



**PLN-USE-2017-003**

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**Hickory Solar Farm**

**APPLICANT:** New Energy Ventures, Inc. **AGENCY:** North Ridge Resources, LLC  
**PROPOSAL:** A conditional use permit to allow a solar energy facility on a 154.40 acre parcel. **ZONE:** A-1, Agricultural District **LOCATION:** On Ballentine Road, approximately 5000 feet east from the intersection of Ballentine Road and Battlefield Blvd. **TAX MAP SECTION/PARCEL:** 0970000000660 **BOROUGH:** Butts Road

**PLANNING COMMISSION MEETING  
MAY 10, 2017**

Department of Planning  
P.O. Box 15225  
Chesapeake, VA 23328  
Office: 757-382-6176  
Fax: 757-382-6406

**HEARING DATE: MAY 10, 2017**

**TO:** CHESAPEAKE PLANNING COMMISSIONERS

**FROM:** HOA N. DAO, SENIOR PLANNER 

**THROUGH:** JALEH M. SHEA, AICP, PLANNING DIRECTOR 

**DATE:** APRIL 28, 2017

**RE:** PLN-USE-2017-003  
**PROJECT:** Hickory Solar Farm  
**APPLICANT:** New Energy Ventures, Inc.  
**PROPOSAL:** A conditional use permit to allow a solar energy facility on a 154.4 acre parcel.  
**ZONE:** A-1, Agricultural District  
**LOCATION:** On Ballentine Road, approximately 5,000 feet east from the intersection of Ballentine Road and Battlefield Boulevard South.  
**TAX MAP SECTION/PARCEL:** 09700000000660  
**BOROUGH:** Butts Road

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**PROJECT DESCRIPTION:**

The applicant seeks approval of a conditional use permit to allow for the construction and operation of an unmanned, 32 megawatt (MW) photovoltaic (PV) solar farm (consisting of a 20 MW and 12 MW project). The project will consist of approximately 144,000 ground-mounted panel arrays on a single-axis tracking system, up to eight feet height, and capable of withstanding wind speeds of 120 m.p.h. The project will be located on a 154.4 acre parcel on Ballentine Road, approximately 5,000 feet east from the intersection of Ballentine Road and Battlefield Boulevard South. Approximately 15 inverters/transformers will be utilized to convert the DC current generated by the solar panels into AC current. The power is then transferred via overhead power lines along an existing Dominion Virginia Power easement running parallel to Ballentine Road and connecting with the existing Dominion Virginia Power distribution system on Battlefield Boulevard South.

The solar farm use is categorized as 'electric services,' which is a conditional use in the A-1, Agricultural District. The proposed use will be required to install a security fence and

landscape buffer for screening. Screening the entire perimeter of the project site will help buffer the facility from the public rights-of-way and mitigate any potential glint and glare from the panel arrays onto nearby residences. However, little to no impact from noise or glint and glare are anticipated since the nearest residence is located over 1,200 feet from the project site.

The applicant held a public awareness meeting on May 4, 2017 at the Hickory Ruritan Club on Battlefield Boulevard South, inviting all concerning citizens and community members to attend. Invitation letters were mailed out to properties located approximately within half a mile of the project site and ads were posted in the Chesapeake Clipper on April 27<sup>th</sup> and 29<sup>th</sup>.

### **BACKGROUND:**

Adjacent land uses and zoning designations are as follows:

<b>DIRECTION</b>	<b>ADJACENT ZONING AND LAND USE DESIGNATION</b>
North	A-1, Agricultural District, Agriculture / Open Space.
South	A-1, Agricultural District, Agriculture / Open Space.
East	A-1, Agricultural District, Agriculture / Open Space.
West	A-1, Agricultural District, Agriculture / Open Space.

### **DEPARTMENTAL COMMENTS:**

#### **Development Engineering:**

- See attached memo dated February 2, 2017 for comments.

#### **Building Review:**

- Building Permit is required for the solar panels being placed in field. Must be designed to resist 120 m.p.h. wind load.

#### **Landscaping:**

- The applicant/owner shall submit a Landscape Plan pursuant to Chesapeake Zoning Ordinance Section 19-600 et seq. prior to final construction plan approval. Said plan shall be subject to the review and approval of the City's Landscape Coordinator. Said plan shall consist of the following: 1) A modified Buffer Yard "E" along the entirety of the property line, consisting of small and medium canopy trees that are at least 6 feet in height, and shrubs that are in a minimum industry standard 3 gallon container at planting, and 2) the modified Buffer Yard "E" shall also include a solid evergreen buffer along the entirety of the property line adjacent to the residential properties to screen the use. The solid evergreen buffer shall include trees that are at least 8 feet in height at time of

planting, and shrubs that are in a minimum industry standard 3 gallon container at time of planting. The plant materials shall be installed prior to the issuance of a Certificate of Occupancy, to be inspected and approved by the City's Landscape Coordinator. The applicant/owner shall also install a 6 foot security fence around the entire perimeter of the solar farm prior to the issuance of a Certificate of Occupancy.

**Zoning Administrator:**

- See attached memo dated February 7, 2017 for comments.

**Public Utilities:**

- This development is outside the City's franchise service area; therefore, City water and sewer are not available or required.

Advisory:

- The project is located in the Northwest River Watershed Protection District. Prior to any construction plan approval, the applicant must apply for and received a valid Run-Off Control Permit from the Department of Public Utilities.

**Fire Prevention:**

- See attached memo dated January 24, 2017 for comments.

**Police:**

- See attached memo dated February 2, 2017 for comments.

**Navy:**

- See attached email dated April 20, 2017 for comments.

**STAFF ANALYSIS:**

Section 17-106.A of the Chesapeake Zoning Code (CZC) requires conditional use permit applications to meet the following standards:

1. **STANDARD:** The proposal, as submitted or as modified, is in conformity with the Comprehensive Plan, including specific applicable elements of the Plan, and with official policies adopted in relation to the Plan, including the purposes of this ordinance.

**FINDING:** The proposed solar farm facility meets the goals and policies of the 2035 Comprehensive Plan and Land Use Plan, specifically the following objectives and action strategies:

- *The City will encourage the development of alternative energy sources. Land use regulations should incorporate flexibility to allow for new technologies such as solar panels.*
- *The City will identify realistic, cost-effective measures that provide tangible benefits to local air quality, as well as long-term quality of life and economic benefits. Increase energy efficiency and use of renewable energy sources such as solar energy.*

The Land Use Plan designates the property for agricultural/open space uses. Solar energy generation is viewed as compatible with the City's agricultural preservation goals by providing rural property owners with a viable source of income and reducing pressure to convert farmland for residential uses. The proposed solar farm will be unmanned and community facilities will not be utilized. The use of the land for solar farming instead of traditional crops would have less of an environmental impact on the surrounding area since less chemicals are utilized. At the ends of the project life, the solar panel arrays will be removed. Thus, the solar farm use does not preclude the land from future use for traditional agricultural practices.

2. **STANDARD:** The proposal, as submitted or as modified, is compatible with the surrounding community and will have no more adverse effects on the health, safety, or comfort of persons living or working in or driving through the area than would any other use generally permitted in the same district.

**FINDING:** The proposed solar farm will be unmanned and will not utilize any public facilities. The use of the land for a solar farm instead of traditional crops would not require as much pesticides/chemicals or water for irrigation. Thus, the proposed use would result in less environmental impact than traditional farming practices.

One of the concerns regarding solar farms is that the panels create glint and glare. The primary purpose of a solar panel is to absorb the sun rays to generate electricity. With the proposed project, the applicant/owner plans to utilize anti-glare panels. In addition, the nearest dwelling unit is located approximately 1,262 feet from the project site, and the project shall be surrounded with a security fence and perimeter landscaping. Therefore, any adverse impacts regarding glint, glare, and noise from transmissions/inverters over 1,200 feet away would be extremely minimal.

The proposed project site is located just outside of the U.S. Navy's Fentress airfield easements. However, the project is located within the Area of Influence of the NSA Northwest Annex. The Navy has reviewed the proposal and has no objection with the project as proposed. There are no known health or safety issues associated with the proposed use. With stipulations, the proposal is compatible with the surrounding community.

Section 17-106.B. offers factors which may be considered in determining whether a Conditional Use Permit application meets the required standards. Only those factors considered applicable to this application are discussed below:

1. **STANDARD:** Whether the proposed conditional use will be consistent with the adopted policies in the Chesapeake Comprehensive Plan.

**FINDING:** Addressed above for #1 of Section 17-106.A.

2. **STANDARD:** Whether the existing or proposed streets and highways are adequate to safely accommodate and serve the site, with particular attention being given to the following:

- a. The capacity of existing or proposed streets and highways located on or near the site to accommodate projected traffic volumes.
- b. The adequacy and safety of the size and design of access roads, entrance and exit drives, and traffic circulation patterns, for both vehicular and pedestrian traffic on and near the site.

**FINDING:** Traffic impacts to the area will only occur during the brief construction period. Post construction, the amount of traffic for maintenance of the site with no more than a few trips per month would be minimal and well below the average daily trips of a single-family residence.

The Department of Development and Permits has indicated that a commercial access at the intersection of Battlefield Boulevard South and Ballentine Road is required for the proposed development.

3. **STANDARD:** Whether the proposed conditional use will be adequately served by other essential public facilities, including but not limited to the following: water and sewers, drainage facilities, schools, recreational facilities, police and fire protection, refuse disposal.

**FINDING:** The proposed solar farm will be an unmanned facility and will not require services such as schools, recreational facilities, refuse disposal, or water and sewer. The applicant/owner will work with the fire department regarding the appropriate method of fire protection using non-water sources when addressing fire hazards involving electricity.

4. **STANDARD:** Whether the proposed conditional use will have any adverse effect upon or will be incompatible with the use or enjoyment of adjacent and surrounding property, with particular attention being given to the following:

- a. The noise characteristics of the proposed use and whether they exceed the maximum sound levels that are typical of uses permitted as a matter of right in the district.

- b. The anticipated glare from vehicular and stationary lights and the extent to which such lights will be visible from any residential district.
- c. The vulnerability of the proposed use to fire and related safety hazards.
- d. The interference by the proposed use with any easement, roadways, rail lines, utilities and public or private rights-of-way.
- e. The possible destruction, loss, or damage of a natural, scenic, or historic feature of significant importance.
- f. The adequacy of proposed landscaping and buffering measures to screen the site from neighboring properties zoned for or containing less intensive uses.

**FINDING:** The proposed use will have minimal impact on the surrounding community. As stated earlier, the facility will be unmanned with maintenance employees visiting the site a few times per month. The nearest residence is located over 1,200 feet from the project site; therefore, any potential noise and/or visual impact is unlikely. In addition, the project will have a security fence and landscaping along the entire perimeter to help buffer the facility. Based on these findings, the proposed conditional use is not expected to have any adverse effect upon or be incompatible with the use or enjoyment of adjacent and surrounding properties.

5. **STANDARD:** Whether the proposed conditional use will be constructed, arranged, and operated so as not to dominate or interfere with the immediate vicinity or to interfere with the development and use of neighboring property in accordance with the applicable district regulations. In determining whether the proposed conditional use will so dominate the immediate neighborhood, considerations shall be given to:
  - a. The location, nature, and height of buildings, structures, walls, and fences on the site; and
  - b. The overall compatibility of the appearance of the site as proposed with neighborhood sites;
  - c. The nature and extent of landscaping and screening on the site.

**FINDING:** The proposed solar farm will include ground-mounted solar panel arrays and a single-story storage shed, no larger than 250 square foot in size. A security fence and landscaping will be installed along the entire perimeter of the project site to offer screening from adjacent residential properties, located over 1,200 square feet from the project site. The applicant is proposing to run overhead power lines from the project site running parallel to Ballentine Road and connecting with the existing Dominion Virginia Power distribution system on Battlefield Boulevard South. One of the goals of the Comprehensive Plan is to preserve and protect rural character. Therefore, staff is recommending that all power lines for the proposed use, both on-site and off-site, be buried underground to protect the health, safety, and rural character of the community.

The proposed conditional use will be constructed, arranged, and operated so as not to dominate or interfere with the immediate vicinity or to interfere with the development and use of neighboring property in accordance with the applicable district regulations.

### **FINDINGS:**

1. The proposed use of a solar farm on agricultural land is in conformity with and consistent with the policies contained in the City's Comprehensive Plan.
2. The solar farm use does not preclude the land from future use for traditional agricultural practices.
3. The proposal, with stipulations, is compatible with the surrounding community and will have no more adverse effects on the health, safety, or comfort of persons living or working in or driving through the area than would any other use generally permitted in the same district.
4. The Navy has no objection to the proposed use that is within 5 miles of the U. S. Navy Northwest Annex.

### **STAFF RECOMMENDATION:**

Based on the findings contained in this staff report, Staff recommends that **PLN-USE-2017-003** be **APPROVED** with the following stipulations:

1. The applicant/owner shall construct a City Standard Commercial Entrance, CG-11A to access the site prior to issuance of a Certificate of Occupancy. The entrance shall be constructed at the intersection of Battlefield Boulevard South and Ballentine Road and shall be depicted on the final site construction plan which is subject to review and approval of the Director of Development and Permits, or designee. In addition, a closure and restoration plan shall be a required component of the final site construction plan.
2. The applicant/owner shall submit a Landscape Plan pursuant to the Chesapeake Zoning Ordinance prior to final construction plan approval. Said plan shall be subject to the review and approval of the City's Landscape Coordinator. Said plan shall consist of the following: a modified Buffer Yard E along the entirety of the property line, consisting of small and medium canopy trees that are at least 6 feet in height, shrubs that are in a minimum industry standard 3 gallon container at planting, and a solid evergreen buffer along the entirety of the property line adjacent to the residential properties to screen the use. The solid evergreen buffer shall include trees that are at least 8 feet in height at time of planting, and shrubs that are in a minimum industry standard 3 gallon container at time of planting. All plant materials shall be subject to the review and approval of the City's Landscape Coordinator and shall be installed prior to the issuance of a Certificate of Occupancy for the use. The applicant/owner shall also install and maintain a 6 foot security fence around the

- entire perimeter of the solar farm prior to the issuance of a Certificate of Occupancy for the use.
3. The applicant/owner shall obtain a valid Run-Off Control Permit from the Department of Public Utilities prior to the approval of construction plans.
  4. The applicant/owner shall obtain all required permits and approvals from the Department of Development and Permits prior to the installation of the security fence and storage shed.
  5. The applicant/owner agrees that all power lines transferring the power generated from the property to the existing Dominion Virginia Power distribution system on Battlefield Boulevard South, which are both on-site and off-site, shall be placed underground unless the applicant/owner provides written correspondence from Dominion Virginia Power which requires the lines to be placed above ground to the Zoning Administrator.
  6. The applicant/owner agrees that the proposed use shall utilize SMA 2200-EV-US, SMA 2500-EV-US or an alternative solar panel inverter approved by the Navy and in compliance with the Navy's Electromagnetic Interference (EMS) assessment.
  7. The approval of this Conditional Use Permit is limited to the applicant only.
  8. The applicant/owner shall provide written notice to the Director of Development and Permits or designee at least 30 days in advance of the cessation or abandonment of this use. Within 180 days of the cessation or abandonment of this use, the applicant/owner shall remove all photovoltaic systems (including but not limited to inverters, modules/solar panels, solar trackers) and all other structural elements related to the photovoltaic system use. The applicant/owner shall also restore the property to its pre-use grade, as approved by the Director of Development and Permits or designee, within the referenced 180 days.
  9. Prior to receiving a certificate of occupancy, an Emergency Management Plan (EMP) will be provided to, and subject to the approval of, the Director of Development and Permits for the solar energy facility. The goal of this EMP is to provide safety guidelines and procedures for potential emergency-related incidents during all phases of the life of the facility (construction, operation, and decommissioning). The EMP shall cover at minimum emergency communications and training, theft and vandalism, inclement weather, high voltage equipment, and fire safety and prevention.
  10. The applicant/owner shall maintain insurance for the duration of the use. The applicant/owner shall provide to the City Attorney a certificate of insurance providing General Liability Insurance which shall include at least the following information: (i) the name of the insurance company, policy number and expiration date; and (ii) the coverage and limits on coverage and including the amount of deductibles or self-insured retentions with a minimum limit of One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate, combined single limit,

for bodily injury (including death) or property damage and Environmental Impairment insurance with minimum limits of \$1,000,000 per occurrence. The certificate of insurance shall be provided to the City Attorney prior to the issuance of a certificate of occupancy.

11. The applicant/owner agrees that the solar array shall be designed to withstand 120 mph wind speeds, as depicted on the approved final site plan.

HD:th

cc: Tim Howlett, Current Planning Administrator