CONCEPT PLAN SUBMITTAL MATERIALS

Franklintown Farm Solar Project Summit Point, West Virginia

Prepared for:

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Franklintown Farm Solar Project Summit Point, Jeffferson County, West Virginia

1.0 PROJECT DESCRIPTION

Franklintown Farm, LLC (Franklintown Solar) is proposing to construct an 80-megawatt solar energy generating and storage facility, known as the Franklintown Farm Solar Project (Project), on approximately 502 acres on four contiguous parcels owned by two separate property owners*. The Project is located approximately 6.5 miles south of the city of Charles Town situated between U.S. Highway 340 (to the east) and Route 611, Leetown Road, (to the west) and is surrounded by agricultural and residential land uses. The Project will consist of approximately 147,000 ground-mounted photovoltaic solar panels on a single-axis racking system that allows them to tilt throughout the day to capture sunlight. Electrical inverters will be dispersed throughout the site to convert the direct current (DC) power generated by the solar panels to alternating current (AC) power. The Project will have a substation connected to the existing 138-kilovolt overhead electrical transmission line passing though the southeast corner of the Project area. This substation and 20megawatt Battery Energy Storage System (BESS) will be situated on the southern portion of the Project adjacent to Lewisville Road. Batteries may also be dispersed throughout the array area and be co-located with the electrical inverters. Energy generated will be transferred to the PJM electrical grid. The Project will include internal access roads, commercial entrances, stormwater management, and will be surrounded by security fencing and the required zoning buffer. Construction is anticipated to take approximately 12 months to complete upon commencement.

Property Owner	Mark D. Stolipher	Mark D. Stolipher	Nancy Stolipher*	Franklintown Farm Trust
Physical Address	261 Berry Hill Farm Ln., Summit Point, WV 25446	2998 Withers Larue Rd. Summit Point, WV 25446	322 Scooter Ln. Charles Town, WV 25414	651 & 653 Franklintown Rd., Summit Point, WV 25446
Deed Book	1129	944	913	1249
Page	746	45	678	214
Parcel ID	District 6, TM#19, Parcel 7	District 6, TM#19, Parcel 8.4	District 6, TM#19, Parcel 16	District 6, TM#19, Parcel 6
Zoning District	Rural	Rural	Rural	Rural
Total Parcel Size	150.31 Acres	146.84 Acres	50.0 Acres	154.16 Acres
Project Area	150.31 Acres	146.84 Acres	50.0 Acres	154.16 Acres

2.0 PROJECT AND ADJOINING PROPERTIES

Parcels within Solar Project

*All properties listed as being owned by Nancy Stolipher have been deeded to Mark Stolipher per Transfer on Death Deed (DB 1253 pg 57).

Adjoining Property Information

- Electrical Substation TM 19 PAR 7.1 Owner: Potomac Edison Co. Address: 10435 Downsville Pike Hagerstown, MD 21740 Zoned: Rural
- 2. TM 19 PAR 18.4
 Owner: Michael Q. Cogle Sr. & Sharron A. Cogle
 Address: 108 Childs Farm Ln.
 Kearneysville, WV 25430
 Zoned: Rural
- TM 19 PAR 17.1 Owner: Gregory L. & Barbara P. Jenkins Address: PO Box 94 Rippon, WV 25441 Zoned: Industrial/Commercial
- TM 19 PAR 17
 Owner: Constance D. & Donald L. Richards
 Address: PO Box 136
 Rippon, WV 25441
 Zoned: Industrial/Commercial
- TM 19 PAR 13
 Owner: Paul Michael Chapman Address: PO 184
 Rippon, WV 25441
 Zoned: Industrial/Commercial
- TM 19 PAR 15 Owner: John Henry Yates Estate Address: 132 Hidden Hollow Dr. Kearneysville, WV 25430 Zoned: Industrial/Commercial
- 7. TM 19 PAR 14
 Owner: Harriett Taylor
 Address: PO Box 81
 Rippon, WV 25441
 Zoned: Industrial/Commercial

 TM 19 PAR 18 Owner: James L. & Gloria L. Grove Address: 130 Grove Way Summit Point, WV 25446 Zoned: Industrial/Commercial

- TM 19 PAR 8.5 Owner: Thomas W. & Jan L. Loy Address: PO Box 43 Rippon, WV 25441 Zoned: Rural
- 10. TM 19 PAR 8 Owner: James Corey Larue Address: PO Box 291 Rippon, WV 25441 Zoned: Rural
- 11. TM 19 PAR 8.1Owner: Elizabeth & James Slusser Mancuso Address: 2882 Withers Larue Rd.Rippon, WV 25441Zoned: Rural
- 12. TM 19 PAR 8.2Owner: James J. & Carisa A. Helinski Address: PO Box 204Rippon, WV 25441Zoned: Rural
- 13. TM 19 PAR 8.3Owner: Charles D. and Carrie B. Lamp Address: PO Box 25Rippon, WV 25441Zoned: Rural
- 14. TM 18 PAR 6.16Owner: Gene SchneiderAddress: 1113 Franklintown Rd.Summit Point, WV 25446Zoned: Rural

- 15. TM 18 PAR 6.14Owner: Kenneth R. & Linda Hawthorne Address: 58 Kelcar Dr. Summit Point, WV 25446Zoned: Rural
- 16. TM 18 PAR 6.7 Owner: Tammy & Brian Sokel Address: 45 Kelcar Dr. Summit Point, WV 25446 Zoned: Rural
- 17. TM 18 PAR 6.4Owner: Charles A. Brewer et al. Address: 887 Franklintown Rd. Summit, WV 25446Zoned: Rural
- TM 18 PAR 6.3
 Owner: Timothy M. & Kelye H. McKee Address: Franklintown Rd. Summit Point, WV 25446 Zoned: Rural
- 19. TM 18 PAR 6.9 Owner: Jarad G. & Carolynn L. Hawthorne Address: 199 Kelcar Dr. Summit Point, WV 25446 Zoned: Rural
- 20. TM 18 PAR 6.10
 Owner: Joseph P. & Traci M. Terango Address: 198 Kelcar Dr.
 Summit Point, WV 25446
 Zoned: Rural
- 21. TM 18 PAR 6.2 Owner: Edna M. Boyd Address: PO Box 39 Rippon, WV 25441 Zoned: Rural

22. TM 19 PAR 2Owner: Bradford D. & Leisa W. Luttrell Address: 585 Boyer Ln.Summit Point, WV 25446Zoned: Rural

- 23. TM 19A PAR 5 Owner: Joshue S. McCarthy & Dorothy Singhas Address: 235 Singhas Ln. Summit Point, WV 25446 Zoned: Rural
- 24. TM 19A PAR 1.1 Owner: Laurice Berry Address: PO 73 Rippon, WV 25441 Zoned: Rural
- 25. TM 19A PAR 3 Owner: Martha A. Payton -EST Address: 64 Payton Way Summit Point, WV 25446 Zoned: Rural
- 26. TM 19A PAR 37 Owner: Mark Stolipher Address: PO Box 190 Rippon, WV 25441 Zoned: Rural
- 27. TM 19A PAR 31 Owner: Locust Grove Cemetery Address: N / A Zoned: Rural
- 28. TM 19A PAR 33Owner: Harry E. Yates Jr. Address: PO Box 103Rippon, WV 25441Zoned: Rural

- 29. TM 19A PAR 35
 Owner: Nancy C. Stolipher*
 Address: 1599 Roper North Fork Rd.
 Charles Town, WV 25414
 Zoned: Rural
- 30. TM 19A PAR 32
 Owner: Nancy C. Stolipher*
 Address: 1599 Roper North Fork Rd.
 Charles Town, WV 25414
 Zoned: Rural
- 31. TM 19A PAR 36Owner: Victoria D. Curry Address: 93 Woods Ln.Summit Point, WV 25446Zoned: Rural
- 32. TM 19A PAR 36Owner: Charles A. Twyman Jr. Address: 2507 Lewisville Rd. Summit Point, WV 25446Zoned: Rural
- 33. TM 12A PAR 1
 Owner: Jeffery D. & Valerie D.
 Gallahan
 Address: 29 Quail Run Rd.
 Summit Point, WV 25446
 Zoned: Rural
- 34. TM 12A PAR 33
 Owner: Howard R. & Janet C. Youngblood
 Address: 44 Quail Run Rd.
 Summit Point, WV 25446
 Zoned: Rural
- 35. TM 12A PAR 32Owner: Frank E. FerroAddress: 64 Pheasant Hill Rd.Summit Point, WV 25446Zoned: Rural

36. TM 12A PAR 31
Owner: Michael T. & Barbara L.
Milleson
Address: 94 Pheasant Hill Rd.
Summit Point, WV 25446
Zoned: Rural

- 37. TM 12A PAR 30Owner: Jefferey B. AlbertAddress: 126 Pheasant Hill Rd.Summit Point, WV 25446Zoned: Rural
- 38. TM 12 PAR 2.16
 Owner: Codie R. Gustines & Jenifer A. Moreno
 Address: 48 Carnegie Links Dr. Summit Point, WV 25446
 Zoned: Rural
- 39. TM 12 PAR 2.13Owner: Cara L. McCormickAddress: 2789 Wither Larue Rd.Martinsburg, WV 25405Zoned: Rural
- 40. TM 12 PAR 2.20
 Owner: James Fitzwater Jr. & Kelly Pelkey-Fitzwater
 Address: 83 Webber Springs Dr. Inwood, WV 25428
 Zoned: Rural
- 41. TM 12 PAR 2.2 Owner: Allan W. & Lorraine E. Thatcher Address: 2921 Withers Larue Rd. Summit Point, WV 25446 Zoned: Rural
- 42. TM 12 PAR 17.5 Owner: Jane A. Rutherford Et al. Address: 3578 Bakerton Rd. Harpers Ferry, WV 25425 Zoned: Rural

43. TM 29 PAR 1 Owner: Clifton 1834 LLC Address: 1625 K St., Ste. 1025 Washington, D.C. 20006-1604 Zoned: Rural

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3.0 TRAFFIC IMPACT DATA

Average Daily Traffic (ADT) of the Adjoining Roadways

The Average Daily Traffic (ADT) of the adjoining roadways to the project site (data per the 2017 WVDOT Data Viewer) are:

- Withers Larue Road (at Route 340) = 694 ADT / 69 VPH Peak Hour
- Lewisville Road = 200 ADT / 20 VPH Peak Hour
- Franklintown Road = 200 ADT / 20 VPH Peak Hour
- Route 340 (at Withers Larue Road) = 15,166 ADT / 1517 VPH *ADT* = Average Daily Traffic *VPH* = Vehicles Per Hour

Trip Generation of the Proposed Site

"Solar Facility" is not listed on table 24-119.B.5.b, nor is it included in the International Transportation Manual; therefore, trip generation data developed for a previously proposed Solar facility project located in Jefferson County, West Virginia will be presented for this project.

Per "Wild Hill Solar Project - Concept Plan Submittal Materials, November 2020"

Maintenance and Operations Traffic Trip Generation

Due to the limited personnel, the operations and maintenance of the Project will result in minimal vehicular traffic generation. Two to three utility type maintenance vehicles would be anticipated to support the site operations. These vehicles would be anticipated to generate an average of two trips per day with a maximum of four trips per day. The maintenance and operations work efforts would generally require vehicular trips to the site outside of the AM and PM peak traffic periods. Occasional water delivery trucks (one per week) would be anticipated to the Project but the need would be sporadic, and their delivery times would vary during the day and would generally be outside of the AM and PM peak traffic periods. Typical operation and maintenance procedures for the facility would include:

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- Inspection of each of the solar panel sites on a frequency of at least once per week.
- Informal site inspections and corrective maintenance for the facility occurring on an as-needed basis.
- Conducting ground maintenance of the facility during growing season months; a couple times per year if mechanically mowing, or multiple times per week if managing alternate strategies such as sheep grazing.

Due to the minimal trips generated by the maintenance and operations of the facility, the existing low volume of traffic along the site access roadways, and the rural nature of the site (not an urbanized congested location), the traffic impacts on the roadway operating level of service will be negligible.

<u>Trip Generation for Franklintown Farm Solar Project</u>:

- Vehicles per Day = 3 vpd
- Maximum and Average Trips Per Day = Max-4 vpd / Ave-2 vpd

Highway Problem Area:

One Highway Problem Area (HPA) is identified within a 1.0-mile radius of the Project (Envision Jefferson 2035 Comprehensive Plan, dated 2015). The summary of the identified HPA is as follows:

Problem Area ID No. 28: Meyerstown Road, 0.85 mile from the project, Reasoning: 90-degree turn

<u>Nearest Key Intersection</u>:

- (1) Route 340/1 Lewisville Road with Route 340 Berryville Pike (Primary) from 0.51 mile from proposed entrance.
- (2) Route 19 Withers Larue Road with Route 340 Berryville Pike (Primary) from 1.45 miles from proposed entrance (*from Envision Jefferson 2035 Comprehensive Plan*, *dated 2015*).

4.0 STORMWATER NARRATIVE

Stormwater Management for this Project will follow the amended Jefferson County Stormwater Management Ordinance, Article I D.2.h for Solar Energy Facilities. A Stormwater Management Report with documentations and drawings will be submitted to Jefferson County for review and approval.

The Project will also develop the required Erosion and Sediment Control Plan, Stormwater Pollution Prevention Plan, and Groundwater Protection Plan as part of the application to register for the West Virginia Department of Environmental Protection National Pollution Discharge Elimination System (NPDES) permit for this construction.

The solar facility will be constructed on agricultural land, normally planted in row crops, hay/straw, or used for grazing. Deep-rooted perennial vegetation will be planted under and around the solar arrays to create a meadow condition, and areas beneath the solar panels that require mowing will not be cut less than 4 inches in height.

Applicant representatives met with the Jefferson County Engineering Staff to discuss their internal changes in their review and approval of Stormwater Management (SWM) design for Solar Facilities. Franklintown Solar's SWM Report will include design aspects to meet the County's SWM ordinance and their updated review process.

Note: Pursuant to the Ordinance, the full Stormwater Management Plan will be submitted and approved by staff prior to issuance of a Zoning Certificate.

5.0 BATTERY ENERGY STORAGE SYSTEMS

Battery Energy Storage Systems (BESS) are a technology that allows energy to be stored and dispatched on demand. Units consist of batteries housed in a container, connected to the power grid. These batteries will either be in a centralized BESS Yard near the substation or dispersed throughout the Project, co-located near some of the electrical inverters. Each battery container has its own HVAC and a power conversion system and are tested to meet the most stringent standards such as UL9540/UL9540A.

BESS are safeguarded by advanced safety features and monitored remotely for safe and efficient operation. Battery energy storage systems are equipped with sensors that track battery temperatures and enable storage facilities to turn off batteries if they get too hot or too cold. Battery management systems also monitor the performance of each individual cell voltage and other key parameters then aggregate that data in real time to assess the entire system's operation, detect anomalies, and adjust the system to maintain safety. They often contain state-of-the-art software designed to safely operate and monitor energy storage systems. Each BESS container is equipped with an independent fire detection, alarm, and suppression system comprising smoke detectors, heat detectors, a horn/strobe device, and an INERGEN suppression system (gas mixture of nitrogen, argon, and carbon dioxide).

6.0 SETBACKS, LANDSCAPING, AND BUFFERS

In locations where the project abuts parcels primarily in agricultural use, a 100-foot setback to the fence will be established. These locations will not include buffer screens.

In locations where the project abuts parcels primarily in residential use, a 50-foot setback to the fence will be established. Within the 50-foot setback, a 20-foot-wide vegetative buffer will be planted with two, staggered rows of evergreen trees planted 10-foot on center. The evergreen trees will be a minimum of 6 feet tall at planting.

Franklintown Road bisects the project north to south. Along both sides of the road, a 50-foot setback to the fence will be established. Within the 50-foot setback, a buffer screen will be planted along both sides of Franklintown Road. This 20-foot-wide vegetative buffer will be planted with two, staggered rows of evergreen trees planted 10-foot on center. The evergreen trees will be a minimum of 6 feet tall at planting.

Existing vegetation and trees will be retained to the greatest extent possible along outside property boundaries and buffer areas to assist in natural screening. A minimum 50-foot strip of existing vegetation may replace the planted buffer with approval from the Zoning Administrator.

In locations where the solar panels are located within 200 feet of any residence, Category 1 Historic Resource or similar use, a 20-foot-wide vegetative buffer will be planted with two, staggered rows of evergreen trees planted 10-foot on center. The evergreen trees will be a minimum of 6 feet tall at planting.

The project also abuts the Locust Grove Cemetery along the south side of the project, adjacent to Franklintown Road. The project fence will be set back 100 feet from the edge of the cemetery, along with appropriate buffering. The 20-foot-wide vegetative buffer will be planted with two, staggered rows of evergreen trees planted 10-foot on center. The evergreen trees will be a minimum of 6 feet tall at planting. In addition, Ground Penetrating Radar (GPR) will be performed prior to construction to confirm any unmarked graves.

All equipment and facilities associated with the solar farm will be set back a minimum of 50 feet from delineated wetlands.

7.0 GROUNDCOVER PLAN

The area around and under the solar panels will be seeded with native or naturalized perennial vegetation to create a meadow condition.

8.0 SITE LIGHTING

Light fixtures are located only at the Substation and BESS Yard. Full cutoff light fixtures are turned on/off via a light switch by operators. The lights will normally be OFF unless activated by operations personnel. Lighting shall be shielded and directed down to prevent glare and to minimize light trespass.

9.0 SITE ACCESS & SECURITY

Permanent site access for the Project includes four entrances off of Franklintown Road and one entrance off of Lewisville Road (County Route 340/1). Emergency access and egress for the Project will be via both vehicular and man gates located throughout the perimeter of the Project. These gates will be equipped with key lock boxes to allow first responders access to the site 24/7 in case of emergency. Sixteen-foot-wide gravel access roads will be installed throughout the site to allow for adequate vehicular access.

The facility will be monitored remotely 24/7. In addition, a local operations team will visit at least once per week. A 7-foot chain-link security fence will encompass the exterior of the facility to deter unauthorized entry, as well as a secondary fence around the BESS and substation. The secondary fence around the BESS and substation will consist of a 6-foot chain-link fence, plus 1 foot of barbed wire (7 feet high in total). All gates will be locked with knox padlock so that only EMS/first responders and operators can gain access. Signage will be posted at both entrances with 24/7 emergency contact phone numbers.

10.0 EMERGENCY RESPONSE

The Project will develop a site-specific Emergency Response Plan (ERP) to outline response procedures to protect people, property, and the environment during an emergency or disaster situation. The ERP is developed in coordination with Health and Safety professionals, facility operators, equipment manufacturers, and local first responders. The Project Team will work closely with local first responders throughout development, construction, and operations of the Project. Additional training and resources will be provided to local first responders to ensure they can execute necessary elements related to the plan and protocols. Mock emergency drills are often held during construction and operations, in coordination with first responders, to ensure readiness and validate that the ERP is effective. The Applicant will also provide annual training to first responders (or more frequent as requested) on applicable NFPA standards such as NFPA 855 - Standard for the Installation of Stationary Energy Storage Systems, NFPA 1 – Fire Code, NFPA 70 – National Electric Code (NEC), and the International Fire Code (IFC).

11.0 DECOMMISSIONING OUTLINE

A Decommissioning Plan will be created that outlines the requirements of the Applicant to remove all equipment and materials associated with the Project at the end of its useful life. The Applicant will be responsible for all decommissioning and restoration activities required to return the land to its original condition. Below is an outline of the Decommissioning Plan.

DECOMMISSIONING DURING CONSTRUCTION, ABANDONMENT, OR COMPLETION OF PROJECT

- Completed useful life of the Project (30 years life expected) or if the Project is deenergized for greater than 6 months, decommissioning plan will go into effect.
- Or unlikely event that construction cannot be completed.

DECOMMISSIONING AFTER CEASING OPERATION

• Operational lifespan of 30 or more years. Proper maintenance, component replacement and repowering can extend life.

GENERAL ENVIRONMENTAL PROTECTION DURING DECOMMISSIONING

• General environmental protection and mitigation measures would be implemented. (Similar to construction phase).

PRE-DISMANTLING ACTIVITIES

- De-energized and isolated from all external electrical lines.
- Staging areas would be delineated at appropriate locations.
- Temporary erosion and sedimentation control measures will be implemented.

EQUIPMENT DISMANTLING AND REMOVAL

Solar Panels

- Each panel will be disconnected and unfastened from the mounting rack and removed.
- Fixed racks be disassembled and removed from the site.
- The pilings will be removed.
- The metal racking components may be reused or recycled for future use.

Electrical Equipment and Collector System Inverters

- Electrical Equipment and Collector System Inverters will be removed and shipped off-site for eventual reuse or disposal.
- The piles and associated foundations will be removed from the site.
- Electrical Equipment and Collector System Inverters will be decommissioned up to the point of interconnection.

Substation and BESS Yard

- All aboveground structure and electrical equipment will be removed.
- Land to be restored to original grade.
- Concrete foundations removed to at least 3 feet below original grade.
- All granular and geotextile materials would be removed.

Underground Cables and Conduits

- Underground cables and conduits that are buried less than 2 feet below grade will be removed in their entirely and shipped to a recycling facility.
- Topsoil excavated during cable removal activities will be segregated and stockpiled for later use.
- Subsurface soils will be stockpiled separately from topsoil.
- Following the removal of the cable and conduits, the excavations will be backfilled with the soils previously excavated.

- The subgrade will be compacted to a density of approximately 90 percent of Standard Proctor.
- Topsoil will be redistributed across the disturbed area.

Access Roads

- All access roads will be removed.
- All granular and geotextile materials would be removed from the site by dump truck.

Storage Infrastructure and Perimeter Fence

- Storage and operation infrastructure (e.g., temporary construction trailer) will be removed from the site by truck.
- Foundations associated with these facilities would be removed to a depth of at least 3 feet below original grade.
- Perimeter fencing would be removed and recycled or reused unless landowner(s) prefers to retain portions of fence.

SITE REHABILITATION/RESTORATION

Rehabilitation Plan will be developed at the time of decommissioning to include:

- Agricultural areas will be restored.
- Access roads and other compacted areas to be de-compacted.
- Disturbed areas will be immediately returned to agricultural uses.
- Erosion and sediment control left in place until ground cover is fully established. Water Quality
- Jefferson County to be consulted for any decommissioning work near streams/waterbodies.

Agricultural Lands

- Any agricultural lands that have become compacted would be de-compacted. Spills
- Strict spill prevention and spill response procedures will be in place.

MANAGING EXCESS MATERIALS AND WASTE

Typical waste materials and modes of disposal:

- Concrete foundations Crush and recycle as granular material.
- Solar Panels Reuse or recycle.
- Steel and aluminum racks and mounts Salvage for reuse or recycle for scrap.
- Cabling Recycle.
- Inverter step-up transformers, inverters, and circuit breakers Salvage for reuse or recycle for scrap.
- Granular material Reuse or dispose in landfill.
- Oils/lubricants Recycle.
- Hazardous materials Dispose through licensed hauler.
- Geotextile material Dispose in landfill.
- Miscellaneous non-recyclable materials Dispose in landfill.

Note: Pursuant to the Ordinance, proof of application with the WVDEP for a decommissioning plan and bond shall be submitted to the Department of Engineering, Planning, and Zoning when such application is filed pursuant to WV State Code §22-32-1, et sec.