BLUEGRASS CREEK BATTERY ENERGY STORAGE SYSTEM SAFETY OVERVIEW AND REPORT

Introduction

Bluegrass Creek Solar LLC proposes to build and operate an approximately 100 megawatt ("MW") Solar Energy System with an approximately 21 MW Battery Energy Storage System ("BESS"). A Special Use Permit is being applied for to build and operate the Project in Scott Township, Vanderburgh County, Indiana.

The Project is sited on approximately 900 acres of leased private property in Scott Township zoned A (Agricultural). There are approximately 600 acres with solar panels within the fences, including about 5-10 acres for the battery energy storage system and the Project substation. The battery energy storage system (BESS) will sit next to the Project substation near the intersection of Interstate 69 and Baseline Road, just north of the Vanderburgh County Industrial Park. The BESS stores energy generated by the Project's solar panels and can discharge the energy when it's needed by the power grid.

The Project will adhere where applicable to the Zoning Ordinance, 2012 International Building Code, 2014 Indiana Amendments, and NEC standards, with solar panels meeting toxicity characteristic leaching procedure standards of the U.S. Environmental Protection Agency and battery storage complying with NFPA 855, per the proposed Conditions and Section 17.13.030.

The Project equipment includes solar photovoltaic ("PV") modules, BESS, racking systems, trackers, inverters, underground cabling, a Project substation, access roads, fencing, ground cover and vegetative screening. To connect to the power grid, the Project will build a 69 kilovolt ("kV") overhead transmission line from the Project substation in Scott Township across Interstate 69 to the existing CenterPoint Energy-owned Elliott Substation. The transmission line will be approximately 1,000 feet long.

Compliance with County Zoning Ordinance; Comprehensive Plan

The Vanderburgh County Zoning Ordinance, specifically Chapter 17.13, sets forth comprehensive standards for Large-Scale Commercial Solar Energy Generating Facilities to minimize impacts on adjacent property and prevent land use conflicts with both existing and future development in the A (Agricultural) zoning district. The Project fully complies with or

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exceeds these rigorous standards, including setbacks, wildlife-friendly fencing, vegetative screening, and pollinator-friendly ground cover, ensuring harmony with surrounding agricultural uses.

The Project also aligns with the Evansville-Vanderburgh County Comprehensive Plan adopted June 27, 2016 ("Comprehensive Plan") which designates Agriculturally zoned property for solar use, reinforcing the suitability of this area for the Project.

The Project supports Goal 10.1 of the Comprehensive Plan ("Preserve agricultural land"). The Project location was specifically chosen because of its proximity to existing electrical grid infrastructure and State Highway 57 and Interstate 69, as well as nearby commercial and industrial corridors.

Further, the Project's design—featuring voluntary 300-foot setbacks from residences of non-participating landowners (unless the setback is waived by mutual consent), 50-foot setbacks from the right-of-way of state highways and county/state aid highways, and 40-foot setbacks from other public roads—mitigates potential conflicts with Scott Township's residential growth plans outlined in Section 6 of the Comprehensive Plan, ensuring compatibility with future housing development while preserving long-term agricultural potential. Through these measures, the Project not only meets but exceeds zoning and planning objectives, fostering sustainable economic and environmental benefits for Vanderburgh County.

Related Agreements

In addition to compliance with the Vanderburgh County zoning ordinance, the Applicant will enter into the agreements listed below.

Decommissioning Plan Agreement

This is a contract between Bluegrass Creek Solar LLC and Vanderburgh County to ensure the proper removal of Project facilities after their useful life, as mandated by Section 17.13.050(G) of the Vanderburgh County Zoning Ordinance. The Project will decommission and remove all structures, including solar panels, roads, and cables, to a depth of 48 inches and restore the site to its pre-construction condition within 6 to 12 months of ceasing operations, with a detailed plan and soil reclamation strategy. To assure the completion of Project decommissioning and removal for the benefit of both participating landowners and Vanderburgh County, the Project will provide Decommissioning Security (e.g., a bond or

irrevocable letter of credit) in an amount equal to 120% of estimated decommissioning and removal costs, such amount to be updated every five years. The agreement, which is binding on successors, supports the Comprehensive Plan's agricultural preservation goal (Section 10) by ensuring the land's return to farming at the end of the Project's operating life.

Roadway Use Agreement

This is a contract between Bluegrass Creek Solar LLC and Vanderburgh County to manage the use, maintenance, and restoration of county roads during the construction, operation, and decommissioning of the Project. The Company will submit plans for haul road use, upgrades, inspections, dust control, and public access for approval by Vanderburgh County's Highway Superintendent, with pre-construction inspections documenting road conditions and post-construction restoration to original or better condition within 12 months. Bluegrass Creek Solar LLC will provide performance assurance (e.g., a bond or irrevocable letter of credit) based on road type (gravel, asphalt or concrete) to cover the cost of road repairs, with provisions for county inspections, emergency repairs, and coordination with emergency responders. The agreement, which is binding on successors, ensures minimal disruption to public infrastructure, aligning with the Comprehensive Plan's transportation goals (Section 16), and includes indemnity, insurance, and force majeure clauses.

Vanderburgh County Fire Department Coordination Items

Emergency Response Coordination

The project will include emergency shutdown procedures to facilitate fire department response to incidents at the 922-acre site. These procedures ensure safe access and hazard mitigation, as required by Section 17.13.030(I) of the Vanderburgh County Zoning Ordinance.

Emergency Management Plan Submission

The Project will submit an emergency management plan to the Scott Township Fire & EMS Department, outlining procedures for handling fires, spills, or other incidents. The plan, mandated by BZA Condition 18, addresses risks from the 100 MW solar arrays and 20.6 MW BESS to ensure coordinated response.

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Annual EMS and Fire Training Funding
The Project will fund annual emergency response training for the fire department, based on a site-specific plan approved by Vanderburgh County. This training, per BZA Condition 18, will equip firefighters to handle solar panel and BESS-related emergencies, with costs covered to reduce local burden.

Site-Specific Emergency Plan Approval
The emergency management plan will be reviewed and approved by Vanderburgh County, incorporating input from the fire department to align with local safety protocols. BZA Condition 18 ensures the plan specifies access points, shutdown procedures, and hazard locations for seamless emergency coordination.

24/7 Security Monitoring Coordination
The Project's 24/7 security monitoring system will integrate with fire department protocols to provide immediate alerts during emergencies like fires or spills. This requirement, outlined in BZA Condition 11, facilitates rapid response by ensuring real-time communication channels are established.

BESS Emergency Response Plan
For the 20.6 MW BESS, the Project will provide a copy of an emergency response plan to the fire department, addressing potential fires or environmental contaminant discharges. Required by HEA 1173 (IC 22-14-8-9(a)(1)), this plan ensures the fire department is prepared for BESS-specific hazards.

Annual BESS Training
The Project will offer annual training sessions to fire department members on responding to BESS fires or contaminant discharges, starting before January 1, 2026, if installed post-July 1, 2023. Per HEA 1173 (IC 22-14-8-9(a)(2)), this training enhances firefighter readiness for lithium-ion battery incidents at the Project site.

BESS Training Content
The annual BESS training will provide information on the installation and operation of the 20.6 MW BESS to enable safe and effective emergency response, without disclosing trade secrets.

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BESS Application Information

The BESS application to the Indiana Department of Homeland Security will include an emergency response plan, which is shared with the fire department to prepare for potential incidents. This requirement, per HEA 1173 (IC 22-14-8-4(b)(4)), ensures coordination by integrating the plan into state approval processes for the BESS Project.

Community Coordination Efforts Completed

On Tuesday May 13th, 2025, a representative of the developer and a fire safety consultant with the Bluegrass Creek project met with Deputy Chief Pat Fisher from Vanderburgh Fire Department to introduce themselves and begin efforts in developing a coordinated Emergency Response Plan. Project specifics were reviewed and preliminary discussions about incident responses were initiated. Deputy Chief Fisher advised on the availability of local resources and emergency response tactics were discussed. The Project will continue to engage local fire authorities in the ongoing development of the Emergency Response Plan.

Additionally, later on the same day, an Open House was held for local community members going over the solar and battery installation. Local media was in attendance and the turnout was encouraging. Efforts were made to host individual stations focusing on different project aspects for community members to ask questions. Concerns brought up by community members will be incorporated into future public engagements.

Battery Storage is a Common Technology:

- Battery technology is not new. Proposed batteries use the same technology as your phone, laptop, power tools, etc.
- 700+ utility-scale batteries are installed and operating.
- BESS fires are rare and are rapidly decreasing as a percentage of deployments. Between 2018 and 2023, the BESS failure rate (incidents per gigawatt installed) fell by 97%.
- Most failures are associated with older technologies that were not installed to today's standards and best practices.
- 15x growth expected in next decade.

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Operating Battery Storage Safely

- Equipment includes sensors and alarms
- Emergency response plan before construction
- Specific training/resources to fire departments before construction
- Designed to applicable codes and standards

Safety Codes and Standards

- UL 9540/1973/1741– Integrated Systems, Battery Management Systems, Inverters, Converters, Controllers, and Interconnection System Equipment for Use with Distributed Energy Resources
- These requirements cover the overall control systems as an integrated system, the Battery Management system (BMS) inverters, converters, charge controllers, and interconnection system equipment.
- Requirements of International Fire Code (IFC), National Electrical Code (NEC) and NFPA 855
- To protect safety, prevent shock, and personal injury

Safety Standards

- **UL9540A – Standard Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems**
    - This is tested at the cell, module, and unit level to evaluate thermal propagation from one area to another.
- **NFPA 855 – Standard for the Installation of Stationary Energy Storage Systems**
    - This is how the site is designed to fire code, involving proper setbacks to further prevent propagation, and to give plenty of safety setbacks
- **NFPA 69– Standard on Explosion Prevention Systems**
    - This is how the manufacturer utilizes hydrogen sensors in conjunction with active ventilation to purge any buildup of hydrogen and prevent any risk of explosion. Typically designed in conjunction with site controller Uninterrupted Power Supply and small generator, so the active purge system is not reliant on grid power.

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- **NFPA 72– National Fire Alarm and Signaling Code**
    - This is how the site is designed with the fire alarm system, with a fire alarm control panel outside of the gate so first responders have information to work with. It also is related to the separate power system mentioned in NFPA 69.

NFPA 855/IFC Remote Location

- Adequate setback distances from homes and Right Of Ways
- **9.3.2 Outdoor Installations.**
    - Outdoor ESS installations shall be classified as follows:
      Remote locations: ESSs located more than 100 ft (30.5 m) from buildings, lot lines that can be built upon, public ways, stored combustible materials, hazardous materials, high-piled stock, and other exposure hazards not associated with electrical grid infrastructure

BESS Incident Lessons Learned

- Battery fires can occur from thermal abuse during charging or discharging, mechanical failures, or environmental influences like water intrusion. However, between 2018 and 2023, the BESS failure rate (incidents per gigawatt installed) fell by 97% largely due to current rigorous codes and improvements in manufacturing.
- In the instance of an incident occurring that results in a fire, the industry best practices advise to monitor adjacent exposures and to let the involved unit consume itself safely. This approach addresses concerns with stranded energy and additionally, the heat from the fire safely consumes any toxics produced.
- Current code direction is to not include suppression systems within the containers and that water should be used only to cool adjacent exposures. The fire safety emphasis is on early gas or smoke detection with integrated exhaust system activation.
- All fire alarm devices are monitored at a UL Central Station 24/7 per NFPA 72. The monitoring station would then contact fire dispatch on any detector activation.
- Arriving first in emergency responders would look for site contact information at the entrance and make direct contact with a site representative prior to taking any action.

- Site representatives can provide valuable diagnostic information on the involved enclosure and adjacent enclosures' battery status.
- The site has the ability to remotely disconnect the BESS units from the grid to ensure optimum life safety.
- A multi-agency command post can be established once the site representative arrives and makes a face to face with emergency response personnel.
- The Large-Scale Fire Test, that is required by code for the battery technology, demonstrates that a fire located in the unit under test will not propagate to adjacent enclosures. This creates a finite fire area of involvement and gives first responders valuable insight on how best to manage the incident.

Past incidents demonstrate that fires are contained within the facility and Air Quality in neighboring areas remains at safe levels.

- Laboratory testing of emissions from Li-ion cells in thermal runaway shows that emissions are similar to those found in typical structure fires and plastics fires.
- During an ESS battery fire, only trace amounts of chemicals are detected in sampling around the event, and overall air quality remains at safe levels.
- During several different battery failures including a fire at a Tesla Megapack at Moss Landing in California, Gateway facility in San Deigo and the events in NY, air-quality testing showed no hazards to human health.
- There has not been a real-world battery event that showed hazardous levels of emissions. All fires create emissions that should not be breathed, including house fires and commercial buildings.

Past incidents demonstrate that fires are contained within the facility and that Water Quality in neighboring areas remains at safe levels.

- While fires at energy storage facilities are extremely rare, environmental data collected by government agencies, firefighters, and hazardous substance experts post incidents

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consistently show no harmful contaminants in runoff water and no emissions exceeding nationally recognized safety thresholds, even within 50 feet of active incidents.

- The County of Monterey Health Department's Environmental Health Bureau examined water samples from fives areas around Moss Landing post incident in January 2025 and found that, "Tests for manganese, cooper, aluminum, and nickel showed levels below regulatory maximum contaminant levels and Public Health Goals, aligning with historical data for each location."

Reported Water Quality findings from the recent Escondido fire in Southern California are as follows:

- The presence of trace amounts of zinc, copper, and barium is typical in urban environments, however, the levels detected in the samples do not indicate a significant environmental or health hazard.
- The absence of toxic metals such as lead, cadmium, and mercury further support that this water is unlikely to contribute to significant contamination of the environment.
- Laboratory personnel at the Hale Avenue Resource Recovery Facility laboratory were consulted regarding the results of the runoff water analysis and confirmed that there were no concerns with this water entering the environment, especially when considering public health standards for drinking water.

Past incidents demonstrate that fires are contained within the facility and that Soil Samples in neighboring areas remain at safe levels.

- The County of Monterey Health Department's Environmental Health Bureau used an X-ray fluorescence spectrometer to test specifically for cobalt, nickel, copper, and manganese.
- As found on the County of Monterey's Moss 300 BESS webpage, the California Department of Toxic Substances Control has released the results of the soil analysis collected on 1/24/2025 post incident. The report stated, "Metal and PAH levels from 6 out of 8 soil locations were below acceptable screening levels for residential soil. More

sampling will be conducted at the other 2 locations to establish potential for health impacts."

- Santa Cruz County Board of Supervisors ordered testing of soil and water samples post incident at Moss landing and released the following findings on 2-21-2025. Soil and water sample results from South Santa Cruz County raised no alarms for county environmental and health officials after the metal levels detected did not suggest elevated public health risks or food safety concerns.

Project Commitments to Local Authorities: Design, Emergency Response, and Training

- Designed to applicable codes and standards and operating procedures to prevent fire or explosion
- Emergency Response Plan developed prior to construction
- Sites monitored 24/7 thru a Remote Operation Center
- Provide training to staff and Fire Departments. Commissioning, Operation and annual review/updates by trained personnel.
- Provide access to subject matter experts and code consultants
- NFPA 72 compliant system with First Responder Station for ERP communication

THROUGH PROPER EDUCATION AND COLLABORATION BETWEEN INDUSTRY LEADERS AND LOCAL AUTHORITIES, THE SAFE IMPLEMENTATION OF BATTERY ENERGY STORAGE IS HAPPENING TODAY.

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