Section 1. Purpose

The purpose of this ordinance is to accomplish the following objectives with the least possible regulation.

1. To encourage the development of on-site energy production and consumption.

2. To protect the public health and safety.

3. To promote the general welfare of the community.

4. To conserve the environment, wildlife habitat, fisheries, and unique natural areas, and

5. To fit these systems harmoniously into the fabric of the community by providing standards for alternative energy systems and other types of arrays.

Section 2. Authority

The Embden Planning Board is vested with the authority to review and approve, approve with conditions, or reject any application for Solar Energy Conversion Arrays (Arrays) as defined in this Ordinance. The Ordinance is enacted pursuant to the enabling provisions of Article VIII, Part 2, §1 of the Maine Constitution, the provisions of Title 30-A MRSA,§3001 (Home Rule), and the provisions of Title 30-A MRSA §4312 et. seq.

1. In the event the Planning Board requests expert opinions, advice, or testimony during the course of reviewing the application to determine the impact to surrounding properties or public safety implications, or to resolve any other issues regarding the proposal, it shall first use due diligence to obtain and utilize free services from governmental or non-profit sources.

2. Should the Planning Board be unable to obtain and utilize free services, the Selectmen may authorize the hiring of independent third-part consultants to review array proposals to determine the impact to surrounding properties or public safety implications or resolve any other issues regarding the proposal. The Planning Board shall require the applicant to pay for such services after giving notice to the applicant of the name of the expert, the area of qualification of the expert, and the purpose for which the expert is required and the approximate cost of the expert.

3. The applicant shall be provided with an opportunity to meet with the Code Enforcement Officer to arrange a schedule for payment of the costs.

4. The applicant shall meet with the Code Enforcement Officer for a pre-construction meeting prior to commencement of construction.

5. The applicant shall have the right to request a public hearing before the Appeals Board to determine if the experts, as proposed by the Planning Board, are necessary to a determination of any issue properly before the Planning Board, and if the approximate costs of the expert are reasonable. The applicant shall request the hearing within 10 days of receipt of the notice establishing the necessity and costs of any independent third-part consultant, or such time as is agreed to by the Planning Board and the applicant. It will be the applicant's burden to prove that the requested expert is unnecessary, or that the cost is not reasonable.

Section 3. Exempt Arrays.

The following arrays are exempt from this Ordinance:

1. Roof-mounted on any legally permitted residential or residential accessory structure.

2. Ground – or pole-mounted for private use, with a panel area less than 5,000 square feet.

3. Building integrated solar (i.e., shingle, hanging solar, canopy, etc.…).

4. Repair or replacement of array components that do not enlarge the area of the existing array.

5. Commercial buildings utilizing solar energy for on-site operational purposes only.

Section 4. Solar Array Complex Plan Review

All non-exempt arrays must be approved by the Embden Planning Board through this Ordinance.

The following requirements must be included in a Solar Energy Conversion Array application:

1. All application materials required for a building permit and any applicable fee established by the Board of Selectmen. The application shall include the following:

   a. A detailed description and number of panels to be installed and associated components.

   b. The name, addresses and contact information of landowner, proposed system installer, the project proponent, project proponent agent, and all other involved in project along with a copy of the Lease Agreement.

   c. A detailed plan for use of herbicides and pesticides to control vegetation and plan to minimize use of herbicides and pesticides. Yearly water testing for water quality and for harmful chemicals shall be mandatory. No prime agriculture soil or significant volume of topsoil shall be removed from the site for installations of the system.

   d. Survey of proposed site including rights of way, easements and topography of site by a licensed Maine surveyor.

e. Names and addresses of abutting landowners including those on the opposite side of any roadways.

f. Locations of important plant and animal habitats identified by the Maine Department of Inland fisheries and Wildlife.

2. A site plan showing property lines, the location of any wetlands or flood zones, the location of proposed panels, equipment, fencing and access road, and the location and setback of any roads or streets.

3. A decommissioning plan signed by the party responsible for decommissioning and the landowner (if different) whose minimum requirements meet the standards in Section 8 of this Ordinance. Such plan must be filed in the Somerset County Registry of Deeds prior to the first operation of the array. DEP approval of decommissioning plan set forth in Title 35-A, §§3491-3496 is required.

4. Waste Stream Management Plan (WSMP) for the construction waste and debris at the site of the said Array, including but not limited to cardboard, wood, scrap metal, scrap wire, and clearing and grading wastes, from the construction site and the disposal site(s) of such waste. Information on the amount of material that is being recycled shall be included in the WSMP. The Code Enforcement officer shall conduct a final inspection to ensure compliance with the approved plan.

5. Safety: The solar system owner or project proponent shall provide a copy of the site plan application to the local Fire Chief for review and comment. The Fire Chief shall base any recommendation for approval or denial the of the application upon review of the fire safety of the proposed system.

Section 5. General Standards for all Arrays.

In addition to any other applicable provisions of this Ordinance, before granting a Solar Array Complex Plan permit, the Planning Board must find that the proposed plan will comply with each of the standards in Sections 5 and 6.

1. Any modifications to the array once the array has been permitted must be brought back to the Planning Board for approval of the proposed modifications.

2. Unless otherwise specified through a written contract, lease or other agreement, a copy of which is on file with the Embden Code Enforcement Officer, the property owner of record will be presumed to be the responsible party for owning and maintaining the array.

3. Approval under this Ordinance is conditional upon compliance with all other Embden Ordinances, the Maine Plumbing and Electrical Codes, Natural Resources Protection Act, Storm Water Management Law, erosion and sediment control rules and

regulations or other applicable regulations and any requirements of the local utility if any array is to be connected to any existing electric grid.

4. A public hearing shall be held prior to the issuance of any permit by the Planning Board. The developer and/or landowner shall notify all abutting landowners of the public hearing by certified mail, return receipt requested.

5. An array shall not be constructed until the Solar Array Complex plan has been approved by the Planning Board and a Building Permit has been issued by the Planning Board and any applicable appeal period having passed without an appeal being filed.

6. All arrays shall be operated and located such that no disruptive electromagnetic interference with signal transmission or reception is caused beyond the site. If it has been demonstrated that the system is causing disruptive interference beyond the site, the system operator shall promptly eliminate the disruptive interference or cease operation of the system.

7 All on-site electrical wires or piping associated with the system shall be installed underground except for "tie-ins" from above-ground mounted installation and to public-utility company transmission & distribution poles, towers and/or lines. Overhead or pole-mounted electrical wires shall be avoided to the extent possible with the facility. This standard may be waived by the Planning Board if the project terrain is determined to be unsuitable for underground installation.

8. The array site shall not display any permanent or temporary signs, writing, symbols, logos, or any graphic representation of any kind except appropriate manufacturers or installer's identification and warning signs.

9. Array placement must be designed to minimize or negate any solar glare onto nearby properties, or roadways.

10. If lighting is provided at the site, lighting shall be shielded and downcast such that the light does not spill onto the adjacent parcel or the night sky. Motion sensor control is preferred.

11. The project will be constructed to eliminate any possible contact between generated electric current and persons or animals lawfully in the area of the array.

12. The boundaries of any non-exempt array that borders any road or any abutting residential dwelling lot shall consist of a vegetated buffer the width of the required setback along that border, in addition to any fence that may be erected, and existing vegetation should be used to satisfy these planting requirements where possible. Berms with vegetation are encouraged as a component of any buffer and the Planning Board may allow up to 25% reduction in the required buffer width where a berm is to be constructed. The buffer shall screen the array from view by the abutting road or any nearby residences to the greatest extent practical. In the event no natural vegetation exists, a plan by a licensed

arborist shall be submitted to the Planning Board for approval. The plan shall contain indigenous species of conifers or evergreens and must be maintained to adequately screen the array.

13. All arrays shall be set back 100 feet from any resident dwelling; 50 feet from roadways; 50 feet from accessory structures; and 50 feet from other abutting property lines.

14. Arrays covering permanent parking lots or other hardscape areas approved by the Planning Board are encouraged to limit the amount of stormwater flowage. Where the array will cover existing hardscape (impermeable surface) areas, the Planning Board may in its discretion waive the vegetated buffer requirement so long as the required setback is met.

15. If electric storage batteries are included as part of any array system, they must be installed according to all requirements set forth in the National Electric Code and State Fire Code when in operation. When no longer in operation, the batteries shall be disposed of in accordance with the laws and regulations of the Town of Embden and any other applicable laws and regulations relating to solid, special, or hazardous waste disposal.

16. Solid Lock Game Fences. Such fencing would start with 8 x 12-inch openings at the bottom (ground) with progressively smaller openings at the top of the fence. This type of fencing meets the National Electric Code for human safety. The fencing should also include placement of five-inch or larger diameter wooden escape poles in two or more corners of the perimeter fence as an alternate means for wildlife to escape the enclosed areas.

17. Construction will commence no earlier than May 1st and shall cease no later than October 31st of each year. The Code Enforcement Officer shall determine that the area has been stabilized for the winter.

18. No solar energy development five (5) acres or greater may be constructed, wholly or partially, on "high-value agricultural land" (as defined by the Department of Agriculture, Conservation and Forestry) after September 1, 2024, without a permit from the Department of Agriculture, Conservation and Forestry.

19. Permanent stabilization (90 percent vegetation) shall be reached thirty (30) days after construction has been completed.

20. Erosion and sediment control installation shall be inspected and approved by the Code Enforcement Office before any earth moving and/or construction shall commence. Best Management Practices as established by the Maine DEP shall be used. Removal of mature trees shall be avoided to the extent possible. Native, pollinator-friendly seed mixtures shall be used to the extent possible. A detailed plan and maintenance thereof to control storm water runoff in lakes and streams and particularly with abutting landowners in mind to be prepared by an environmental engineer. If the terrain has up and down inclines, crushed rock waterways shall be used to direct any water flow to retention ponds.

21. Maintenance Conditions: The array owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, vegetative screening, fences, landscaping and plantings, and integrity of security measures. The Array must be properly maintained and be kept free from all hazards, including, but not limited to, faulty wiring, loose fastenings, being in an unsafe condition or detrimental to public health, safety or general welfare. Site access shall be maintained to a level acceptable to the fire chief for emergency response. The owner or operator shall be responsible for the cost to maintain the Array and any access road(s), including regular plowing of snow to maintain road access. Emergency phone number(s) shall be posted in case of emergency at the array.

Section 6. Dimensional and Design Standards.

1. Height: A ground – or pole – amounted SECA shall have a maximum height of 20 feet as measured from the ground level to the system's highest point at full tilt.

2. Roof Load: the weight of any array proposed to be roof mounted on any non-exempt structure must be calculated and the applicant must submit a determination by a registered engineer with stamped certification or finding that the load rating of the underlying structure can accommodate the addition weight of the Array.

3. Lot Coverage: The maximum surface area of a ground – or pole- mounted panel system, regardless of the mounted angle, shall be calculated as part of the overall lot coverage or area of the structure, for the purposes of any applicable Town of Embden ordinance.

4. Design Standards:

a. Any height limitation of this Ordinance shall not be applicable to roof-mounted solar collectors provided that such structures are erected only to such height as is reasonably necessary to accomplish the purpose for which they are intended to serve.

b. Array installations shall not obstruct access to sunlight upon neighboring properties.

c. The array structure shall be a non-reflective color that blends the system and its components into the surrounding landscape to the greatest extent possible and incorporates non-reflective surfaces to minimize any visual disruptions.

Section 7. Guarantee for Decommissioning

At the time of permitting of a proposed array, and prior to initiating construction of any array with the Town of Embden, the applicant must guarantee the costs for the decommissioning of the facility.

1. The amount of the guarantee shall be equal to 150% of the estimated decommissioning cost, provided by the applicant and certified by a professional civil engineer licensed in the State of Maine .

2. The owner of the facility shall provide the Planning Board with a revised decommissioning cost estimate and structural evaluation prepared by a professional civil engineer licensed in Maine every five (5) years from the date of the Planning Board's issuance of the permit for the Array.

3. Types and Contents of Guarantee – One of the following performance guarantees chosen by the applicant shall be provided as a condition for approval of the permit application.

   A. Interest-Bearing Escrow Account – A cash amount equal to 150% of the estimated decommissioning cost shall be deposited into an escrow account, at a financial institution acceptable to the Town.

      For any account opened by the applicant, the Town shall be named as owner or co-owner, and consent of the Town shall be required for withdrawal.

      Any interest earned on the escrow account shall be returned to the applicant unless the Town has found it necessary to draw on the account, in which case the interest earned shall be proportionately divided between the amount retuned to the applicant and the amount withdrawn to complete the work.

      The Town and applicant shall create and execute an escrow agreement.

   B. Performance Bond – A performance bond shall detail the conditions of the bond, the method for release of the entire bond or portions of the bond to the Town, and the procedures for collection by the municipality. The bond documents shall specifically reference the array facility for which approval is sought. The insurer for the performance bond shall be acceptable to the Town.

   C. Irrevocable Letter of Credit – An irrevocable letter of credit from a bank or other lending institution shall indicate that funds have been set aside for the decommissioning of the array facility and may not be used for any other project or loan. The letter of credit shall detail the procedures for collection by the municipality.

   D. The conditions and amount of the performance guarantee shall be determined by the Planning Board with the advice of the Town Selectmen, and/or Town Attorney, expert consultant with such fees paid for by the applicant.

   E. DEP approval of decommissioning plan is required for ground mounted arrays three acres or more. Title 35-A MRSA §§3491 et. seq.

Section 8. Decommissioning and Abandonment.

1. The owner or operator of the facility, or the owner of the parcel if there is no separate owner or operator of the facility or if the owner/operator fails to do so, shall do the following as a minimum to decommission the project: See definition of decommissioning in Title 35-A MRSA §§3491 et. seq.

    a. Remove all non-utility owned equipment, conduits, structures, fencing, and foundations to a depth of at least four feet below grade.
    b. Revegetate any cleared areas with appropriate plantings that are native to the region according to an approved Solar Array Complex plan, unless requested in writing by the owner of the real estate to not revegetate due to plans for agricultural planting or other development subject to the Planning Board's approval.
    c. Fill in all holes, depressions or divots resulting from the construction of the array.
    d. Satisfy all conditions for decommissioning as specified in Title 35-A MRSA §§3401 et. seq

2. All said removal and decommissioning shall occur within 12 months of abandonment.

3. Unless the lessee or owner of the facility or of the parcel notifies the Code Enforcement Officer of the intent to maintain and reinstate the operation of the facility within 30 days of the following events, abandonment shall be deemed to have occurred.

    a. The land lease (if applicable) has terminated;
    b. The array fails to generate electricity for 180 days;
    c. The date for decommissioning has passed by more than 60 days without decommissioning activities.

    If decommissioning activities, as defined herein, shall not have commenced within 180 days of any of the above events, the Town of Embden may use all available means to cause an abandoned array to be fully decommissioned at the expense of the land owner, operator or lessee.

4. A notice submitted to the Code Enforcement Officer of the intent to maintain and reinstate the operation of the facility shall be updated every six months with a statement of the progress made towards that goal.

5. If the facility has not returned to operational condition with one year from the date of the first notice of the intent to maintain and reinstate the operation of the facility, the Code Enforcement Officer shall find the facility has been abandoned unless there is documentable evidence that significant progress has been made toward reinstatement

and in the Code Enforcement Officer's opinion is likely to be completed in a timely manner.

6. Upon determination of abandonment based on the foregoing, the Code Enforcement Officer shall notify the party (or parties) responsible by certified mail or by hand delivery with signed receipt that they must remove the facility and fully restore the site in accordance with Section 8.1. of this Ordinance within three hundred and sixty (360) days of notice by the Code Enforcement Officer. A copy of the notice shall be forwarded by the Code Enforcement Office to the Embden Selectmen.

    a. In the event the lessee of the facility fails to decommission the facility as outlined above, the landowner shall decommission the facility within 90 days of notice by the Code Enforcement Officer.

    b. In the event the landowner fails to remove the facility as stated above, the Town of Embden shall have the facility removed and the Town's costs may be recovered under any of the performance guarantees in Section 7. 3A, 3B or 3C or, if necessary, by a special tax assessed against the real estate of the array site.

    c. Any unreimbursed costs associated with the removal, after one year of removal, shall be recovered by a special tax to be assessed against the real estate of the array site.

Section 9. Retroactive Clause

Notwithstanding the provision of 1 M.R.S.A. §302, and regardless of the date on which it is approved by the Selectmen, this Ordinance shall be effective as of _____ and shall govern any and all applications for permits or approvals required under the applicable laws of the Town of Embden, Maine that were or became pending before any officer board or agency of the Town of Embden on or at any time after _____.

Section 10. Conflicts; Savings Clause

Any provision of the Town's ordinances that are inconsistent with or conflict with the provisions of this Ordinance are hereby repealed to the extent applicable. If any section or provision of this ordinance is declared by a Court of competent jurisdiction to be invalid, such a declaration shall not invalidate any other section or provision.

Section 11. Violations and Enforcement.

Violations of this Ordinance shall be subject to per-day penalties in accordance with 30-A, M.R.S.A. §4452 and the violator shall be assessed the Town's reasonable attorney fees and costs. The Code Enforcement Officer shall have authority to enforce this Ordinance.

Definitions

Berm: A barrier constructed of landscaped earth, four (4) feet or more in height measured from the outside base of the berm. Berms may be pierced with reasonable access ways no more than twelve (12) feet in width as approved by the Planning Board.

Decommissioning: See Title 35-A MRSA §§3401 et. seq. incorporated by reference.

Permanent Stabilization: If the area will not be worked for more than one year or has been brought to final grade, then permanently stabilize the area within 7 days by planting vegetation, seeding, sod, or through the use of permanent mulch, or riprap, or road sub-base. If using vegetation for stabilization, select the proper vegetation for the light, moisture and soil conditions; amend areas of disturbed subsoils with topsoil, compost, or fertilizers; protect seeded areas with mulch or, if necessary, erosion control blankets; and schedule sodding, planting, and seeding so to avoid die-off from summer drought and fall frosts. Newly seeded or sodded areas must be protected from vehicle traffic, excessive pedestrian traffic, and concentrated runoff until the vegetation is well-established. If necessary, areas must be reworked and restabilized if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. Winter stabilization needs to be completed no later than November 1st.

Solar Array: Multiple solar panels combined together to create one system.

Solar Energy Conversion Array (SECA): The components and subsystems required to convert solar energy into electric or thermal energy suitable for use. The term applies, but is not limited to, solar photovoltaic (PV) systems, solar thermal systems, concentrated solar thermal installation, and solar hot water systems.

Tilt – The angle of the solar panels and/or solar collector relative to horizontal. Tilt is often between five (5) and forty (40) degrees. Solar energy systems can be manually or automatically adjusted throughout the year. Fixed-title systems remain at a static tilt year-round.

Date Approved: September 19, 2024