar law that this ordinance will replace.}*

#### **Section 2. Title**

This Local Law may be cited as the "Solar Energy Facilities" law of XYZ County, North Carolina.

#### **Section 3. Purpose**

The County Commissioners of XYZ County adopt this Local Law to regulate the placement of industrial Solar Energy Facilities (SEFs) to protect the public health, safety and welfare of its citizens and visitors; to minimize the adverse impacts on the County's character and economy; to minimize negative impacts on the unique scenic resources including, but not limited to adjacent lands and waterways; to minimize the adverse impacts on property values of nearby citizens; to minimize the adverse impacts on the County's farming communities; and to minimize the adverse impacts on the County's environment and ecosystems.

This law is not addressing residential solar use, or a small solar array that is on a farm or other business, exclusively for onsite energy usage. This ordinance is not intended to abridge safety, health or environmental requirements contained in other applicable codes, standards, or ordinances. The provisions of this ordinance shall not be deemed to nullify any provisions of any state or federal law.

#### **Section 4. Authority and References**

The County Commissioners of XYZ County, North Carolina enact this ordinance establishing comprehensive regulations for Solar Energy Facilities in XYZ County, providing for the administration, enforcement, and amendment thereof, in accordance with the provisions of:

4-1 The applicable parts of the North Carolina State Constitution

4-2 The applicable parts of the North Carolina General Statutes (esp. §14 - Criminal Law; §22B-20 - Solar Collectors; §62 - Public Utilities; §105 - Taxation; §106 - Agriculture; §113 - Conservation and Development; §113A - Pollution Control and Environment; §130A - Public Health; §150B - Administrative Procedure; §153A - Counties; §159 - Local Government Finance; §160A - Cities and Towns).

4-3 The applicable parts of North Carolina State Building Codes.

4-4 North Carolina State Session Law 2007-397, Senate Bill 3.

4-5 NC Dept of Insurance: Fire Fighter Safety & Renewable Energy Systems Module.

4-6 US DoD Instruction: Air Installation Compatible Use Zones (AICUZ).

## Section 5. Findings

The County Commissioners of XYZ County find and declare that:

- 5-1 The North Carolina State General Statutes (e.g. §153A-121/122/123, §153A-340, §160A-381) give local legislators the power to write zoning and regulation ordinances “for the purpose of promoting the health, safety, or general welfare” of their community.
- 5-2 While solar energy is a semi-renewable energy resource of electricity generation, and under some circumstances it may reduce the use of nonrenewable energy sources, the possible benefits must be balanced against potential negative impacts to local citizens, local economy, and local ecosystems.
- 5-3 Regulation of the siting and installation of solar arrays is necessary for protecting the health, safety, and well-being of neighboring property owners, the general public, the local economy and local ecosystems.
- 5-4 Several independent legal and economic experts have concluded that there can be legal and economic downsides for landowners entering into the secretive, complicated and one-sided lease/easement contracts written by industrial solar energy developers.
- 5-5 Large-scale industrial solar energy facilities represent potential negative aesthetic impacts because of their size.
- 5-6 Installation of large-scale industrial solar energy facilities can create drainage problems through erosion and lack of sediment control of facility and access road sites, and harm farmlands through construction methods utilized.
- 5-7 There is evidence from independent appraisers that industrial solar energy facilities can reduce property values of nearby property owners. Said property value reductions will reduce the County’s tax base, resulting in a tax rate increase on all County property owners.
- 5-8 In certain circumstances, industrial solar energy facilities can cause electromagnetic interference with some types of communications.
- 5-9 Independent experts (e.g. ornithologists) have concluded that solar arrays can kill birds. It is especially troublesome if raptors that are destroyed. XYZ County is located on a migration route for many species of birds, and is habitat for many species, both year-round and seasonal.
- 5-10 XYZ County has many scenic view sheds, and some of these would be negatively impacted by industrial solar energy facilities.
- 5-11 Significant public and private dollars have been invested in infrastructure within XYZ County to enhance and promote an important local industry, tourism. It stands to reason that nearby industrial solar energy facilities may have a negative economic impact on tourism sensitive communities.
- 5-12 XYZ County and its citizens desire to maintain the pastoral, rural nature of this region. An industrial solar energy facility is in conflict with the culture and character of this community.
- 5-13 Due to the unusually broad array of potentially problematic Findings (and lack of scientifically proven net benefits), the Precautionary Principle dictates that the County be particularly conservative and cautionary in its regulation of industrial solar energy.
- 5-14 XYZ County has regulated solar energy facilities for the past decade through local laws. This Local Law represents an updating of said regulations.
- 5-15 In formulating this Local Law, studies have been reviewed — and those written by independent experts were given the greatest consideration. (See [WiseEnergy.org](http://WiseEnergy.org) for good examples of such reports.) Experiences of other communities with industrial solar energy have been studied. An *ad hoc* Committee was appointed to make recommendations regarding industrial solar energy regulation. Some of its conclusions were incorporated into this Local Law.

## Section 6. Permit Required

Large solar energy facilities shall be permitted within XYZ County only in an Agricultural District designated as such. Such facilities shall be subject to the requirements and permitting process of this Local Law, in addition to other applicable local, state and federal laws.

This Local Law shall apply to all areas of XYZ County.

## Section 7. Definitions

As used in this chapter, the following terms shall have the meanings indicated. Words not defined in this Local Law shall be given their ordinary and common meaning:

**Accessory building:** A building that is located on the Solar Energy Facility (SEF) property.

**Accessory Equipment:** Any equipment serving or being used in conjunction with a SEF. The term includes utility or transmission equipment, power supplies, generators, batteries, equipment buildings, and storage sheds, shelters or similar structures.

**Administrative Approval:** Approval that the Planning Board is authorized to grant after Administrative Review.

**Board of Appeals:** The Board of Appeals is comprised of the members of the Zoning Board of Appeals that is established by the Local Zoning Law.

**Completed Application:** An application that contains all information and/or data required and requested, to enable an informed decision to be made with respect to that application.

**Concentrated Solar Power (CSP):** See Thermal Solar Conversion.

**Conservation Area:** Such areas include natural areas protected by law, such as wetlands that meet the definition in the Clean Water Act 33 USC Sec. 1251 et seq.; shore land areas; water bodies; riparian buffers; populations of endangered or threatened species, or habitat for such species; archaeological sites, cemeteries, and burial grounds; important historic sites; other significant natural features and scenic viewsheds; and existing trails or corridors that connect the tract to neighboring areas.

**Electrical Transmission Tower:** An electrical transmission structure used to support high voltage overhead power lines. The term shall not include any utility pole.

**FAA:** The Federal Aviation Administration or successor agency.

**Maintenance:** The cleaning, painting, repair, or replacement of defective parts (including plumbing, electrical, or mechanical work that might require a building permit) in a manner that does not alter the basic design or composition of a structure, such as a solar array.

**Modification or Modify:** Any change, addition, removal, swap-out, exchange, and the like that does not qualify as "Repairs and/or Maintenance" as defined herein is a Modification. Also included is any change, addition, swap-out, exchange, and the like that requires or results in changes and/or upgrades to the structural integrity of a solar array.

**Necessary:** What is technologically required for the equipment to function as designed by the manufacturer. Anything less will restrict or inhibit the provision of service as intended and described in the Application. Necessary does not mean what may be desired or preferred technically.

**Ordinary Maintenance:** Actions that ensure that the SEF is kept in good operating condition. Ordinary Maintenance includes inspections, testing and modifications that maintain functional capacity and structural integrity. Ordinary Maintenance does not include Modifications.

**Person:** An individual, trustee, executor, receiver, other fiduciary, corporation, firm, partnership, association, organization, club, etc. acting as an entity.

**Photovoltaic Solar Conversion (PV):** An active solar energy system that directly converts sunlight into electricity by what is known as the photovoltaic process.

**Repair:** The replacement of existing work with the same kind of material used in the existing work, not including additional work that would change the structural safety of the structure or that would affect or change required existing facilities, a vital element of an elevator, plumbing, gas piping, wiring, or heating installations, or that would be in violation of a provision of law or this Local Law. The term "Repair" or "Repairs" shall not apply to any change in construction.

**Residential Zoning Districts:** The RA, R-35, {fill these in} ... zoning districts.

**Solar Array:** An active solar energy system that converts sunlight into electricity using either Thermal or Photovoltaic methods. Such a system has multiple solar collectors, and might include transformers, generators, batteries, and other appurtenant structures and/or facilities.

**Solar Collector:** A device that converts sunlight into electricity using either Thermal or Photovoltaic methods.

**Solar Energy:** There are two general ways sunlight is converted into useful energy: passive and active. *Passive* refers to such actions as opening a window shade to let sunlight in to heat a room. *Active* uses mechanical devices to collect, convert, store and distribute solar energy. The two most common *Active* conversions of sunlight into electricity are Thermal and Photovoltaic.

**Solar Energy Facility (SEF):** A commercial electricity-generating facility (PV or CSP), whose primary purpose is to supply electricity. This consists of one or more solar arrays and other accessory structures and buildings, including substations, electrical infrastructure, generators, transmission lines, and other appurtenant structures and/or facilities.

**Solar Farm:** A marketing term for a SEF.

**State:** The State of North Carolina.

**Temporary:** Something intended to exist or does exist for fewer than 180 days.

**Thermal Solar Conversion:** An active solar energy system that converts sunlight into electricity by collecting and concentrating heat to drive a conventional steam generator. For a commercial application this is called Concentrated Solar Power (CSP).

**Utility Pole:** A structure owned and/or operated by a public utility, municipality, electric membership corporation, or rural electric cooperative that is designed specifically for and used to carry lines, cables, or wires for telephone, cable television, or electricity, or to provide lighting.

**8-1 General:** Before a building permit may be submitted for a SEF, a Solar Energy Permit Application must first be approved by the Planning Board.

**8-2 Permit Application:** Throughout the permit process, the Applicant shall promptly notify the Planning Board of any changes to the information contained in the permit application. Changes that do not materially alter the initial site plan may be administratively accepted. The application for a SEF shall consist of an electronic (digital) filing that contains at least the following:

8-2.1 **Summary:** A narrative overview of the SEF, including its generating capacity.

8-2.2 **Inventory:** A tabulation describing the:

- A. Number and type of each proposed solar array, including their generating capacity.
- B. Dimensions and respective manufacturers.
- C. Appurtenant structures and/or facilities.

8-2.3 **Vicinity map:** Identification of the property on which the proposed SEF will be located.

8-2.4 **Site Plan:** A plan showing the:

- A. Planned location of each solar array.
- B. All property lines within 1000 feet of the property lines of the proposed site.
- C. Each array's setback distance from the closest SEF boundary.
- D. Access road and turnout locations.
- E. Substation(s) and ancillary equipment, buildings, and structures.
- F. Electrical cabling from the SEF to the substation(s), and from the substation(s) to where the electricity will leave the site, and associated transmission lines.
- G. Conservation Areas, including natural areas protected by law, such as wetlands that meet the definition in the Clean Water Act; shore land areas; water bodies; riparian buffers; populations of endangered or threatened species (federal or state), or habitat for such species; flyways; archaeological sites, cemeteries, and burial grounds; important local historic sites; existing healthy, native forests consisting of at least one acre of contiguous area; individual existing healthy trees that are at least 100 years old; other significant natural features and scenic view sheds; existing trails or corridors that connect the tract to neighboring areas.
- H. A landscaping plan that shows proposed screening and buffering of all arrays, buildings and other non-array structures on the site or sites.

8-2.5 **Misc:** The Applicant shall provide the following information to the Planning Board:

- A. Certification that the proposal is for an International Electrical Congress (IEC) solar array that is designed to meet all NC Building Codes.
- B. A Stand-down Plan for high wind conditions.
- C. Signed copies of all original leases/easements and agreements for this SEF.
- D. Any other materials needed to satisfy the requirements of this permit.

8-2.6 **Economic Impact Study:** The County will hire independent experts (paid for from the Escrow Account: see ¶ 8-4) who will do a thorough, conservative assessment of the SEF's net economic impact on the community. This will include possible tourism reduction, property devaluations (and the commensurate loss in tax base), cost to community due to possible adverse health effects, higher cost of electricity, etc. This will be compared to any guaranteed incomes from the SEF.

8-2.7 **Environmental Impact Study:** An Environmental Impact Study (EIS) shall be conducted that includes review comments from citizens in the County, independent experts, as well as all applicable state and federal agencies, including (as a minimum) the:

- A. NC Department of Environmental Quality,
- B. NC Department of Health,
- C. NC Department of Transportation,
- D. US Fish and Wildlife Service, *and*

#### E. US Army Corps of Engineers.

The EIS shall include, at a minimum, the potential impacts on the human population, as well as the animal populations, migratory areas used by waterfowl, land, and water (including impacts on groundwater resources due to foundations, pilings, etc.), and air. The study area shall include within the confines of the proposed SEF, as well as the area at least one (1) mile surrounding the proposed SEF.

All costs and expenses incurred related to the Environmental tests for the SEF shall be paid from the Escrow Account (see ¶ 8-4). The County shall use the Escrow Account funds to hire independent qualified experts, as needed, to do the following:

1. The Applicant must provide a written report from all appropriate state and federal agencies detailing their evaluation of the proposed SEF.
2. Provide a complete list of all materials that will be used in the solar array, highlighting any materials that are known to be toxic (e.g., cadmium, PFOS, PFAS).
3. Generate a reasonable baseline by analyzing at least five (5) representative soil samples, plus at least five (5) representative samples from nearby waterways, aquifers and wells, to determine what toxic chemicals are in the pre-SEF samples, if any.
4. Provide the location and full description of any of the following: open drainage courses, streams, vernal pools, wetlands, and other important natural areas and site features, including, but not limited to, floodplains, deer wintering areas, Essential Wildlife Habitats, Significant Wildlife Habitats, livestock, Scenic or Special Resources, habitat of rare and endangered plants and animals, natural communities of endangered species (federal or state), unique natural areas, sand and gravel aquifers, wells, and historic and/or archaeological resources.
5. The Applicant must demonstrate, to the satisfaction of the County, that the proposed SEF will not have negative hydro-geological consequences (e.g., with surface or subterranean water resources, storm water runoff, or toxic contamination), or adverse effects on geological stability, rare, threatened, or endangered wildlife, Significant Wildlife Habitat, Essential Wildlife Habitat, Raptor Habitat, livestock, threatened or endangered plants, and rare or exemplary natural plant communities and ecosystems.
6. The Applicant must provide a cumulative-impact assessment of their SEF in the context of any other SEFs within five (5) miles, and demonstrate that the SEF is not located such that it will result in degradation of important wildlife corridors or flyways.
7. Pre-construction and post-construction field studies shall be conducted using the most advanced techniques available. If the pre-construction field studies demonstrate significant adverse effect to birds, bats, game animals, water resources, habitat fragmentation or other ecosystem degradation, the SEF Applicant shall propose a remediation plan, subject to the County's approval. The Applicant accepts that some environmental impacts cannot be satisfactorily resolved, and that such situations will be factored into the County's decision regarding the net benefits of the SEF.
8. In determining the nature and effectiveness of such remediation plans, the County will be guided by inputs of its citizens, its own consultants, the appropriate state & federal agencies, and applicable state and federal laws and regulations. The SEF Applicant will be responsible for the full cost of implementing any approved remediation plan, under the supervision of the County and its designated agents.
9. After implementation of any remediation plan, the County will review the situation to determine its effectiveness. Should the County find the remediation efforts inadequate, the SEF Applicant will be given sixty (60) days from that finding, to resolve the deficiencies. In the absence of a successful resolution, the County (at its sole discretion) shall have the right to deny the SEF Permit.

- 8-2.8 **SEF Airspace Impacts:** If any portion of a SEF will be located within five (5) miles of any civilian or military airport runway, or heliport, the Applicant shall provide a copy of the FAA determination resulting from the filing of FAA Form 7460-1. The Applicant shall also demonstrate compliance with all Local, State and Federal airport related laws.
- If requested by the County Planning Board, the SEF Applicant shall use the latest version of the Solar Glare Hazard Analysis Tool (SGHAT), per its user's manual to evaluate the solar glare aviation hazard, as indicated in D (i) and D (ii). The full report for each flight path and observation point, as well as the contact information for the zoning administrator, shall be sent to the appropriate authority at least 30 days prior to site plan approval. Proof of delivery of notification and date of delivery shall be submitted with permit application.
- 8-2.9 **Visual Impacts:** The Applicant shall furnish a visual impact assessment to the Planning Board, which shall include:
- A. Pictorial representations of "before and after" views from 360 degree viewpoints within 1000 feet of the proposed SEF boundaries. These will include major roads; state and local parks; other public lands; historic districts; preserves and historic sites. The Applicant shall provide a map showing the locations of where the pictures were taken and the distance of each location from the proposed SEF.
  - B. If any portion of a proposed SEF will be located within 1000 feet of the right-of-way of a Federal or State-designated Scenic Route/By-way, the Applicant shall describe the proposed measures to be taken to minimize the visual impact of the proposed SEF upon a Scenic Route/By-way.
  - C. A computer-generated "zone of visibility map" (covering at least a one [1] mile radius from the proposed SEF) shall be created to illustrate locations from which the proposed installation may be seen, with and without foliage.
- 8-2.10 **Maintenance Plan:** The Applicant shall detail storm follow-up, and other actions that will be taken to keep the SEF operating quietly, efficiently, and not polluting land, water, or air. The Applicant shall conduct preventive maintenance inspections at least once every year, and after any wind event defined as a tropical storm or Category 1 (or higher) hurricane. Each inspection shall look for such things as metal fatigue, nut loosening, and other potential failures that might impact the public health and safety. Such inspection reports shall be provided to the Planning Board within thirty (30) days of the inspection.
- 8-2.11 **Decommissioning Plan:** A description of how the structural and array materials will be disposed of, how the site will be restored, as well as:
- A. Anticipated life of the SEF.
  - B. Estimated decommissioning costs including contingency costs of at least 20% (in current dollars), as provided by an appropriately experienced licensed engineer.
  - C. A verifiable means of determining if the decommissioning plan needs to be activated due to cessation of use, such as a letter from the electric utility stating that it will notify the Planning Department within ten (10) business days if electricity is not received from any array within the SEF for any thirty (30) consecutive days.
  - D. The Applicant's plan to dispose of all hazardous waste contained in the SEF.
  - E. Method for ensuring that funds will be available for decommissioning and restoration as set forth in ¶ 9-6.
- 8-2.12 **Ancillary Materials:** Other relevant studies, reports, certifications, and approvals as may be reasonably requested by the County to ensure compliance with this Local Law, or to protect the health, safety and well-being of the County's citizens, or local ecosystems. The inputs of local citizens will be solicited in at least one (1) public hearing on this application.
- 8-2.13 **Testament:** The Applicant will sign a document that Applicant (and successive assigns) agree to all the provisions of this Local Law, without reservation or qualification.

8-2.14 **Planning Board Decision:** The approval by the Planning Board shall be valid for a period of one (1) year. Prior to the expiration of such approval, the Owner of the SEF may submit one (1) approval extension application for up to an additional one (1) year. Such approval extension application shall be accompanied by a renewal application fee (§ 8-9), as well as a letter explaining the reasons that would justify an approval extension.

### 8-3 Installation and Design:

8-3.1 **Setbacks:** To provide for at least minimal operational safety for persons and property located outside of a SEF, all SEFs shall comply with the following: two hundred fifty (250) feet from residential property lines\*, fifty (50) feet from non-residential property lines\*, and maximum height of twenty (20) feet\*\*.

\* Such minimum setback for a SEF shall be measured from its outermost extension that is nearest the SEF property line, public or private right-of-way, and access easement.

\*\* Height is measured from the lowest adjacent grade to the highest point of the structure, including any attachments (such as a lightning protection device).

8-3.2 **Power Collection:** The electrical connection system from the solar arrays to a substation shall, to the maximum extent possible, be placed underground. The power from that substation may use overhead transmission lines, if approved by the Planning Board.

8-3.3 **Road Analysis:** The Applicant shall agree, in writing, to the conditions of § 9-3.

#### 8-3.4 The SEF shall:

- A. Be a non-obtrusive color that blends with the surrounding foliage, as determined by the Planning Board.
- B. Not be artificially lighted, except as approved by the Planning Board.
- C. Not contain any signs or other advertising (including flags, streamers or decorative items or any identification of the array manufacturer, SEF owner and operator). This does not include any identification plaques that might be required by the electric utility or a governmental agency.
- D. Have a minimum landscape buffer of 25 feet on sides where neighboring homes can see into the SEF. The buffer shall contain evergreen trees or bushes planted no more than 8 feet apart and at least 4 feet tall at time of planting. The buffer shall obtain a height of 10 feet within 3 growing seasons. The trees or bushes may be trimmed but no lower than a height of 10 feet.
- E. Have a continuous opaque, unperforated barrier (inside the buffer tree line) extending from the surface of the ground to a uniform height of not less than six (6) feet from the ground at any given point, constructed of dirt, wood, stone, steel, or other metal, or any substance of a similar nature and strength which will hide the SEF.
- F. Be sited and operated so as to not interfere with television, Internet service, telephone (including cellular and digital), microwave, satellite (dish), navigational, or radio reception in neighboring areas. The Applicant and/or operator of the SEF shall be responsible for the full cost of any remediation necessary to correct any problems or provide equivalent alternate service, within thirty (30) days of being given notice. This includes relocation or removal of a problematic array, or any other equipment, transmission lines, transformers, and other components related thereto.
- G. The design and construction of the SEF shall not produce light emissions, either direct or indirect (reflective), that would interfere with pilot vision and/or traffic control operations as stated in section 3.2.2 of the DoD AICUZ report.
- H. Prepare an incident response plan that ensures that local emergency responders have the necessary equipment and training to effectively handle emergencies such as fires, structural damage (or collapse) of equipment, including access to equipment needed for rescue of trapped personnel. The Escrow Fund will be used to reimburse all local emergency responders for any necessary equipment or training required by a SEF.



- 8-3.5 **Security:** The Applicant shall submit design plans to verify that the SEF is:
- A. Located, fenced, or otherwise secured so as to prevent unauthorized access.
  - B. Installed in such a manner that they are accessible only to persons authorized to operate or service them, and inaccessible to non-authorized individuals.

**8-4 SEF Escrow Account:** The Applicant shall pay to the County a non-refundable Application Fee (see ¶ 8-9). The County Commissioners and/or County Planning Board reserve the right to obtain engineering, economic impact, environmental impact, or other professional services to aid it in the review of any submitted SEF application. These costs (and other expenses incurred by the County) are reimbursable only from the Escrow Account, not the Application Fee.

8-4.1 The Applicant shall reimburse the County for all oversight expenses incurred relating to the SEF, from application through decommissioning.

8-4.2 These SEF-related oversight expenses include (but are not limited to) amounts required for Building Permits, Licensing, Re-Licensing, and Decommissioning — e.g. administration, engineering, expert health and wildlife evaluations, handling complaints, legal, etc. “Legal” includes reasonable attorney fees for the County if the County has to sue the Applicant.

8-4.3 Any Escrow Account interest shall stay with the account and be considered new principle.

8-4.4 This Escrow Account will be setup by the Applicant at the time of the SEF permit Application. This Escrow Account will be at a financial institution approved by the County, solely in the name of the County, to be managed by the County Treasurer (or designee). The Applicant will make an initial deposit of \$10,000. A SEF Permit Application will not be processed until the Applicant has provided proof of deposit. A SEF Permit Application determination will not be made until all costs incurred by the County to date, have been reimbursed by the Applicant.

8-4.5 If the SEF Application is denied, all Escrow Account funds will be returned to the Applicant, less related expenses incurred by the County. The money will be returned, along with a statement as to these costs, within 30 days of the Application being formally denied, or receipt of a Letter of Withdrawal. Permit Fees are non-refundable.

8-4.6 This Escrow Account will be funded during the life of the SEF by the Applicant/Owner/Operator. The Applicant/Owner/Operator will replenish any Escrow funds used by the County within 14 days of being sent written notification (and explanation) of said withdrawals. Failure to maintain the Escrow Account at \$10,000 (within 30 days of being given notice) shall be cause for revocation (or denial of renewal) of the SEF Permit.

8-4.7 Once the Owner believes that they have satisfactorily complied with the decommissioning conditions specified herein, they will send the County written notification. The County then has sixty (60) days to verify to their satisfaction that all decommissioning conditions have been complied with. If there is material non-compliance, the County will so notify the Owner and the process starts over. Otherwise the County will return all Escrow Account funds to the Owner, less related expenses incurred by the County, along with an explanatory statement.

#### **8-5 SEF Real Property Value Protection Plan:**

The SEF Applicant shall assure the County that there will be no loss in real property value for any property within 1000 feet of the SEF. To legally support this claim, the Applicant shall consent in writing to a Real Property Value Protection Agreement (“Agreement”: see ¶ 9-4) as a condition of approval for the SEF. This Agreement shall provide assurance to non-participating real property owners (i.e. those with no solar facilities on their property) near the SEF, that they have some protection from SEF-related real property values losses.

### **8-6 SEF Surety for Removal, when Decommissioned:**

The Applicant shall place with the County an acceptable letter-of-credit, bond, or other form of security that is sufficient to cover the cost of removal at the end of each SEF array's useful life, as detailed in the decommissioning plan. Such surety shall be at least \$10,000 for each acre of a solar array. The Planning Board may approve a reduced surety amount that is not less than 150% of a cost estimate that is certified by an Engineer, salvage company, or other expert acceptable to the Planning Board. This calculation will not take into account any estimated salvage values.

The County shall use this surety to assure the faithful performance of the decommissioning terms and conditions of the Applicant's plan and this law. The full amount of the bond or security shall remain in full force and effect until all necessary site restoration is completed to return the site to a condition comparable to what it was prior to the SEF, as determined by the Planning Board (see ¶ 9-6). The Applicant will be responsible for assuring that any subsequent Assigns of the SEF, will provide acceptable surety to the County, prior to any transfer of ownership.

### **8-7 SEF Liability Insurance:**

8-7.1 The holder of a permit for a SEF shall agree to secure and maintain for the duration of the permit public liability insurance, as follows:

A. *Commercial general liability covering personal injuries, death and property damage:* \$5,000,000 per occurrence (\$10,000,000 aggregate), which shall specifically include the County and its officers, councils, employees, committee members, attorneys, agents and consultants as additional named insureds.

B. *Umbrella coverage:* \$10,000,000.

8-7.2 The insurance policies shall be issued by an agent or representative of an insurance company licensed to do business in the State and with at least a Best's rating of "A".

8-7.3 The insurance policies shall contain an endorsement obligating the insurance company to furnish the County with at least 30 days prior written notice in advance of a cancellation.

8-7.4 Renewal or replacement policies shall be delivered to the County at least 15 days before the expiration of the insurance that such policies are to renew or replace.

8-7.5 No more than 15 days after the grant of the permit and before construction is initiated, the permit holder shall deliver to the County a copy of each of the policies or certificates representing the insurance in the required amounts.

8-7.6 A certificate of insurance that states that it is for informational purposes only and does not confer sufficient rights upon the County, shall not be deemed to comply with this Law.

### **8-8 SEF Indemnification:**

Any application for a SEF within the County shall contain an indemnification provision. The provision shall require the Applicant to at all times defend, indemnify, protect, save, hold harmless, and exempt the County, and its officers, councils, employees, committee members, attorneys, agents, and consultants from any and all penalties, damages, costs, or charges arising out of any and all claims, suits, demands, causes of action, or award of damages, whether compensatory or punitive, or expenses arising therefrom, either at law or in equity, which might arise out of, or are caused by, the placement, construction, erection, modification, location, equipment's performance, use, operation, maintenance, repair, installation, replacement, removal, or restoration of said SEF, excepting, however, any portion of such claims, suits, demands, causes of action or award of damages as may be attributable to the negligent or intentional acts or omissions of the County, or its employees or agents. With respect to the penalties, damages, or charges referenced herein, reasonable attorneys' fees, consultants' fees, and expert witness fees are included in those costs that are recoverable by the County.

**8-9 SEF Permit Fees.** The non-refundable Permit Application Fee shall be \$500 per megawatt (MW) of rated maximum capacity. A renewal Permit Application Fee shall be \$250 per megawatt (MW) of rated maximum capacity.

**8-10 Standards for Planning Board’s SEF Permit Application Decision:**

The Planning Board may disapprove a SEF Permit Application for a variety of legal reasons, including but not limited to, the following:

- A. Conflict with safety and safety-related codes and requirements.
- B. The use or construction of a SEF that is contrary to an already-stated purpose of a specific zoning or land use designation.
- C. The operation of a SEF would be a net economic liability to the community.
- D. The operation of a SEF would create unacceptable health risks to the public.
- E. The placement and operation of a SEF that would create unacceptable risks to wildlife and/or regional ecosystems.
- F. The placement and location of a SEF would result in a conflict with, or compromise or change in, the nature or character of the surrounding area.
- G. The operation of a SEF would create unacceptable interference with any type of military operation.
- H. Conflicts with any provisions of this Local Law.

**Section 9. SEF Post-Permit Approval Requirements**

**9-1 SEF Certification**

Prior to operation of any approved and constructed SEF, the Applicant must provide a certification that the project complies with applicable codes, industry practices and conditions of approval (where applicable).

**9-2 Reservation of Authority to Inspect SEF**

In order to verify that the holder of a permit for a SEF and any and all lessees, renters, and/or licensees of it, have placed and constructed such facilities in accordance with all applicable technical, safety, fire, building, and zoning codes, laws, Local Laws and regulations and other applicable requirements, the County may inspect all facets of said permit holder's, renter's, lessee's or licensee's placement, construction, and maintenance of such facilities, including all solar arrays, buildings, and other structures constructed or located on the site.

- 9-2.1 Solar Energy Facilities shall not begin operation until all approvals required under this Local Law shall have been obtained, and all required certifications are provided.
- 9-2.2 Following the issuance of any approval required under this Local Law, the Planning Board or its designee shall have the right to enter onto the Site upon which a SEF has been placed, at reasonable times in order to inspect such SEF and its compliance with this Law.
- 9-3.3 After undertaking such inspection, the Planning Board or its designated representative shall provide notice of any non-compliance with the terms of this Local Law or the conditions of approval of any permit issued hereunder, and shall provide the owner or Applicant with a reasonable time frame to cure such violation, such time frame to be determined based upon the seriousness of the violation, its actual and/or potential impact upon public safety, and the actual and/or potential impact of the violation upon County residents and/or local ecosystems.

**9-3 SEF Construction Related Damage**

The owner of any permitted SEF shall, to the extent practicable, repair or replace all real or personal property, public or private, damaged during the SEF construction.

The Applicant shall reimburse the NC DOT and/or County (as appropriate) for any and all repairs and reconstruction to roads that are necessary due to the construction or decommissioning of the SEF. A qualified independent third party or other qualified person, agreed to by the NC DOT and/or County (as appropriate) and the Applicant, shall be hired to pre-inspect the roadways to be used during construction and/or decommissioning. This third party shall be hired to evaluate, document, and rate the roads condition prior to construction or decommissioning of the SEF, and again 30 days after the SEF is completed or removed.

- A. Any road damage during construction that is done by the Applicant and/or one or more of its subcontractors that is identified by this third party shall be repaired or reconstructed to the satisfaction of NC DOT and/or County (as appropriate) at the Applicant's expense, prior to the final inspection. In addition, the Applicant shall pay for all costs related to this third party pre-inspection work prior to receipt of the final inspection.
- B. The surety for removal of a decommissioned SEF shall not be released until the Planning Board is satisfied that any road damage that is identified by this third party during and after decommissioning that is done by the Applicant and/or one or more of its contractors or subcontractors has been repaired or reconstructed to the satisfaction of the NC DOT and/or County at the Applicant's expense. In addition, the Applicant shall pay for all costs related to work of this third party's inspection prior to receipt of the release of the surety.

#### **9-4 SEF Real Property Value Protection Plan:**

The Applicant guarantees that there will be no loss in real property value within 1000 feet of the SEF, due to the SEF. Any real property owner(s) included in that area who believe that their property may have been devalued due to the SEF, may elect to exercise the following option:

- 9-4.1 All appraiser costs are paid by the Applicant, from the Escrow Account. Applicant and the property owner shall each select a licensed appraiser. Each appraiser shall provide a detailed written explanation of the reduction, if any, in value to the real property ("Diminution Value"), caused by the proximity to the SEF. This shall be determined by calculating the difference between the current Fair Market Value (FMV) of the real property and what the FMV would have been at the time of exercising this option, assuming no SEF was proposed or constructed.
  - A. If the higher of the Diminution Valuations submitted is equal to or less than 25% more than the other, the two values shall be averaged ("Average Diminution Value": ADV).
  - B. If the higher of the Diminution Valuations submitted is more than 25% higher than the other, then the two appraisers will select a third licensed appraiser, who shall present to Applicant and property owner a written appraisal report as to the Diminution Value for the real property. The parties agree that the resulting average of the two highest Diminution Valuations shall constitute the ADV.
  - C. In either case, the property owner may elect to receive payment from Applicant of the ADV. Applicant is required to make this payment within 60 days of receiving said written election from property owner.
- 9-4.2 Other Agreement Conditions:
  - A. If a property owner wants to exercise this option, they must do so within 10 years of the SEF receiving final approval from the County.
  - B. A property owner may elect to exercise this option only once.
  - C. The Applicant and the property owner may accept mutually agreeable modifications of this Agreement, although the Applicant is not allowed to put other conditions on a financial settlement (e.g. confidentiality). If the property owner accepts some payment for property value loss based on an alternative method, that that acceptance and payment shall be considered an exercise of this option.

- D. This Agreement applies to the property owner of record as of the date of the SEF approval, and is not transferrable to subsequent owners.
- E. The property owner of record as of the date of the SEF approval must reasonably maintain the property from that time, until they choose to elect this option.
- F. The property owner must permit full access to the property by the appraisers, as needed to perform the appraisals.
- G. The property owner must inform the appraisers of all known defects of the property as may be required by law, as well as all consequential modifications or changes to the property subsequent to the date of the SEF application.
- H. This Agreement will be guaranteed by the Applicant (and all its successors and assigns), for 10 years following the SEF receiving final approval from the County, by providing a bond (or other surety) to the County, in an amount determined to be acceptable by the County. This surety account will ensure execution of all aspects of this Agreement (including compensation of eligible property owners in the case of default by Applicant). Failure to maintain this surety account shall be cause for revocation (or denial of renewal) of the SEF Permit.
- I. Payment by the Applicant not made within sixty (60) days will accrue an interest penalty. This will be twelve percent (12%) annually, from the date of the written election from property owner.
- J. For any litigation regarding this Agreement, all reasonable legal fees and court costs will be paid by the Applicant.

**9-5 SEF Environmental Monitoring:**

The Applicant will permit post-construction environmental studies deemed appropriate by the County Planning Board, which will be funded by the Escrow Account (§ 8-4). These studies will include hydro-geological monitoring at least once a year, in each of the same general locations that all the baseline samples were taken (§ 8-2.7 3). These analyses will pay special attention to any chemical residue from the SEF, particularly of any toxic chemicals.

The Applicant is responsible to see that the County has a current written list of all chemicals used for maintenance, etc. of the SEF (e.g. pesticides, herbicides, cleaners). This list shall include quantity and frequency of application of each of these chemicals. At any time if this information is out of date, the Applicant will be subject to a fine per § 10-2.2.

Post-construction field studies will include scientific assessments of regional nesting failures, and territory abandonment of special status species within 500 feet of the SEF. When these assessments are being done, only researchers involved with these studies will be legally allowed to touch carcasses. SEF personnel who move carcasses without written County approval will be subject to a fine per § 10-2.2, as solar arrays do kill endangered and other highly protected species. During the life of the project every bird or bat carcass, or crippled bird or bat found anywhere within the SEF must be reported to the County by the Applicant within seven (7) days.

**9-6 SEF Decommissioning:**

The County Planning Board will review the projected Decommissioning costs (§ 8-2.11) every five (5) years. The SEF owner will adjust their security to any changes from the original calculation.

If the County Building Codes official condemns any portion of a SEF, or if no electricity is generated from any solar array for three (3) consecutive months, the SEF owner and/or property owner shall have three (3) months to remedy the safety issues or complete the decommissioning of the SEF, according to the approved plan.

- 9-6.1 The Planning Board may grant extensions of time for repair and/or maintenance, for good cause, such as the need to back-order parts that are not currently available from the supplier or the need to repair a SEF damaged by a storm.

- 9-6.2 Decommissioning shall include the complete removal of solar arrays, buildings, electrical components, cabling, roads, and any other associated facilities and/or structures, including below-ground items (e.g. foundations), to a depth of four (4) feet below grade.
- 9-6.3 Disturbed earth shall be graded and re-seeded, unless the landowner requests in writing that the access roads or other land surface areas not be restored.
- 9-6.4 The Planning Board shall pay (from the Escrow Account) for at least ten representative soil sample tests, to assure that no new contaminants are left behind (ref ¶ 8-2.7 (3)). If evidence of new contaminants is found, the SEF owner is obligated to remedy the situation to the County Planning Board's satisfaction.

### **9-7 SEF Complaints:**

The County shall set up a procedure for filing and handling SEF complaints. The SEF owner shall initially be given a reasonable opportunity to resolve all complaints. The cost of such resolution shall be borne by the SEF owner. If resolution is not made in a reasonable time (as determined by the County), the County may utilize its Escrow Account to attempt to resolve any SEF issues. The County may establish a monitoring committee to oversee resolution of complaints regarding SEFs.

## **Section 10. Miscellaneous**

### **10-1 SEF Property Taxes**

- 10-1.1 The County will assess any and all parts of the SEF at their full current market value. That value will be determined by the documented construction cost, less any applicable depreciation.
- 10-1.2 The County directs that the SEF owner release any and all SEF landowners from any confidentiality clause that impedes the County from knowing what encumbrances are on taxable lands in their jurisdiction.

### **10-2 Enforcement; Penalties and Remedies for Violations**

- 10-2.1 The County Commissioners and/or Planning Board shall appoint such County staff or outside consultants as it sees fit to enforce and implement this Local Law.
- 10-2.2 Any person owning, controlling or managing any building, structure or land related to a SEF, shall be legally and financially responsible for any and all violations of this Local Law. Such violations would include noncompliance with the terms and conditions of the permit herein, or any order of the enforcement officer. Any person who is responsible for so doing, shall be guilty of an offense and subject to a fine of not more than \$1000 per incident, and/or any other penalties provided by local, state, or federal law.  
  
Every such person shall be deemed guilty of a separate offense for each week such violation shall continue. The County may institute a civil proceeding to collect civil penalties in the amount of \$1000 for each violation, and each week said violation continues shall be deemed a separate violation.
- 10-2.3 In case of any violation (or threatened violation) of any of the provisions of this Local Law, including the terms and conditions imposed by any permit issued pursuant to this Local Law, in addition to other remedies and penalties herein provided, the County may institute any appropriate legal action or proceeding to prevent such unlawful erection, structural alteration, reconstruction, operation, moving and/or use, and to restrain, correct or abate such violation, to prevent the illegal act.

### **10-3 Fiscal Responsibility**

- 10-3.1 The Planning Board may, at its discretion, request the most recent annual audited financial report of the permittee prepared by a duly licensed Certified Public Accountant, during the review process. If such report does not exist, the Planning Board may, in its sole discretion, require a suitable alternative to demonstrate the financial responsibility of the Applicant and its ability to comply with the requirements of this Local Law.

10-3.2 No transfer or sale of any SEF, including the sale of more than 30% of the stock of such entity (not counting sale of shares on a public exchange) shall occur without written acceptance by such entity of the obligations of the permittee under this Local Law. Any such transfer shall not eliminate the liability of any entity for any act occurring during its ownership or status as permittee.

**Section 11. Applicability**

The requirements of this Local Law shall apply to all SEFs proposed, operated, modified or constructed after the effective date of this Local Law.

**Section 12. Severability**

Should any provision of this Local Law be declared by any Court, administrative body, or board, or any other government body or board, to be unconstitutional, invalid, preempted, void, or otherwise inapplicable for any reason, such decision shall not affect the validity of this Local Law as a whole or any part thereof other than the part so decided to be unconstitutional, invalid, preempted, void, or otherwise inapplicable.

Consider adding something about limiting noise from inverters — e.g 40 DBa

***— See Notes & Objectives on the following two pages —  
(These are explanatory only, and not intended to be a part of the actual law)***

## — LOCAL NC MODEL SOLAR LAW NOTES —

- 1: North Carolina (like almost every other state) has laws directing local legislators to “protect the health, safety and well-being” of their community. That is the *fundamental premise* that this entire law is based on. *Every* aspect of this law is examined under that light. [Note: we are aware of no NC law obligating legislators to promote the interests of business entrepreneurs, solar or otherwise.]
- 2: The “Findings” (Section 5) are particularly important, as they set the stage for the subsequent rules and regulations. The Findings here make it clear that there are potential downsides to industrial solar energy. These need to be carefully considered before an accurate determination of community **net benefits** can be made.
- 3: After considerable research it has been determined that an effective regulatory industrial solar law addresses four key protections: **a)** property value, **b)** environmental, **c)** escrow account, and **d)** decommissioning.
- 4: “Mitigate” has become a legal weasel word that ranges from fix (a problem), to make it better. But how much better is sufficient: 1%? We have substituted “remediate” to make it clearer that the objective is to *remedy* the problems caused by solar energy.
- 5: Although it is a rarity in other solar laws we’ve seen, we strongly believe that a net economic assessment (§ 8-2.6) is an important, and justifiable requirement.
- 6: In most solar laws the developer is allowed to hire experts to conduct various environmental tests. If the developer contracts an ally, the resultant tests are likely useless. This law (§ 8-2.7) provides a simple solution: *give the money that the developer was going to spend on experts, to the County*. The County then hires independent experts. The cost is the same to the developer, so they have no legitimate complaint against this arrangement — but the results will likely be *radically* better.
- 7: We also strongly believe that taxpayers should not be subsidizing the costs incurred by the County, in behalf of these entrepreneurs for these lucrative projects. As such there is a strong (and very justifiable) Escrow Account that is required (§ 8-4).
- 8: For technical details on most aspects of this Model Law (and supporting studies), please see **WiseEnergy.org** (especially the “Solar” and “Legal Matters” pages).
- 9: This law strictly deals with commercial/industrial solar energy facilities (SEFs). Your community should consider whether a separate set of rules is necessary to be written to apply to residential solar.
- 10: Always consult with a competent attorney when involved in any legal matter.



— See Objectives on the next page —

## — PROPOSED SOLAR LAW OBJECTIVES —

The objective in writing this law was to produce a high quality solar law – i.e. an ordinance with rules and regulations that:

- a) reasonably and effectively protect the health, safety and well-being of local citizens and visitors,
- b) reasonably and effectively protect the property rights of local residents,
- c) reasonably and effectively safeguard the local economy,
- d) reasonably and effectively conserve the environment and preserve local ecosystems,
- e) are understandable to legislators and citizens (KISS),
- f) will result in objective and meaningful tests and reports,
- g) are relatively easy to implement,
- h) will not be any expense to taxpayers,
- i) are scientifically sound, *and*
- j) can likely withstand a legal challenge (e.g. by the developer).

For any questions or suggestions please email physicist John Droz: “aaprjohn at northnet dot org”.