

TERRA ENERGY, LLC

Application for Approval of Conditional Use No. \_\_\_\_\_  
Martinsburg Road, Dickerson, Maryland

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## SUMMARY OF PROPOSAL

Terra Energy LLC, (the "Applicant") a Maryland Limited Liability Company, submits this Conditional Use Application in order to allow redevelopment/reuse of the subject property for a cable communication system under Section 3.5.2.A of the Zoning Ordinance and a public utility structure under Section 59.3.6.7.E. The 292 acre area that is the subject of this Application (the "Site"), (Exhibit 1) is part of an assemblage of parcels totaling approximately 758 acres in size. The 292 acre area has been used as an electrical power generating facility and related uses for more than 50 years. With the power plant's deactivation and Applicant's purchase of the property, the Site provides an excellent opportunity for reuse for the proposed purposes. Through this submittal and corresponding exhibits, as well as the testimony of expert witnesses and their reports, Applicant will demonstrate that the proposed Conditional Uses:

- (a) Are permitted in the IH and AR zones
- (b) Comply with the specific use standards set forth in Division 59.3, the development standards set forth in Division 59.4 and the General Requirements set forth in Division 59.6.
- (c) Satisfy the findings required for approval in Section 59.7.3.1 including that the uses:
  - (1) Substantially conform with the recommendations of the applicable master plan.
  - (2) Are harmonious with and will not alter the character of the surrounding neighborhood in a manner inconsistent with the master plan.
  - (3) Do not, when evaluated in conjunction with existing and approved conditional uses in any neighboring residential detached zone, increase the number, intensity, or

scope of conditional uses sufficiently to affect the area adversely or alter the predominantly residential nature of any area.

- (4) Will be served by adequate public facilities and services.
- (5) Will not cause undue harm to the neighborhood as a result of non-inherent adverse effects alone or the combination of an inherent and a non-inherent adverse effect on the categories defined by the Montgomery County Zoning Ordinance.
- (6) Are compatible with the character of the neighborhood.

## STATEMENT IN SUPPORT

### I. Subject Property

The subject Site is located along Martinsburg Road, west of its intersection with Darnestown Road (MD 28). It is split zoned Heavy Industrial (IH) and Agricultural (AR). (Exhibit 2) The overall assemblage, of which the Conditional Use Site is part, totals approximately 758 acres in size with an irregular shape, generally running the entire distance between MD Route 28 and the Potomac River. (See Existing Conditions Plan, Exhibit 3). For more than 50 years the Site has been the location of a major electric power generating station, known as the Dickerson Power Plant. Consistent with this heavy industrial use, the Site contains high-voltage power lines for the transmission of electric power and, a railroad line and a siding for the transportation of materials, supplies and fuel for the generating plant. Multiple buildings of all sizes are located throughout the Site, including the large power plant structures themselves, along with tall

smokestacks and scrubbers as high as 725 feet above sea level. Attached as Exhibit 19 are images of the Site and the existing buildings and infrastructure.

At its peak use, the power plant operated 24 hours a day, seven days a week and employed up to 175-200 employees at any given time. Given the intensive use of the property, industrial lighting existed throughout the property. Truck and railroad traffic were common for the operations and the plant generated a noticeable level of noise, consistent with its industrial operations.

The plant has a high-volume water intake facility to bring water from the Potomac River into the plant for steam generation/cooling. That water was then discharged back into the Potomac at a downstream location. In addition to the buildings and structures on the Site, there are multiple roads, parking areas, staging areas and areas for outdoor storage of materials, equipment, security fences and supplies.

## II. Proposed Uses

Applicant intends to redevelop the Site with the proposed uses that will take advantage of the existing and unique infrastructure on or adjacent to the Site, these include two (2) electrical substations, several electric power transmission lines that run through the property, a fiber optic loop that serves the property and other data centers in the region, water intake and discharge systems and other infrastructure associated with the former uses. Given the nature of the proposed operations, however, the intensity of use will be significantly lower in terms of the number of employees, vehicular traffic, noise, lighting and virtually every other impact. This

redevelopment plan will also reduce the environmental impact when compared to the former use, and potential "by right" heavy industrial uses. Carbon emissions created as a result of the burning of coal for energy generation, other air contaminants related to the operation of the plant, and water withdrawal/discharge will be reduced.

More specifically, Applicant intends to construct Data Storage Facilities (Data Centers) and a Battery Energy Storage System (BESS) on the property.

**Battery Energy Storage System (BESS):**

The BESS is considered a Public Utility Structure under section 59.3.6.7.E and is permitted as a Conditional Use in the Heavy Industrial (IH) and Agricultural Reserve (AR) zoning districts.

Attached as Exhibit 4 is a letter from the Montgomery County Department of Permitting Services, dated August 9, 2022, confirming these uses as described.

A BESS is a technology that enables electrical utility system operators to store energy for later use. Operators charge batteries, or collect energy, from the grid or an energy generation source, to discharge at a later time. Energy storage systems provide several grid services such as arbitrage, operating reserve, peak capacity, and resiliency. The result of these combined services is an overall reduced demand for large energy generation plants, and grid flexibility which promotes intermittent renewable energy sources, such as solar and wind.

A typical Battery Energy Storage System installation will look like a field of shipping containers, connected together through several transformers. The field of self-contained units will be surrounded by security fencing and cameras, normal protection methods for electrical grid infrastructure. Although storage technologies have changed over time, generally most products are containers approximately 9' x 10' x 30' in size and look like a typical shipping container. Attached as Exhibit 5 is a group of images of BESS installations from around the United States. Additionally, Exhibit 6 is a representation of the expected installation at this site, this sketch plan is intended to provide an impression of what the final engineered plan will be, and to demonstrate the possible alignment of the site with sufficient space to meet both County and State Codes, pending further approvals.

**Data Center:**

The Data Center use is considered a Cable Communications System under Section 3.5.2 of the Montgomery County Zoning Ordinance and is allowed as a Conditional Use in both Heavy Industrial (IH) and Agricultural Reserve (AR) zoning districts.

A data center is a facility that centralizes information technology operations and equipment for the purposes of storing, processing, and disseminating data and applications. Facilities contain computing infrastructure such as servers, data storage drives, network equipment, cooling equipment, power management devices and security measures. Data centers are a cornerstone of the new digital infrastructure. Demand for online storage of applications and data has increased in every industry and sector of our lives. Business records, medical imaging, video streaming services, family photos and web site hosting are all supported by the infrastructure and services

data centers provide. Typically, the exterior of a data center will appear very similar to a warehouse. They require regular employees to monitor equipment performance, cooling systems and for site and building security. Attached as Exhibit 7 is a group of images of Data Center Buildings from around the United States. Additionally, attached as Exhibit 8 is a prototypical Data Center site plan sketch is intended to provide an impression of what one of the final engineered plans will be, and to demonstrate the possible alignment of a building on this site with sufficient space to meet both County and State Codes, pending further approvals.

The estimated maximum number of employees on site as a result of these uses is 85. The active hours of active operation will be 7 a.m. to 7 p.m. although the facilities themselves operate 24 hours per day and may have reduced or limited staff onsite.

Applicant is submitting a generalized Natural Resource Inventory/Forest Stand Delineation for the entire 758 acre area and a Full, Detailed NRS/FSD for the Development Area of the project, 292 acre Site that is the subject of this Application (Exhibits 9 & 10) for review and approval in connection with this application.

### III. Discussion

This is a unique project in terms of its approval process. Before redeveloping the Site with the proposed data center and battery storage uses, the Applicant must undertake additional planning efforts to locate these uses efficiently around the site. The Applicant will be contracting with tenants for the proposed uses on the Site. Before executing contracts with such operators,

however, and before undertaking the costly final planning process, Applicant has to know that it will be permitted to proceed with the data center and battery storage uses and what general conditions there will be to do so. As a result, Applicant is first seeking a general overall approval of the Conditional Uses, with the understanding that all other regulatory requirements will be reviewed and satisfied as part of the normal course of permitting activities.

Applicant believes that the lower intensity of the proposed use compared to the power plant, the large size of the subject property, the distance of the use from neighboring properties and the industrial use of adjoining properties, as well as Applicant's commitment to preserve existing forest, streams and other buffer areas, provides the Office of Zoning and Administrative Hearings with a sufficient basis to approve the uses with conditions.

As noted, much of the Site is open land and or developed today with industrial facilities and adjoining properties include major industrial uses. See photos attached as Exhibit 11. In addition there are adjoining forest areas, streams and wetlands as reflected in the Natural Resource Inventory/Forest Stand Delineation.

Given the long-standing heavy industrial use of the property, Applicant has entered the property into the Maryland Voluntary Cleanup Program and is working with the Maryland Department of the Environment on further environmental monitoring of the property if deemed necessary.

Applicant recognizes that the former power plant operations generated noise and light consistent with their heavy industrial nature. Applicant, on the other hand, is proposing uses that have little to no noise and any noise that is created will not be noticeable at the property lines given the

large size of the property. Additionally, there is additional room even between the development and any adjoining non-industrial properties because of adjoining heavy industrial adjacent to Applicant's site. All operations will comply with County noise standards. The proposed uses also have very little traffic related to employees, deliveries and virtually no heavy vehicles compared to the pre-existing use. In contrast, by-right heavy industrial uses would generate considerably greater traffic, noise and light than that related to Applicant's proposed use.

Battery energy storage systems and data centers represent the new digital and energy infrastructure. These are extremely high-value assets that create a significant tax return for the County and State. This project is estimated to create between a 7 and 10 time multiple tax revenue to the County with little or no cost of community services when compared to a similar redevelopment plan using by right Heavy Industrial uses. The battery energy storage system will incentivize the creation of additional renewable/sustainable energy projects on the regional transmission grid by providing flexibility in energy distribution while improving grid resiliency. Renewables need a storage component to make the intermittency of the energy source work for the public's 24 hour a day lives. This will support a reduction of the electrical grids reliance on fossil fuels because of the ability to store renewable energy for use when needed.

The project will comply with all applicable Stormwater Management requirements, as reflected in the Stormwater Management Narrative (Exhibit 12) and typical SWM Concept (Exhibit 13).

#### IV. Community Outreach

Applicant has been meeting with members of the community for several months to identify any concerns relating to the redevelopment of this property. These include direct residential and commercial/industrial neighbors, local constituency groups and various boards and agencies. This project is a great opportunity to demonstrate a balanced redevelopment plan when considering the community's interests, a viable business plan and land stewardship. We have been participating and listening to the community, how their experiences with the former use and the existing adjacent uses are effecting the enjoyment of personal property. These discussions have reshaped and improved our redevelopment plan for this site.

#### V. Findings – Battery Energy Storage System & Data Center

Applicant will present exhibits and testimony showing that both of the proposed uses meet the requirements for Conditional Use approval as follows:

- Are permitted in the IH and AR zones and satisfy the requirements of the zone.

The IH zone allows public utility structures and cable communication systems as conditional uses. All development is under the Standard Method. Development of the property will be subject to a minimum of 10% open space. The building placement will substantially exceed all of the required setbacks given the large size of the property and the limited location of buildings. The Heavy Industrial (IH) zoning for the property (where all buildings will be located) allows a density up to 2.5 FAR at a height of 70 feet. The estimated height of the buildings at this time is 68 feet.

- Substantially conform with the recommendations of the applicable Master Plan.

The applicable Master Plan is the 1980 Preservation of Agriculture and Rural Open Space Plan. That Plan included the Site in the Western Sector portion of the Agricultural

Reserve. That Plan did not discuss the preexistence of the Dickerson Power Plant and its related facilities, but a major portion of the overall property has been zoned IH in recognition of the existing and potential future industrial uses for the property. Although the Master Plan does not specifically discuss this, continued operation of industrial uses such as the County's own nearby facilities, and others, as well as various improvements and expansion to the power plant over the years, recognize that those uses are in substantial conformity with the Master Plan. The proposed uses will not change this. The portion of the Site that is zoned AR will primarily remain undeveloped subject to small portions in which battery storage facilities and data centers may be located. This expansion will be limited by existing County and State requirements regarding tree retention, stream protection and buffering.

- Are harmonious with and will not alter the character of the surrounding neighborhood in a manner inconsistent with the Plan.

As noted above, the Site includes the Dickerson Power Plant and related heavy industrial facilities, and surrounding properties including those owned by the County and others are used for heavy industrial purposes. The reuse of the Site for data storage and battery energy storage will be more harmonious with the surrounding area and will not negatively affect the character of that area.

- Will not increase the number, intensity or scope of Conditional Uses sufficiently to affect the area adversely.

Given that this use is a lower intensity use compared to the long standing heavy industrial power plant use, and the by right heavy industrial uses, the conversion of the Site will not increase the number, intensity or scope of conditional uses sufficiently to affect the area adversely.

- Will be served by adequate public facilities and services.

The Site is served by adequate public services and facilities.

1. Public Safety (Police and Fire Protection) – This site and the surrounding lands have been and continue to be utilized for industrial uses. Coal Fired Power Plant, Waste Transfer, Treatment and Incineration, Power Generating Combustion Turbines, and Public Utility Structures are all current and former uses. Site Access has been and will continue to be provided to public safety representatives. Any changes or expansion of the internal road network, security or access will be reviewed by public safety as part of individual project approvals.
2. Public Roads – The former use of this site required 24/7 operation with a full complement of staff, as well as support contractors, consultants, and outside maintenance workers. The attached Traffic Statement, Exhibit 14, confirms that the proposed change of use does not generate at least 50 total net new workday peak-hour person trips and this is deemed no de minimis. Access to the property will be via MD 28 and Martinsburg Road as reflected in the Traffic Statement and in the Road Layout (Exhibit 15). Given the significantly reduced road demands for the proposed use, transportation public facilities will remain adequate.

3. Electrical Infrastructure - The former use and current surrounding uses are well established as a hub of Electrical Infrastructure. The power provider for this area is First Energy, responsible for delivering electrical service to each metered facility. Locations to connect to the electrical utility grid are shown on Exhibit 3. The process for gaining access to the required electrical load is defined by First Energy and, depending on the level of service, the Regional Transmission Operator (PJM). Prior to electrical service commitment, each improvement will be required to apply for a Load Study, performed by First Energy and PJM. This provides an analysis of the Substations capacity and equipment as well as the regional infrastructure. The result of this study defines the ability to serve with adequate load capacity and identifies the required infrastructure improvements. The cost of the study and improvements are paid by the applicant and are intended to ensure there is no adverse effect of the new load on the electrical system. This process takes place before building permits are issued or any projects are advanced. Exhibit 17 reflects the electrical infrastructure that will serve the use.
4. Water and Sanitary Sewer – As discussed in this document there are additional planning efforts required to construct at this site. Public Water and sewer are not available to serve this property, so an onsite (private) solution will be designed. Individual buildings may be constructed after receiving approvals from a variety of local and state agencies, this includes permits for Potable Water as well as Sanitary Sewer. Final designs cannot be created for permitting until this process is finalized and buildings with known water and sewer requirements are established, at which point Montgomery County Department of Permitting

Services will be responsible for reviewing and approving plans. Attached is Exhibit 10, a memo from Heidi Benham (Well and Septic Manager Montgomery County DPS), confirmation of this process from Montgomery County Department of Permitting Services.

- Will not cause undue harm to the neighborhood and any other necessary findings under Section 59.7.3.1.E.

Applicant believes that the uses and conditions being proposed at this time provide this assurance while, at the same time, enabling Applicant to redevelop the Site to an even more compatible use.

- Are compatible with the character of the neighborhood. As noted, the site, as well as surrounding properties, have been used for heavy industrial uses for many years. They are separated by substantial distances as well as heavy forest. The new uses will be much less intensive.

## VI. Hearing

Jeffrey Ferrel – Vice President, Terra Energy LLC. – Provide testimony on behalf of the property ownership to provide development goals, purpose and intent.

Jim Soltesz, Kyle Soltesz and Daniel Park – Soltesz Engineering – Provide testimony regarding redevelopment engineering requirements such as storm water management, grading, forestation and other horizontal development requirements.

Shepard Winkler – Associate, Geo-Technology Associates, Inc. – Provide testimony regarding the environmental conditions of the site, specific to the former use and ongoing monitoring efforts and coordination with the Maryland Department of the Environment.

Scott Schwartz – Vice President – East Development, RWE Clean Energy, LLC. – Provide testimony regarding the siting, construction, operation of a Battery Energy Storage System.

Mark Anderson – Vice President – Site Development, Nautilus Data Technologies, Inc. – Provide testimony regarding the siting, construction, operation of a Data Center.

Applicant also reserves the right to call other witnesses as may be necessary to address issues that arise at the hearing.

Applicant anticipates that the total time required for its direct testimony will be approximately 4 hours.

## VII. Proposed Conditions

Applicant proposes the following conditions of approval:

- All structures constructed prior to 1999 and exceeding 50’ in height shall be demolished within 7 years of the first redevelopment project building permit approval for a data center. Exemptions include all electrical and water withdrawal and discharge facilities as well as a single exhaust tower, currently housing communications equipment supporting Montgomery County Emergency Services. Exemptions for this tower will be removed following the siting and construction of an alternate tower location on this property.
- At no time will blasting occur onsite.
- Diesel or other fuel generators are permitted onsite and may be installed as part of each redevelopment project. The use of generators shall be restricted to emergency backup power and operation of required maintenance hours. Such generators may not be used in “peak shaving”, or any other effort to reduce energy costs during peak hours. Other back up methods may be used to reduce energy costs such as energy storage or onsite renewable or clean energy.
- No principal buildings shall be constructed inside of the areas with the zoning designation of Agricultural Reserve. Improvements, such as fencing, Storm Water Management Features, plantings, grading, access roads, and utility infrastructure will be permitted inside of the Agricultural Reserve, provided these activities meet all other regulatory restrictions required of the Zone.
- Newly constructed projects are required to be, at a minimum, LEED Certified or a comparable measurable certification for energy efficiency and sustainability.
- Lighting Requirements:
  - All outdoor lighting will follow Dark-Sky compliant requirements.

- Parking lot and access road lighting structures will not exceed a height of thirty (30) feet.
- Pedestrian and walkway lighting structures will not exceed a height of twelve (12) feet.
- These lighting requirements will be strictly enforced to protect the neighboring properties from the effect of light trespass and sky glow.
- Structure Height:
  - New Improvement constructed on the premises shall not exceed a height of sixty-eight (68) feet.
- Operating Hours:
  - a. Construction – Operating hours for construction projects will be limited to 7:00am to 7:00 pm, 6 days a week Monday – Saturday.
  - b. Construction - Delivery vehicles, which require a CDL license to operate will be further restricted and may only enter and exit the site between the hours of 7:00am – 5:00pm, 6 days a week between Monday – Saturday.
  - c. After construction is complete it is expected that employees and contractors will need access to this site 24/7 7 days a week. Delivery vehicles are subject to the same operating hours required during construction, details in “b” above.
- Prior to construction of any buildings on the property, Applicant will submit a Site Plan Application to the Maryland-National Capital Park and Planning Commission for staff review and approval. That application will include details with respect to: lighting; landscaping; location and design of buildings; parking and maneuvering areas;

Stormwater Management and information demonstrating compliance with all Conditional Use Conditions in the approval.

## LIST OF EXHIBITS

1. Site
2. Zoning Map
3. Existing Conditions Plan
4. MC-DPS Letter re Proposed Uses
5. Images of BESS Installations
6. Prototype BESS
7. Images of Data Centers
8. Prototype Data Center
9. Generalized Overall NRI/FSD
10. Site NRI/FSD (420240750)
11. Photos of Site and Surroundings
12. SWM Narrative
13. Typical SWM Concept
14. Traffic Statement