



**A Proposal to Lexington-Fayette Urban County Government
to deliver Haley Pike Solar Project**

Submission in Response to Request for Proposals

RFP Number: 35-2025

RFP Title: Haley Pike Solar Lease

**Applicant: Social Impact Solar LLC,
a platform of Edelen Renewables**

Contact: Adam Edelen, Manager, Social Impact Solar LLC

Founder & CEO, Edelen Renewables

adam@edelenrenewables.com | 859-977-6267

AFFIDAVIT

Comes the Affiant, Adam Edelen, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is Adam Edelen and he/she is the individual submitting the proposal or is the authorized representative of Social Impact Solar LLC, the entity submitting the proposal (hereinafter referred to as "Proposer").
2. Proposer will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.
3. Proposer will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.
4. Proposer has authorized the Division of Procurement to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.
5. Proposer has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Proposer will not violate any provision of the campaign finance laws of the Commonwealth.
6. Proposer has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as "Ethics Act."
7. Proposer acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

CONTINUED ON NEXT PAGE

Further, Affiant sayeth naught.



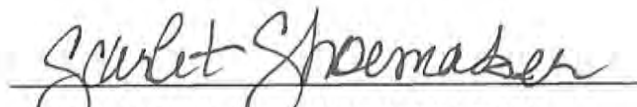
STATE OF KENTUCKY

COUNTY OF FAYETTE

The foregoing instrument was subscribed, sworn to and acknowledged before me

by Adam Edelen on this the 22nd day of September, 2025.

My Commission expires: Sept 27, 2027



NOTARY PUBLIC, STATE AT LARGE
KYNP 19826

EQUAL OPPORTUNITY AGREEMENT

Standard Title VI Assurance

The Lexington Fayette-Urban County Government, (hereinafter referred to as the "Recipient") hereby agrees that as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, 78Stat.252, 42 U.S.C. 2000d-4 (hereinafter referred to as the "Act"), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, (49 CFR, Part 21) Nondiscrimination in Federally Assisted Program of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964 (hereinafter referred to as the "Regulations") and other pertinent directives, no person in the United States shall, on the grounds of race, color, national origin, sex, age (over 40), religion, sexual orientation, gender identity, veteran status, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives Federal financial assistance from the U.S. Department of Transportation, including the Federal Highway Administration, and hereby gives assurance that will promptly take any necessary measures to effectuate this agreement. This assurance is required by subsection 21.7(a) (1) of the Regulations.

The Law

- Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- Section 503 of the Rehabilitation Act of 1973 states:
The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.
- Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal contracts.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractors may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.


Signature

Social Impact Solar, LLC
Name of Business

Firm Submitting Proposal: Social Impact Solar, LLC
A platform entity of Edelen Renewables

Complete Address: 175 E. Main Street, Ste 300
Lexington, KY 40507

Contact Name: Adam Edelen

Title: Manager

Telephone Number: 859-977-6267

Fax Number: 859-788-3240

Email Address adam@edelenrenewables.com

GENERAL PROVISIONS

1. Each Respondent shall comply with all Federal, State & Local regulations concerning this type of service or good.

The Respondent agrees to comply with all statutes, rules, and regulations governing safe and healthful working conditions, including the Occupational Health and Safety Act of 1970, 29 U.S.C. 650 *et. seq.*, as amended, and KRS Chapter 338. The Respondent also agrees to notify the LFUCG in writing immediately upon detection of any unsafe and/or unhealthful working conditions at the job site. The Respondent agrees to indemnify, defend and hold the LFUCG harmless from all penalties, fines or other expenses arising out of the alleged violation of said laws.

2. Failure to submit ALL forms and information required in this RFP may be grounds for disqualification.
3. Addenda: All addenda and IonWave Q&A, if any, shall be considered in making the proposal, and such addenda shall be made a part of this RFP. Before submitting a proposal, it is incumbent upon each proposer to be informed as to whether any addenda have been issued, and the failure to cover in the bid any such addenda may result in disqualification of that proposal.
4. Proposal Reservations: LFUCG reserves the right to reject any or all proposals, to award in whole or part, and to waive minor immaterial defects in proposals. LFUCG may consider any alternative proposal that meets its basic needs.
5. Liability: LFUCG is not responsible for any cost incurred by a Respondent in the preparation of proposals.
6. Changes/Alterations: Respondent may change or withdraw a proposal at any time prior to the opening; however, no oral modifications will be allowed. Only letters, or other formal written requests for modifications or corrections of a previously submitted proposal which is addressed in the same manner as the proposal, and received by LFUCG prior to the scheduled closing time for receipt of proposals, will be accepted. The proposal, when opened, will then be corrected in accordance with such written request(s), provided that the written request is contained in a sealed envelope which is plainly marked "modifications of proposal".
7. Clarification of Submittal: LFUCG reserves the right to obtain clarification of any point in a bid or to obtain additional information from a Respondent.
8. Bribery Clause: By his/her signature on the bid, Respondent certifies that no employee of his/hers, any affiliate or Subcontractor, has bribed or attempted to bribe an officer or employee of the LFUCG.

9. Additional Information: While not necessary, the Respondent may include any product brochures, software documentation, sample reports, or other documentation that may assist LFUCG in better understanding and evaluating the Respondent's response. Additional documentation shall not serve as a substitute for other documentation which is required by this RFP to be submitted with the proposal,
10. Ambiguity, Conflict or other Errors in RFP: If a Respondent discovers any ambiguity, conflict, discrepancy, omission or other error in the RFP, it shall immediately notify LFUCG of such error in writing and request modification or clarification of the document if allowable by the LFUCG.
11. Agreement to Bid Terms: In submitting this proposal, the Respondent agrees that it has carefully examined the specifications and all provisions relating to the work to be done attached hereto and made part of this proposal. By acceptance of a Contract under this RFP, proposer states that it understands the meaning, intent and requirements of the RFP and agrees to the same. The successful Respondent shall warrant that it is familiar with and understands all provisions herein and shall warrant that it can comply with them. No additional compensation to Respondent shall be authorized for services or expenses reasonably covered under these provisions that the proposer omits from its Proposal.
12. Cancellation: If the services to be performed hereunder by the Respondent are not performed in an acceptable manner to the LFUCG, the LFUCG may cancel this contract for cause by providing written notice to the proposer, giving at least thirty (30) days notice of the proposed cancellation and the reasons for same. During that time period, the proposer may seek to bring the performance of services hereunder to a level that is acceptable to the LFUCG, and the LFUCG may rescind the cancellation if such action is in its best interest.

Termination for Cause

- (1) LFUCG may terminate a contract because of the contractor's failure to perform its contractual duties
- (2) If a contractor is determined to be in default, LFUCG shall notify the contractor of the determination in writing, and may include a specified date by which the contractor shall cure the identified deficiencies. LFUCG may proceed with termination if the contractor fails to cure the deficiencies within the specified time.
- (3) A default in performance by a contractor for which a contract may be terminated shall include, but shall not necessarily be limited to:
 - (a) Failure to perform the contract according to its terms, conditions and specifications;

- (b) Failure to make delivery within the time specified or according to a delivery schedule fixed by the contract;
- (c) Late payment or nonpayment of bills for labor, materials, supplies, or equipment furnished in connection with a contract for construction services as evidenced by mechanics' liens filed pursuant to the provisions of KRS Chapter 376, or letters of indebtedness received from creditors by the purchasing agency;
- (d) Failure to diligently advance the work under a contract for construction services;
- (e) The filing of a bankruptcy petition by or against the contractor; or
- (f) Actions that endanger the health, safety or welfare of the LFUCG or its citizens.

B. At Will Termination

Notwithstanding the above provisions, the LFUCG may terminate this contract at will in accordance with the law upon providing thirty (30) days written notice of that intent, Payment for services or goods received prior to termination shall be made by the LFUCG provided these goods or services were provided in a manner acceptable to the LFUCG. Payment for those goods and services shall not be unreasonably withheld.

13. Assignment of Contract: The contractor shall not assign or subcontract any portion of the Contract without the express written consent of LFUCG. Any purported assignment or subcontract in violation hereof shall be void. It is expressly acknowledged that LFUCG shall never be required or obligated to consent to any request for assignment or subcontract; and further that such refusal to consent can be for any or no reason, fully within the sole discretion of LFUCG.
14. No Waiver: No failure or delay by LFUCG in exercising any right, remedy, power or privilege hereunder, nor any single or partial exercise thereof, nor the exercise of any other right, remedy, power or privilege shall operate as a waiver hereof or thereof. No failure or delay by LFUCG in exercising any right, remedy, power or privilege under or in respect of this Contract shall affect the rights, remedies, powers or privileges of LFUCG hereunder or shall operate as a waiver thereof.
15. Authority to do Business: The Respondent must be a duly organized and authorized to do business under the laws of Kentucky. Respondent must be in good standing and have full legal capacity to provide the services specified under this Contract. The Respondent must have all necessary right and lawful authority to enter into this Contract for the full term hereof and that proper corporate or other action has been duly taken authorizing the Respondent to enter into this Contract. The Respondent will provide LFUCG with a copy

of a corporate resolution authorizing this action and a letter from an attorney confirming that the proposer is authorized to do business in the State of Kentucky if requested. All proposals must be signed by a duly authorized officer, agent or employee of the Respondent.

16. Governing Law: This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky. In the event of any proceedings regarding this Contract, the Parties agree that the venue shall be the Fayette County Circuit Court or the U.S. District Court for the Eastern District of Kentucky, Lexington Division. All parties expressly consent to personal jurisdiction and venue in such Court for the limited and sole purpose of proceedings relating to this Contract or any rights or obligations arising thereunder. Service of process may be accomplished by following the procedures prescribed by law.
17. Ability to Meet Obligations: Respondent affirmatively states that there are no actions, suits or proceedings of any kind pending against Respondent or, to the knowledge of the Respondent, threatened against the Respondent before or by any court, governmental body or agency or other tribunal or authority which would, if adversely determined, have a materially adverse effect on the authority or ability of Respondent to perform its obligations under this Contract, or which question the legality, validity or enforceability hereof or thereof.
18. Contractor understands and agrees that its employees, agents, or subcontractors are not employees of LFUCG for any purpose whatsoever. Contractor is an independent contractor at all times during the performance of the services specified.
19. If any term or provision of this Contract shall be found to be illegal or unenforceable, the remainder of the contract shall remain in full force and such term or provision shall be deemed stricken.
20. Contractor [or Vendor or Vendor's Employees] will not appropriate or make use of the Lexington-Fayette Urban County Government (LFUCG) name or any of its trade or service marks or property (including but not limited to any logo or seal), in any promotion, endorsement, advertisement, testimonial or similar use without the prior written consent of the government. If such consent is granted LFUCG reserves the unilateral right, in its sole discretion, to immediately terminate and revoke such use for any reason whatsoever. Contractor agrees that it shall cease and desist from any unauthorized use immediately upon being notified by LFUCG.


Signature

22 Sept 25
Date

**RISK MANAGEMENT PROVISIONS
INSURANCE AND INDEMNIFICATION**

INDEMNIFICATION AND HOLD HARMLESS PROVISION

It is understood and agreed by the parties that Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "CONTRACTOR") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.

CONTRACTOR shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "LFUCG") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by CONTRACTOR's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the CONTRACTOR; and (b) not caused solely by the active negligence or willful misconduct of LFUCG.

In the event LFUCG is alleged to be liable based upon the above, CONTRACTOR shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by LFUCG, which approval shall not be unreasonably withheld.

These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.

LFUCG is a political subdivision of the Commonwealth of Kentucky. CONTRACTOR acknowledges and agrees that LFUCG is unable to provide indemnity or otherwise save, hold harmless, or defend the CONTRACTOR in any manner.

Notwithstanding, the foregoing with respect to any professional services performed by CONTRACTOR hereunder (and to the fullest extent permitted by law), CONTRACTOR shall indemnify, save, hold harmless and defend LFUCG from and against any and all liability, damages and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees, for any damage due to death or injury to any person or injury to any property (including the loss of use resulting therefrom) to the extent arising out of, pertaining to or relating to the negligence, recklessness or willful misconduct of CONTRACTOR in the performance of this agreement.

TABLE OF CONTENTS

1. Background and Qualifications	4
Company Background	4
Key Staff	4
Experience with Similar Projects	6
Interconnection & Regulatory Experience.....	8
Navigating Regulatory Processes	10
2. Project Configuration and Technical Details	10
Photovoltaic Array.....	10
Schematic.....	10
Right of Way	17
Equipment and Design	18
Racking Systems.....	19
Landfill Cap & Transportation Plan	19
Storm Water Management & Erosion Control	20
Erosion Control.....	20
Vegetation Management.....	21
Methane & Leachate Management	21
Site Access Control.....	22
Public Service Commission Approval and Interconnection	22
Utility and permitting approvals	23
Post-Construction Monitoring & Safety Measures	23
System Design Considerations for Arc Hazard Control & Ongoing Safety	24
Response to Electrical Hazards.....	25
Protection Design Methods.....	25

NFPA 70E ARC Flash Training.....	26
Project Timeline	26
Investment Tax Credit Timelines.....	28
Operations and Maintenance Plan.....	28
Decommissioning Plan & Bond	29
3. Financial Summary	29
Developer Financial Model Description.....	30
Production Calculation	30
Capital Costs.....	30
Revenues	30
Expenses	30
Project Cost Overview	31
Revenue to LFUCG	31
Land Lease Revenue	32
Payment In Lieu of Taxes (PILOT) Revenue	32
Water Quality Management Fee Revenue.....	33
Deferred Expense	33
Extended Expenses	33
Economic Impacts to Lexington-Fayette County	34
Performance Bond	34
Renewable Energy Certificates.....	35
LFUCG REC Strategy	35
Lease Terms	36
4. Environmental Compliance Haley Pike Landfill	37
Summary of relevant environmental and landfill regulations.....	38
5. Social and Educational Impacts and Initiatives	39
Past Participation in Community, Social, and Educational Programs.....	40
Coal-to-Solar Workforce Development	40
Catholic Diocese of Lexington - Net Zero Advisory Board.....	41
Comprehensive Plan & Sustainability Contributions	41

HPSP Social & Educational Programs	42
Land Use Best Practices	43
Agrivoltaics	43
Local Hires & Training.....	44
CONCLUSION	45

Appendices

Appendix A: Tracker Spec Sheet #1: GameChange Genius Tracker 1P

Appendix B: Fixed Rack Spec Sheet #2: GameChange Pour-in-Place Ballasted Ground System

Appendix C: Fixed Rack: GameChange Pour-in-Place Ballasted Ground System Diagram

Appendix D: Inverter Spec Sheet: SMA Medium Voltage Power Station

Appendix E: Landfill cap transportation and laydown protective measures (examples)

Appendix F: Water Quality Management Fee Calculations

1. Background and Qualifications

Company Background

Edelen Strategic Ventures LLC, dba Edelen Renewables, was established in 2016 with headquarters in Lexington, Kentucky. Since then, the firm has opened satellite offices in downtown Hazard, Kentucky and Water Valley, Mississippi.

In 2024, Edelen Renewables (ER) introduced Social Impact Solar LLC (SIS), a platform entity to host new project development efforts. All projects are staffed by the Edelen Renewables team and our partners. ER and SIS have a management agreement in place, and Edelen Strategic Ventures LLC (dba Edelen Renewables) holds the majority ownership of Social Impact Solar LLC. The remainder of the SIS LLC investors have no voting rights or decision-making authority; they only have an economic interest. This application by **Edelen Renewables and Social Impact Solar LLC (“ER/SIS”)** is submitted under the authority of the described management structure.

Edelen Renewables/Social Impact Solar LLC (ER/SIS) is the only solar development firm in America with a sole focus on socially impactful projects that provide the triple-bottom line return of meeting the climate challenge, driving economic transition in forgotten communities, and creating legacy impact for offtakers and communities alike.

Spanning Appalachia to Nations, Tribes, and Pueblos, ER/SIS is bringing the promise of renewable energy to the forgotten places, where coalminers and oil and gas workers powered the industrial development of America for a century. Squaring that deal – putting displaced energy workers back to work in a new, greener economy – is our passion. And our business. Our growing portfolio prioritizes brownfield redevelopment to target energy facility development on areas previously disturbed and to create new value from often stranded assets.

From land acquisition, facilitating public engagement and incentives, and shepherding projects through regulatory processes, to securing corporate offtake agreements (e.g., virtual power purchase agreements), we utilize a “boots-on-the-ground” approach to produce results for communities across America.

Key Staff

Adam Edelen, Founder and CEO of Edelen Renewables – and Manager of Social Impact Solar LLC – is a proven leader in public service and renewable energy. At Edelen Renewables, he pioneers renewable energy projects that create economic opportunity

in energy communities. A former Kentucky elected official, he's known for bipartisan, results-driven leadership and a commitment to social impact.

David Absher, Chief Development Officer at Edelen Renewables, brings decades of leadership in sustainability and innovation from his career at Toyota. A native of Eastern Kentucky, he led major environmental initiatives, including Toyota's Environmental Challenge 2050. He also led the renewable energy programs for Toyota Motor North America. At Edelen Renewables, he oversees Design Solutions, helping partners meet energy and economic goals through community-focused renewable energy strategies.

Amy Samples, Chief Operating Officer of Edelen Renewables, has two decades of experience in organizational management. She first joined Edelen Renewables in 2023 as Chief of Staff, and she continues to support the team to advance the social impact mission.

Tim Hennessy, Chief Engineer, has a diverse background as a senior executive and leader of technology and energy service companies. He is both a technical expert and solutions innovator, pioneering advanced energy solutions and products for multinational corporations and early-stage companies.

Lee Ullman, Director of Structured Finance at Edelen Renewables, is an experienced attorney and entrepreneur with a background in real estate and renewable energy. Since 2009, he has led over 40 energy partnerships and structured more than \$1 billion in projects across solar, natural gas, carbon sequestration, and EV infrastructure.

Brad Clark, Vice President of Social Impact, is a twenty-year educator, workforce development, and economic development leader. Brad has demonstrated expertise in designing and implementing multi-stakeholder community engagement models that increase local employment and workforce outcomes, develop community benefit programs, and maximize economic and social impact at the local level.

Haley Pike Solar Project Core Team

Edelen Renewables/Social Impact Solar LLC (ER/SIS) proposes to deliver the **Haley Pike Solar Project (HPSP)** as a **67.4 MW DC renewable energy facility** at the city LFUCG-owned landfill. Design and delivery of the renewable energy generation system and the day-to-day project management will be overseen by David Absher, Chief Development Officer with design guidance by Tim Hennessy, Chief Engineer. Adam Edelen, Chief Executive Officer, and Amy Samples, Chief Operating Officer, will track and manage overall project progress and collaboration with Lexington-Fayette Urban County Government (LFUCG). Brad Clark, Vice President of Social Impact will be the

liaison for social programs. Lee Ullman, Director of Structured Finance will oversee the establishment of bonds and project finance.

Through a competitive request for proposals, an engineering, procurement, and construction (EPC) firm will be selected to deliver the project. The EPC's assigned Project Manager will be a critical member of the core team. A short-list of competitive and regional EPC firms is in place and the RFP will be circulated for open review. A representative from Lexington-Fayette Urban County Government (LFUCG) will be invited to participate regularly in project meetings. Representatives from regulatory agencies with jurisdiction over the landfill property and its use will be engaged, as per the plans outlined below. This will include the Kentucky Energy and Environmental Cabinet (KEEC), Kentucky Division of Waste Management (KDWM), LFUCG Environmental Quality & Public Works (EQPW), LFUCG Planning Commission, LFUCG Division of Environmental Services. ER/SIS will also present the HPSP to the Kentucky Public Service Commission (PSC) and Kentucky Siting Board for review and approval.

Experience with Similar Projects

Social Impact Solar LLC, a platform entity of Edelen Strategic Ventures LLC (dba Edelen Renewables), has completed or is developing the following selected projects:

- Martin County Solar Project is located on a 2,541-acre site in Martin County, Kentucky. In Phase 1 solar installation being constructed on the former Martiki Coal Mine site near the border of West Virginia and Kentucky.
 - o Capacity: Phase 1: 200 MW_{AC} (additional phase in consideration)
 - o Type: Brownfield, coal-to-solar
 - o ER Role: Origination, Developer Services (support for permitting, negotiation of Industrial Revenue Bond, local engagement, etc.)
Development partner: Savion
 - o Regulatory Landscape: Hearings with Kentucky Public Service Commission, State Siting Board, collaboration with KY Division of Mine Reclamation and Enforcement, KY Economic Development Finance Authority
 - o Commercial Operation Date: December 2024 (Phase 1)
- Starfire Solar Project (Perry, Knott, Breathitt Counties, Kentucky)
 - o Capacity: 200-400 MW_{AC} (Phase 1-2; Phases 3-4 proposed for a total of 800 MW)
 - o Type: Brownfield, coal-to-solar

- o ER Role: Origination, Developer Services (support for permitting, negotiation of Industrial Revenue Bond, local engagement, etc.)
Development partner: BrightNight
 - o Regulatory Landscape: Hearings with Kentucky Public Service Commission, State Siting Board, collaboration with KY Division of Mine Reclamation and Enforcement, KY Economic Development Finance Authority
 - o Commercial Operation Date: TBD, start of construction by June 30, 2026. COD by Q4 2030
- Bright Mountain Solar Project (Perry County, KY)
 - o Capacity: 80 MW_{AC}
 - o Type: Brownfield, coal-to-solar
 - o Regulatory Landscape:
 - o ER role: Origination, Developer Services (support for permitting, negotiation of Industrial Revenue Bond, local engagement, etc.).
Development partner: Avangrid
 - o Regulatory Landscape: Hearings with Kentucky Public Service Commission, State Siting Board, collaboration with KY Division of Mine Reclamation and Enforcement, KY Economic Development Finance Authority
 - o Commercial Operation Date: TBD, start of construction by Q1 2026. COD by Q2 2027
- Paradise Solar Project (Muhlenberg County, KY)
 - o Capacity: 80 MW_{AC}
 - o Type: Brownfield, coal-to-solar
 - o ER role: Origination, Developer Services (support for permitting, negotiation of Industrial Revenue Bond, local engagement, etc.), co-developer
 - o Development partner: Established, not yet publicly announced
 - o Regulatory Landscape: Hearings with Kentucky Public Service Commission, State Siting Board, collaboration with KY Division of Mine Reclamation and Enforcement, KY Economic Development Finance Authority
 - o Commercial Operation Date: TBD, COD anticipated Q4 2027
 - o Project webpage: www.paradisesolarproject.com
- ER/SIS partners with [American Farmland Trust](#) and [Reactivate](#) on the Farmers Powering Communities initiative to site community solar projects using Smart SolarSM principles
 - o In New York and Illinois, three 6.25 MW solar development projects are underway, with land control and queue positions secured. Four additional

- projects have lease options in negotiation. An additional 18 projects are in the queue at the vetting stage of feasibility assessment.
- o [Smart SolarSM principles](#), developed by American Farmland Trust, are used to guide solar projects to meet three main, equally important goals: (1) safeguarding land well-suited for farming and ranching, (2) strengthening farm viability, and (3) accelerating solar energy development.
 - o Webpage: fpc.community
- Prior to joining ER, David Absher, Chief Development Officer, was with Toyota for 37 years and has oversaw the development of projects in the small to utility scale range.
 - o Toyota Motor North America headquarters, Plano, TX
 - Size of project: 8.9 MW_{AC}
 - Long span mount atop parking garages. No storage. Used on site & exported through ERCOT. Time of Build: 2016
 - o Toyota Motor North America, Virtual Power Purchase Agreement (VPPA) and Direct Power Purchase Agreement Projects
 - Size of Projects: 981 MW_{AC}
 - Multiple locations, including KY, WV, AL, MS, TX, MI, CA.
 - Time of Build: 2016 through 2025
 - Tim Hennessy, Chief Engineer, has extensive experience developing federal government related Build America, Buy America (BABA) projects, including:
 - o Project located on Arizona/New Mexico border
 - PV+BESS 543MWp and 1100MWH connected at 345kV via a ringbus configuration
 - Project build - 2005/6/7
 - Yield - 2080kWh/kWp
 - Project objective was to firm up using a 16hour strip, the PV energy at a 400MW_{AC} POI

ER/SIS will bring lessons learned and best practices from these projects forward to serve as a strong, local partner to LFUCG, exhibiting a shared premium placed on being a good business partner within our shared community.

Interconnection & Regulatory Experience

As a successful originator and development services provider, the ER/SIS core team has experience with a range of utilities and regulatory bodies, including permitting and the

negotiation of interconnection agreements. Project team has advanced renewables energy projects in the following markets:

- Louisville Gas & Electric – Kentucky Utilities (LG&E-KU)
 - Originated and advancing the Paradise Solar Project (113 MW_{DC} solar in Muhlenberg County, KY)
 - Status: interconnection agreement pending with Kentucky Utilities, full permitting process underway on reclaimed coal mine site
- Tennessee Valley Authority (TVA)
 - Developed 52 MW_{DC} solar project (David Absher)
- PJM Interconnection (PJM)
 - Originated Martin County Solar Project (250 MW_{DC} solar in Kentucky)
 - Developed Black Rock Wind (52 MW_{DC} wind in West Virginia; David Absher)
- MISO:
 - Developed Wildflower Solar (110 MW_{DC} solar in Mississippi; David Absher)
- Southern California Edison (SCE)
 - Advanced BESS project with PV in California (Tim Hennessy)
- Tucson Electric Power (TEP)
 - Advanced PV and BESS in Arizona and New Mexico (Tim Hennessy)
- Tri-State Utilities
 - Advanced Multiple PV projects in Georgia (Tim Hennessy)

Edelen Renewables and Social Impact Solar LLC (ER/SIS) are familiar with navigating the Kentucky Public Service Commission (PSC) and Kentucky Siting Board to gain required approvals for renewable energy projects. This includes establishing industrial revenue bonds and payment in lieu of tax (PILOT) mechanisms to create local economic value.

Successfully Permitted Kentucky Projects (Edelen-contracted portion):

- Martin County Solar Project. 200MW. Local government support secured. State Siting Board approved. Negotiated and executed IRB/PILOT.
- Blue Moon Solar Project. Harrison County. 125MW. Local government support secured. Planning and Zoning approved. State Siting Board Approved. Negotiated and executed IRB/PILOT.
- Bright Mountain Solar Project. Perry County. 85MW. State Siting Board approved. Negotiated and executed IRB/PILOT.
- Stonefield Solar Project. Hardin County. 100MW. Planning and Zoning approved. (Edelen not contracted at present for State Siting Board or IRB/PILOT). Project pending in litigation at present.

- Starfire Solar Project. 200-800MW. Breathitt, Knott, Perry Counties. Local government support secured. State Siting Board approval and IRB/PILOT approved.

Navigating Regulatory Processes

Additionally, the ER/SIS team has navigated the permit and evaluation processes of developing on a landfill. David Absher, Chief Development Officer, has direct experience with navigating development on landfill property, having initiated and managed a landfill gas recovery and power generation system as well as power distribution and delivery system through a 7.5 mile right of way at the Scott County Landfill in Kentucky.

Additional information on the HPSP approach to regulatory compliance is included in the Interconnection and Environmental Compliance sections below.

2. Project Configuration and Technical Details

Photovoltaic Array

ER/SIS proposes a **67.4 MW DC** project installed at the site as indicated in the basic proposed layout shown. The layout may change as the project progresses and changes are made to the final design

The indicative project design is contingent upon final capacity available on the selected utility lines and systems. Any revisions to the indicative project will require remodeling of the design and financial models. The indicative design for the project is based on an effort to optimize the overall utilization of the space available, including targeting a high utilization rate of the closed cell areas.

Schematic

The Haley Pike Landfill is approximately 687 acres located primarily in Eastern Fayette County and Clark County. The landfill has two closed and capped cells (Area A closed/capped in early 1980s and Area B closed/capped in 2014) and three permitted but unused cells (Areas H, I, and J).

ER/SIS understands that several areas are not available for use and has proposed a site layout to reflect the specifications of the available area.

This project is a **reuse/repurpose project** aiming to provide maximum utilization of the capped landfill cells (Area A & Area B), and an optimized solution for the landfill areas overall. ER/SIS has proposed an indicative layout that places **34.45% of the total array on**

capped landfill Area A and Area B. This signals directly to LFUCG's request for a 25-33% utilization rate of the capped area.

Our analysis shows this utilization is the maximum capacity for the closed cell landfill footprint (Areas A & B). Further study will determine the final ratio of arrays to be placed on the capped and other areas, based on financial outcomes and evaluations that consider yield, capital cost, available tariffs, and current offtake markets available.

Any factor that changes design based on utility system capacity, KEEC/KDWM input regarding design restrictions on the landfill, or other factors as they become known, may affect final design and percentage of capped area used.

The ER/SIS proposal for the Haley Pike Solar Project will utilize Areas A, B, C, D, E, H, I, and J. No activities are planned for Area F, G, K, L, M, or N.

A series of tables and images is provided to further illustrate the HPSP commitment to clarity and compliance.

Table A: HPSP Area Breakdown table to crosswalk known areas to proposed for utilization.

Haley Pike Solar Project Area Breakdown – Annotated for Proposed HPSP Purpose				
Area	Name/Use	Approx. Acres	Note	Proposed Usage for HPSP
A	Closed Cell	53	Required to be used for PV Array Lease	Area A: 53 of 53 used for solar
B	Closed Cell	105	Required to be used for PV Array Lease	Area B: 70 of 105 used for solar
C	Unused	39	Available for PV Array Lease	Area C: 39 of 39 used for solar and array substation
D	Leased - Model Airplane Club*	68	Available for PV Array Lease *LFUCG will be expanding operations in area L. This will reduce the available acreage in area D by 5 -10 acres	Area D: 58 of 68 used for solar (utilization acknowledges reduced availability)
E	Unused	6	Available for PV Array Lease	Area E: 6 of 6 acres used for solar
F	Unused*	15	*LFUCG will be expanding operations that will most likely incorporate this area.	Area F: 0 of 15 acres used for solar to allow for LFUCG future use
G	LFUCG Spray field	59	This area is currently used for LFUCG spray fields. Only available for PV if the cost to relocate those operations is borne solely by the Developer.	Area G: 0 of 59 acres used for solar
H	Permitted unused cell	20	Available for PV Array Lease	Area H: 20 of 20 acres used for solar
I	Permitted unused cell	69	Available for PV Array Lease	Area I: 69 of 69 acres used for solar
J	Permitted unused cell	42	Available for PV Array Lease	Area J: 42 of 42 acres used for solar
K	Wetland/Leachate System	20	LFUCG Operations - Not available for Lease	Area K: 0 of 20 acres used for solar
L	Scale House - LFUCG Operations	11	LFUCG Operations - Not available for Lease	Area L: 0 of 11 acres used for solar
M	Leased - Creech	32	Leased - Not available for Lease	Area M: 0 of 32 acres used for solar
N	LFUCG Mulch - Contractor operated	26	LFUCG Operations - Not available for Lease	Area N: 0 of 6 acres used for solar
O	Right of Way	21.5	Proposed ER/SIS-negotiated Right of Way (ROW #1: 20 acres, ROW #2: 1.5 acres)	Area O 21.5 acres used for ROW

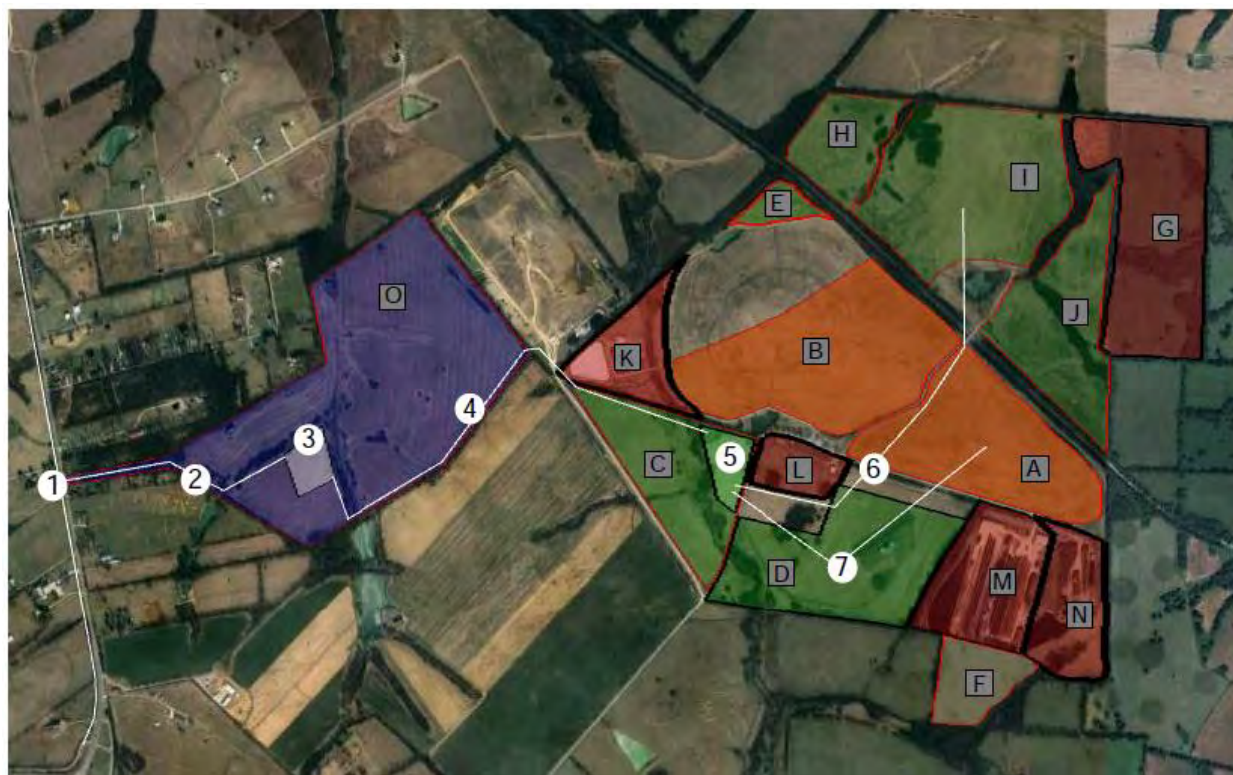
Table B: Utilization Rate for Landfill Cap Areas A and B, yielding an overall 34.45% utilization rate for reuse of the capped landfill. (Calculation: $53+70/357$)

Haley Pike Solar Project Land Usage Calculations

	<u>Size Acres</u>	<u>Avail. For solar</u>	<u>Used for Solar</u>	Color Coding per LFUCG
Area A	53	53	53	50% usable for PV
Area B	105	105	70	
Area C	39	39	39	90% usable for PV
Area D	68	58	58	
Area E	6	6	6	
Area F	15	0	0	
Area G	59			Not usable for PV
Area H	20	20	20	
Area I	69	69	69	
Area J	42	42	42	
Area K	20			
Area L	11			
Area M	32			
Area N	26			
	565	392	357	

% of A+B / overall solar	27.96%	40.31%	34.45%
--------------------------	--------	--------	--------

Image 1: Schematic of land use for HPSP, with notation of known areas.

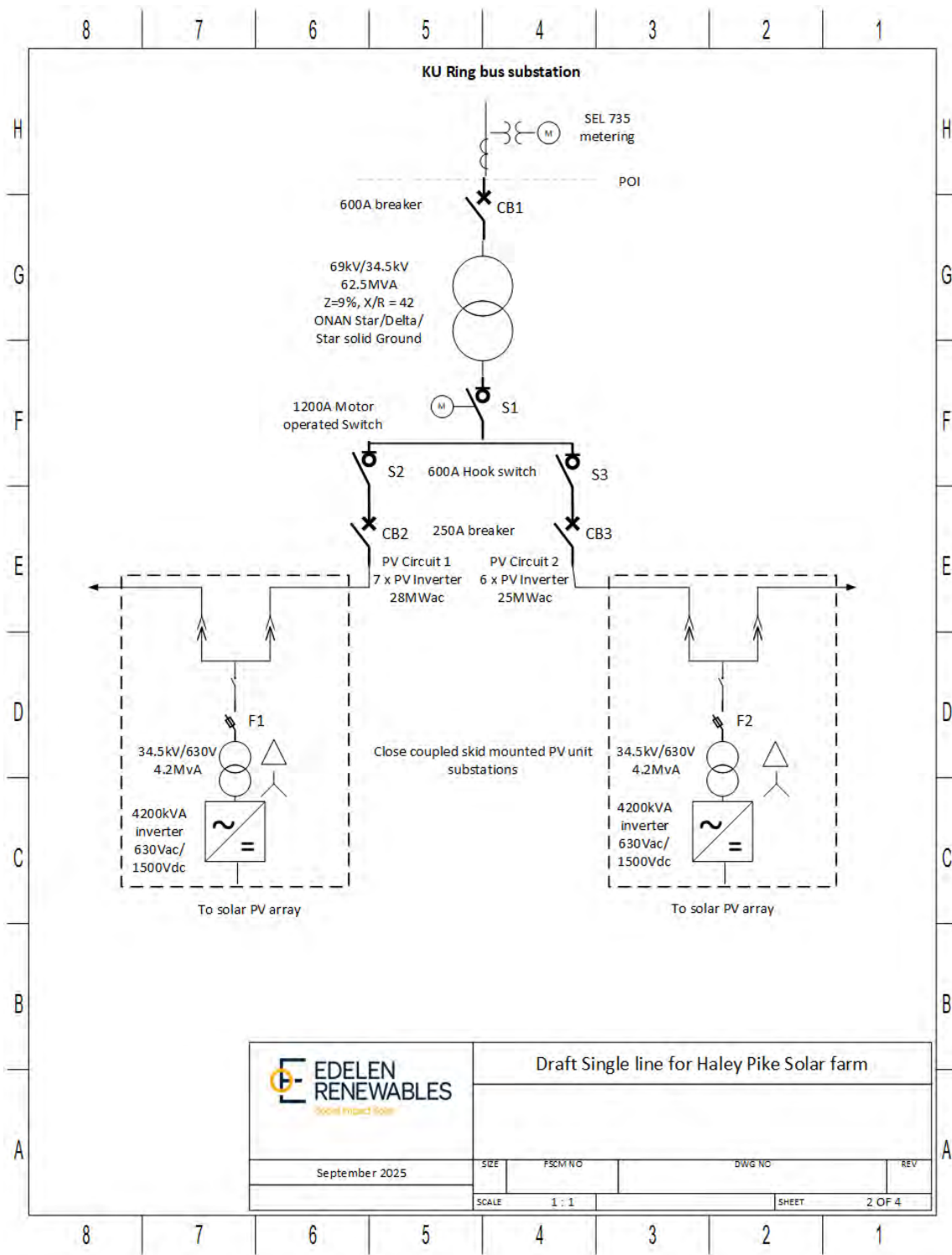


MAP KEY		
Marker	Component Type	Color Shading Code
1	Point of Interconnection (69kV line)	Purple: ER/SIS negotiated Right of Way Green: LFUCG designated 90% usable land for PV Orange: LFUCG designated 50% usable land for PV Red: LFUCG designated 0% usable land for PV No Color: where segments in project area are not shaded, no activities are planned to allow for LFUCG future use
2	Feeder to Switchyard	
3	Switchyard	
4	Feeder to Array Substation	
5	Array Substation	
6	Collection Feeder 1 to Arrays	
7	Collection Feeder 2 to Arrays	

Image 2: Photovoltaic panel layout developed in PVSyst. Layout includes both fixed tilt (shaded in black) and single axis tracker panel sections (shaded in red).



Image 3: Single Line diagram (SLD) of the engineering specifications for the system connection.



Right of Way

As developer, ER/SIS will acquire the easements and right-of-way (ROW) allowances required for the project. This includes a railway and land crossing for utility access:

- **Railway crossing:** A connector line will need to cross the CSX/RJ Corman rail line and ROW that bisects the landfill property. The project design accounts for the need to cross over the railway with necessary clearance. The agreement for the crossing will be made in negotiation with CSX/RJ Corman; ER/SIS welcomes LFUCG engagement with this process.

Image 4: Aerial image of the railroad crossing where wires already cross the railway. Intention is to cross HPSP lines at this crossing, respecting the existing right of way.



- **Right of Way to Utility Access:** Negotiations with a commercial landowner are underway to secure a right of way for interconnection. The approach will ensure connection to the utility line.

Image 5: Right of Way to utility point of connection line (shaded in yellow); the box outline represents the Switchyard to be constructed (i.e., marker #3 depicted in Image 1).



Equipment and Design

The following general materials will be supplied to the project site for construction:

- Miscellaneous steel
- Support steel posts
- Components (nuts, bolts, clamps, etc.)
- PV modules
- Fixed tilt, trackers and racking equipment and components (See Appendices A, B, and C for specifications)
- DC cabling and combiner boxes
- DC junction boxes
- AC cabling
- Power centers, including inverters (See Appendix D for inverter specifications)

- Electrical switchgear
- Transformers
- Remotely accessible data acquisition system
- All materials related to drainage required by the civil engineering plan
- All electrical conduit and junction boxes
- Concrete equipment pads
- Communications structure or fiber runs

Racking Systems

Our plan will be engineered in coordination with the Kentucky Division of Waste Management (KWWM) and other agencies to not inhibit the current function of the landfill. Any racking systems and or other development that require ground penetration will be carefully designed and coordinated to avoid sensitive areas.

- Borrow Areas/Permitted Future Landfill/Vacant Land: The non-capped areas will use **single axis tracker panels** and a **traditional solar tracking system** designed to maximize yield. A single axis tracking system is a tracking system for solar panels where the pivot of the photovoltaic support structure is installed parallel to the surface. Environmental testing will be conducted to determine the best method to support the trackers (piles or screws, etc.). For more information on the tracking system, refer to Appendix A.
- Closed Cell/Capped Areas:
 - o The capped areas will utilize **fixed tilt panels** with a **ballasted racking system** designed to avoid surface penetration; this is the accepted method for landfill solar design. For more information on ballasted racking, refer to Appendix B and C.
 - o The system on the capped areas will utilize above-ground cabling systems that do not require ground penetration. Multiple manufacturer systems will be analyzed for incorporation into the design.

Landfill Cap & Transportation Plan

To preserve the integrity of the landfill cap, Areas A and B will use ballasted supports for the solar structures, which are non-penetrating. Fixed tilt ballasted racking will be utilized for all capped areas. Appendices B and C provide proven examples of equipment for fixed tilt ballasted racking. Cabling to connect the arrays will be laid in above-ground cable trays/conduits to link to combiner boxes and central inverters which will be mounted atop the capped areas. This approach preserves the capped area landfill seals.

To limit uncontrolled access, the total area on which the solar modules are installed will be fenced. Any fencing near the closed cell areas will be held to the perimeter (i.e., bottom of grade to skirt the base to avoid puncturing the membrane). Detailed designs will consider the access, spacing, water management/drainage and performance (e.g., north facing slopes to be avoided).

Construction practices for the capped areas will require a specific method. Capped areas will require preassembly of racking and long boom crane placement on or close to locations with onsite assembly at the capped area. Maximum load bearing studies will determine what vehicles can be used onsite and ballasted foundations will be placed and poured onsite using primarily manual or small load means.

Moving some devices, panels, etc., will be necessary and our EPC will utilize light equipment to ensure there is no damage to the capped landfill areas or methane vents. For example, installers may utilize small trailers with a 1,000-pound limit towed by offroad ATV vehicles both equipped with floatation tires. Refer to Appendix E for sample images protective measures for placing and moving equipment on landfill cap.

Storm Water Management & Erosion Control

As referenced in the Water Quality Management Fee section in the Finance section, below, ER/SIS will comply with the Water Quality Management Fees ordinance ([Article 16](#)), including adhering to the LFUCG finding that the fee is applicable. Per the Haley Pike Landfill Potential Reuse for Utility Scale Solar Report's noted concern for potential stormwater impact to the site, stormwater management and monitoring through and following the installation of PV panels will be a focus.

The project design will account for stormwater management to ensure adequate surface water runoff management and that established features within the water quality management area, including Wetland Treatment System, are maintained appropriately.

Erosion Control

Erosion control at the panel drip line will be evaluated. Vegetation and drainage systems, with consideration of retaining integrity of the cap membrane will be introduced. Strategies may also include using non-vegetative controls like gravel, erosion blankets, or specialized ground covers beneath the drip lines. This control plan will be determined in the final design phase.

Vegetation Management

The HPSP will focus on low growth vegetation to complement the solar array functionality. Vegetation and habitat considerations will also be informed by agrivoltaics opportunities further described in Section 5 of this proposal.

ER/SIS will conduct an assessment of current vegetation in place to determine if onsite plants qualify as low growth. Site visits appear to indicate the current vegetation is low growth and typical vegetation management is sufficient for the site. If adequate, the current low growth vegetation will be left in place in order to reduce ground disturbance. If the vegetation currently in place is adequate, ER/SIS will request the details of the current vegetation management plan in place with LFUCG and will adopt the plan currently approved and in place for vegetation management, and to be confirmed confirm with other authorities having jurisdiction (AHJs).

For the **Borrow Areas/Permitted Future Landfill/Vacant Land** areas of the site, where suitable low growth vegetation is not present, or the current vegetation is not adequate, native plants, pollinators, and potentially grasses suitable for grazing will be utilized. These sections will facilitate revegetation to complement solar array productivity and may further Comprehensive Plan goals and outcomes (e.g., Theme B: to protect, conserve, and restore landscapes and natural resources).

The **Closed Cell** areas of the landfill will not be replanted unless the vegetation declines due to weather conditions or other factors that may cause a decline in the health and cover of the current vegetation in place. The developer aims to avoid disturbances to the capped areas, including the slopes.

Methane & Leachate Management

The methane vents at the landfill are subject to quarterly monitoring. For example, in Area B, there are 97 methane vents onsite (located approximately every 100' in an offset triangular pattern). HPSP will be designed and constructed to not impact the existing landfill gas collections system. Construction phase will account for navigating around and securing all vents, including safety protocols.

The wetland leachate system (Area K) nor spray field (Area G) will be developed for solar. Monitoring already required and in place will track any impacts which will be addressed and mitigated.

Site Access Control

ER/SIS understand that LFUCG and multiple contract operators will continue to have active operations at the HPLF facility. Any project fencing or other infrastructure installations will be designed to allow for routine access for landfill permit compliance activities.

- Fencing:
 - o Additional fencing will be added to limit access to the PV areas
 - o All fencing plans will be proposed to LFUCG and will be designed to provide ongoing site access for LFUCG for all required testing and activities.
 - o Agrivoltaics/grazing fencing and gating will be considered.
 - o Per National Electric Code (NEC) requirements, fencing standard for solar arrays and will be installed (i.e., six-foot chain link with three strings of wire at the top)
- ROW setbacks:
 - o As shown in Image 4 (above), the tree line generally marks the railroad ROW and will be left intact.
 - o Required railway setback areas are accounted for in the HPSP layout.
- ER/SIS will work with the LFUCG to secure site control at HPLF:
 - o The mechanism may entail a written contract or land lease, as negotiated with the City.
 - o A special purpose entity (SPE) will be established to hold ownership of the project (i.e., the infrastructure which sits atop the LFUCG-owned land).

Public Service Commission Approval and Interconnection

The developer's intention is to submit the Haley Pike Solar Project for review with the utility as either a Large Qualified Facility or a wholesale power market participant. Determination will be made upon utility system capacity available and market availability for each potential option. The interconnection process will include several key phases:

- Formal Generator Interconnection (GI) analysis by utility,
- Application to Federal Energy Regulatory Commission (FERC) for Large Qualified Facility status – FERC 556 application, if necessary, and
- Transmission Service Request (TSR) application or similar as required by utility.

The project will follow KY Public Service Commission (KPSC) processes to engage the Kentucky Siting Board and the requirements broadly defined in KRS 728 and specific requirements detailed in “Electric Generation and Transmission Siting.”

Utility and permitting approvals

- **Certificate of Public Convenience and Necessity (CPCN):** ER/SIS will file for a Certificate of Public Convenience and Necessity (CPCN) with the Kentucky Public Service Commission (PSC). The PSC is responsible for approving the construction and operation of major new energy infrastructure.
- **Site Compatibility Certificate:** ER/SIS will determine if a Site Compatibility Certificate is necessary before we approach the PSC.
- **Interconnection agreements:** ER/SIS will work with the local utility to establish an interconnection agreement for connecting the solar facility to the power grid. The firm has experience and existing relationships with the utilities in question and with the interconnection process, as summarized in Section 1 of this proposal.
- **Local ordinances and zoning:** ER/SIS will ensure that the project complies with applicable county or city-adopted solar ordinances. The project will need to be approved by the local planning and zoning commission.
 - o The landfill property will need to be rezoned for use other than landfill, per the feasibility report’s PV evaluation, solar farms would be permitted. ER/SIS will partner with LFUCG to navigate this process.
 - o Fayette County is currently reviewing zoning rules via a Zoning Ordinance Text Amendment (ZOTA) to regulate solar energy systems. The current proposal prohibits large-scale, ground-mounted solar farms (i.e., over 5 acres) Agricultural-Rural zones. Although the Planning Commission has approved language banning industrial-scale solar in agricultural zones, the full ordinance has not yet been finalized, and ongoing workgroup discussions are in process to refine the terms (e.g., limits, vegetative cover, land management plans). As the HPSP is a **reuse/repurpose project on a brownfield**, it is the developer’s view that this potential restriction will not apply.

Post-Construction Monitoring & Safety Measures

The firm and engaged contractors will establish standards and expectations regarding workplace injuries and incidents. ER/SIS considers only one standard to be acceptable:

zero injuries in all facets of our business and the firm requires the same from subcontractors.

The Safety Management System provides the tools to integrate safety into work planning and execution throughout the organization and on all projects, the system entails:

- A Safety Policy that establishes vision and values,
- Safety Principles that guide decisions, planning and work performance,
- Safety Standards that are set forth in the Health & Safety manuals for operations, construction, maintenance and offices, and
- Safety Plans and Procedures that include site-specific safety plans, safety improvement plans for all plants and projects, and manuals tailored to site-specific safety programs.

ER/SIS follows a cycle of continuous improvement through planning, implementation, performance, measurement, assessment and improvement.

Based on established processes and procedures, ER/SIS fosters a safe working environment through training, communication and quality execution. The firm works closely with customers/clients to solicit feedback and has/will integrate “lessons learned” into all projects and safety programs.

ER/SIS will select an EPC firm that will issue a safety control plan for the construction work at the site. ER/SIS and our partners will assume responsibility for contractors and will supply LFUCG with the safety plan.

System Design Considerations for Arc Hazard Control & Ongoing Safety

All electrical engineering design shall meet applicable codes and standards and the requirements of the interconnecting utility. Specific considerations:

- The engineering and design include the appropriate sizing and cabling (above and below ground) that will connect all applicable equipment to the point of interconnection.
- The Plant electrical system shall be designed for electrical system losses on the DC wiring system to be no more than 2 percent and losses on the AC wiring system no more than 2 percent.
- All DC disconnects at the inverter(s) and combiner boxes shall include a visible gap when in the open position.
- All protection equipment used throughout the system shall be sized and specified to reduce damage to all components to the utility interconnection point in the event of electrical failure.

- The electrical design shall include the design of equipment grounding and lightning and surge protection for the entire Plant Site.
- A comprehensive surge protection system and a lightning risk assessment will be provided.
- The results of the lightning risk assessment will be the basis for determining the extent of the lightning protection system (LPS) that is required.
- An arc flash study shall be performed per IEEE 1584.
- All communications hardware and software required for system protection and remote monitoring and control will be specified to consider remote access and monitoring.
- All monitoring and communication supplemental equipment and cabling shall be designed and specified.

The developer will work with the landowner (LFUCG) and contracted EPC to confirm details of construction materials and safety requirements.

Response to Electrical Hazards

All types of fault monitoring are typical for a PV system of the scale proposed. The operations and maintenance entity contracted by ER/SIS for the HPSP will conduct live and automated monitoring. Specific measures include:

- O&M entity will oversee emergency response plan and will provide a copy of the plan to LFUCG, with notification to Fire Marshall.
- Reporting of arc faults, electrical interruptions, or departure from standard operating range values will be constantly monitored via Self Contained Automated Data Acquisition and Reporting systems that are typical of PV systems. A remote notification system will notify operations managers of any non-normal events or departures from normal operations.
- System design will adhere to industry standards throughout design and operations and training shall be required for operations to meet all codes and standards.

Protection Design Methods

In accordance with professional practice, adherence to regulations and codes, the electrical system and equipment design and selection consider the likelihood of unforeseen events causing damage or injury. In solar plants Arc Faults warrant specific consideration. An arc flash study shall be performed per IEEE 1584.

Additionally, the following seven (7) protection design methods greatly mitigate such events occurring:

1. Zone selective interlocking (ZSI)
2. Differential relaying
3. Energy-reducing maintenance switching with a local-status indicator
4. Energy-reducing active arc flash mitigation system
5. An instantaneous trip setting. Temporary adjustment of the instantaneous trip setting to achieve arc energy reduction is not permitted.
6. An instantaneous override
7. An approved equivalent means with the local authority having jurisdiction (AHJ)

NFPA 70E ARC Flash Training

All site operators and HPSP staff shall have been trained in accordance with NFPA 70E ARC FLASH requirements along with electrical equipment service, emergency response and treatment, CPR, Contact release, tools and equipment including PPE. Safe working conditions and practice, tagging and lockout procedures form a critical part to the safe site operations. Training references:

- OSHA 29 CFR 1910 – General Industry
 - o 29 CFR 1910.269 Subpart R – Special Industries
 - o 29 CFR 1910.269 Subpart S – Electrical, General Industry
- OSHA 29 CFR 1926 – Construction Industry
 - o 29 CFR 1926 Subpart V – Electric Power Transmission and Distribution, Construction
- ANSI Z535 – Series of Standards for Safety Signs and Tags

Project Timeline

Table C: Haley Pike Solar Project Development Timeline

Action	Estimated Timing
Public announcement of intent and filing of public-private unsolicited proposal to LFUCG	July 2025
Public review and comment period	September 2025
LFUCG Notification to ER/SIS	Below dates assume notification in September 2025
• Contract signed (ER/SIS-LFUCG) • Finalize project development timeline • Capacity and process discussion with Utility • Secure right of way with landowner & railway	Project Month 1: October 2025

	(i.e., Proposal Acceptance Date + 1 Month)
• Utility capacity analysis • Prep for Generation Interconnection (GI) and Transmission Service Request (TSR) & Qualified Facility application w/ FERC (if applicable) • Additional economic analysis based on any feedback from LFUCG that impacts design/economics • Preliminary construction plans	Project Month 2: November 2025
• Project design completed (80%) • Confirm permit requirements: ◦ Secure opinion from the KDWM on use modification. If required, submit “Application for a Major Modification” ◦ KPDES Permit review to confirm no impact to WTS • Safe Harbor plan ◦ Prep material order sequence ◦ Ordering material and active preliminary construction work • Confirm state requirements – KPSC, siting, etc.	Project Month 4: January 2026 <i>GO/NO GO DECISION PERIOD</i>
• Continue permit sequence • Confirmation of design plans with LFUCG • Initiate Civil Work – fencing, lighting, etc.	Project Month 5: February 2026
• Construction final planning & kick-off • Interconnection Agreement with Utility	Project Month 8: May 2026 (construction term estimated at 18 mos.)
• Project substantially completed (90%) • Interconnection completed • Final inspections completed • Permission to operate (PTO) granted	Project Month 26: November 2027
• Commercial Operation Dated (COD), anticipated • Punch list corrections	Project Month 27: December 2027
• Operations & Maintenance begins at COD • Initial Term begins (21 years, begins at COD)	Ongoing from Project Month 28: January 2028 through January 2049
• Subsequent Terms, optional: Up to two (2) 7-year extensions (35-year total lease period). Subsequent 21-35 years.	2049-2063

Investment Tax Credit Timelines

The proposed project development timeline incorporates milestones that are necessary to meet current guidelines to achieve Investment Tax Credit (ITC) Safe Harbor as of September 2025. Safe Harbor requirements are for continuous construction beginning July 2026 or full project completion by December 31, 2027. To preserve options, the project timeline accounts for either of these tracks to qualify for full ITC.

Operations and Maintenance Plan

Ongoing operations and maintenance (O&M) will be provided by contractors engaged by ER/SIS. The broad items for O&M are listed below. This is not comprehensive but covers major items and is based on both National Renewable Energy Laboratory (NREL) benchmarks and agreed upon industry standards.

Local contractors will be engaged to perform vegetation maintenance on the property on an ongoing basis. Every effort will be put forth to identify, engage, and select local subcontractors that employ local workers on the operation, maintenance, security, and land management of the HPSP.

It is understood that the required Performance Bond will be established to ensure operations and maintenance are being conducted at a high standard which will ensure that the project will be capable of producing the energy output expected. Developers will commit to an industry-standard operations and maintenance plan for the HPSP that is designed for a P50 median yield over the period of the contract; further detail can be provided in a PVSyst report.

Table D: Operations and Maintenance Table (activities, frequency)

	Activity	Frequency
1	PV modules cleaning	Biannually
2	PV Inverter testing, protection, fuses, capacitors control	Annually
3	Tracker motors and control testing	Annually
4	DC cable checks sample tests (Pass through string samples)	Annually
5	Grounding inspections and tests	Annually
6	I-V curve tracing per Inverter	Annually
7	Protection (transfer/trip) / High POT – MV (per utility req.)	Every 3 years
8	Plant visual inspections/=hot spot	Biannually
10	Control system / testing, communications/weather stations	Every 3 years

11	Metering	Every 2 years
12	General PV plant: fencing/vegetation clearance, maintenance	Biannually
13	Reporting	Quarterly
14	Compliance/training/updates/ Health and safety	Annually

Decommissioning Plan & Bond

A formal decommissioning plan will be incorporated into the final LFUCG lease documents. The generation system will be decommissioned and dismantled following the end of the lease period, or the end of its useful life.

General decommissioning considerations:

- The KY Division of Waste Management (KDWM) requires a plan for the proper management and disposal of solar panels at the end of their lifecycle. The HPSP decommissioning plan will address this, and all relevant issues related to the end of service life of the solar array and related equipment.
- Unless otherwise requested by the LFUCG, the decommissioning plan shall, at a minimum, include plans to: remove all above ground facilities; remove any underground components and foundations of above-ground facilities to a depth of three (3) feet below the surface grade of the land in or on which the component was installed; return the land to a substantially similar state as it was prior to the commencement of construction; leave any interconnection or other facilities in place for future use at the completion of the decommissioning process.
- There are no exemptions to the removal of infrastructure added.

A **decommissioning bond** will be secured at a value equal to **\$0.045 per watt of installed watts DC**. The current modeled design is 67,460,000 watts DC (67.46MW_{DC}). If this design were to be the final design, the accompanying bond would equal 67,460,000 W_{DC} X \$.045/w = **\$3,035,700**.

3. Financial Summary

The estimated cost of the Haley Pike Landfill Solar Project is expected to fall within the general costs for this region of the United States. ER/SIS will source a real asset, climate-technology-focused infrastructure financier to support the project. ER/SIS and our development partners will develop a special purpose entity (SPE), to manage project

development. The entity will likely be incorporated as a limited liability corporation (LLC) to manage project administration as the partner entity to collaborate with LFUCG.

Developer Financial Model Description

The financial model used to qualify the project incorporates a detailed financial projection of the production, expected capital costs, revenues, expenses, and tax implications to assess the financial feasibility of the project. The model accurately projects the capital costs of the project on a monthly basis through predevelopment, construction, and post-construction. The combination of the revenues, expenses, and tax benefits are used to ensure that these capital costs can be paid for with industry-standard returns.

Production Calculation

The entire project is accurately modeled in PVSyst, an industry standard design and production calculation software. Given the layout and location of a given project, PVSyst projects the expected solar production over all **8,760 operating hours in a year**. This projection is then inputted into the model along with industry-standard degradation assumptions to yield the expected solar production for every month over the lifespan of the project.

Capital Costs

The model incorporates assumptions for costs to developer as:

- Predevelopment costs such as permitting, engineering, and equipment deposits,
- Construction costs such as the equipment (modules, racking, inverters, transformer/switchgear), interconnection costs, land costs, and any other project-specific costs which are expected, and
- Post-Construction costs such as the payment of fees, legal costs, performance bond, and decommissioning bond.

All these costs are paid on a monthly schedule which allows the model to calculate both the expected construction interest costs and the financial return which the project is expected to provide.

Revenues

This project assumes revenues to the developer from two sources: power sales under the tariff and the sale of Renewable Energy Credits (RECs).

Expenses

The developer's expenses include payment in lieu of taxes (PILOT) for the property tax,

insurance, operations and maintenance cost, lease expenses, and the funding of accounts to pay for the eventual replacement of the inverters in year 15, and for the provision of miscellaneous spares and parts through the lifecycle of the project.

This project will qualify for Investment Tax Credits (ITC), and the ITC plays an integral role in the financials of the project.

Project Cost Overview

The total project capital cost is estimated to be \$88,483,800 which includes the performance and decommissioning bonds as well as reserves for inverter replacement and spares. Renewable energy certificates (RECs) will be retained by the project company and monetized, as required for the project to achieve the desired returns. (Note: LFUCG may purchase RECs, as an option.)

Table E: Estimated Haley Pike Solar Project Costs by Category

Category	Gross Cost	Cost per Watt dc	Fraction of Total
Land Fees	\$197,601	\$0.003	0.22%
Permits	\$819,293	\$0.012	0.93%
Interconnection	\$7,643,016	\$0.113	8.64%
Engineering	\$1,272,999	\$0.019	1.44%
Construction	\$63,322,537	\$0.939	71.56%
Financing	\$10,275,909	\$0.152	11.61%
Fees	\$1,348,620	\$0.020	1.52%
Misc	\$3,603,824	\$0.053	4.07%
Total	\$88,483,800	\$1.312	100.00%

Revenue to LFUCG

Over the initial project period of 21 years (2028-2049), significant revenue will accrue to Lexington Fayette Urban County Government:

- **Estimated Revenue to LFUCG: \$2,261,944 over the initial 21-year project period**
- Delivered as an estimated **\$107,712 annually** for 21 years via a land lease payment, Water Quality Management Fee, and Payment In Lieu of Taxes (PILOT).

The overall per acre payment paid to LFUCG is proposed as **\$301/acre**. ER/SIS is open to negotiation with LFUCG to settle on a mutually agreeable rate and breakdown. This could

include some balancing between three revenue streams envisioned (Water Quality Management Fee, PILOT, and Lease Rate) to deliver equivalent value to LFUCG of approximately \$301/acre.

Table F: Summary of Revenue Sources for LFUCG via the HPSP proposal

Revenue Type	# of Acres Leased	Revenue per Acre	Revenue per Month	Total Revenue Annually
Water Quality Management Fee	357	\$122.18	\$3,635	\$43,617
PILOT (\$500 per MW @ 67.5)	n/a	\$94.54	\$2,813	\$33,750
Lease rate per acre (\$85/acre)	357	\$85.00	\$2,529	\$30,435
TOTAL =		\$301.71	\$8,976	\$107,712

ER/SIS anticipates requiring **357 acres** for the HPSP. Three revenue streams to LFUCG are envisioned, as follows:

Land Lease Revenue

- Land Lease Payment: **\$30,345 annually** over 21-year project period
 - o Whereas the feasibility report suggests a \$500-800 lease rate, an alternate lease rate is suggested based on review of equivalent land values.
 - o Proposed rate: \$85/acre per year for 357 acres.
 - o Sources to corroborate proposed lease rate:
 - \$25/acre on unimproved ground. Source: University of Kentucky, ANR Agent Land Value and Cash Rent Survey AEC 2018-90.
Available: <https://agecon.ca.uky.edu/files/kycashrentnew.pdf>
 - \$25.5/acre for pastureland. Source: US Department of Agriculture, Land Value and Tenure 2024.
Available: <https://www.ers.usda.gov/topics/farm-economy/land-use-land-value-tenure/farmland-value/>
 - o Additionally, there will be an option to extend for two (2) seven-years periods for an additional 14-year revenue stream.

Payment In Lieu of Taxes (PILOT) Revenue

- PILOT: **\$33,700 annually** over 21-year project period
 - o Valuation of the proposed PILOT, subject to negotiation: \$500 per MW (67.4 MW_{DC}) for 21 years.
 - o The ER/SIS viewpoint on the applicability of the PILOT is that the PILOT

opportunity is applicable to the HPSP. While the leased property is not subject to taxation and therefore would not be PILOT-eligible, the solar array infrastructure atop the leased land will be owned by a for-profit special purpose entity which will be subject to taxes, making the HPSP eligible for PILOT.

- Should the PILOT not be applicable, the Lease Rate will be adjusted to deliver equivalent value to LFUCG (i.e., \$301/acre).

Water Quality Management Fee Revenue

- Water Quality Management Fee with proposed area adjustment: **\$43,617 annually** over 21-year project period.
 - o Per the RFP and LFUCG Code of Ordinances Chapter 16, Art. XIV, Sec. 16-402, LFUCG finds that photovoltaic panels meet the definition of Impervious Surface and that the Water Quality Management Fee should apply.
 - o To account for the fact that the solar array includes both fixed and adjustable panels (indicated as “trackers”), the impervious surface calculation requires additional consideration. The proposed single axis (adjustable) panels are equipped with automated trackers to follow the sun for maximum efficiency. These panels are also scheduled to orient perpendicular to the surface at night when no irradiance is available for capture. Therefore, the adjustable tilt of the panels and the perpendicular positioning functionally decrease the overall amount of impervious surface. Therefore, to more accurately calculate impervious surface “area adjustment percentages” were calculated and proposed to inform square footage and the Equivalent residential unit (ERU) multiplier for the \$4.32 rate.
- Water Quality Management Fee calculation with proposed area adjustment: \$122.18 average fee per acre for 357 acres.
 - o Details of the calculation are included in Appendix F: Water Quality Management Fee Calculations.

Deferred Expense

- LFUCG will enjoy deferred expense from eliminated mowing and ground management expenses on the Areas that will be developed for solar.
- ER/SIS will assume costs of grounds management as part system operations & maintenance.

Extended Expenses

- As an option, LFUCG may purchase Renewable Energy Certificates (RECs) to offset the LFUCG carbon footprint. ER/SIS and LFUCG may negotiate toward such a

purchase of a subset of the RECs made available through this project. Refer to the RECs section below for more information.

- No required new expenses are expected. For example, access to the site will be via currently existing and maintained roadways.
- Costs for operations and maintenance and insurance through the initial term of the project will be maintained by ER/SIS. The only new/future expenses for LFUCG would occur if LFUCG decided to negotiate ownership of the system (to capture residual values and/or re-power the system) after the initial project term, as an alternative to decommissioning proposed.

Economic Impacts to Lexington-Fayette County

In addition to direct revenue to LFUCG, the Lexington-Fayette County community will experience indirect economic benefits related to the project.

Based on an established commitment to Social Impact SolarSM, ER/SIS will make every effort to identify, engage, and select local subcontractors and unions that employ local workers on the construction, operation, maintenance, security, and land management to support the HPSP. Additionally, a series of local job fairs will be used to recruit and hire individual local laborers and electrical workers (outside of selected subcontractors) for the construction phase of the project. Job projections are estimated at **140 to 200 jobs during the construction phase** and **5 to 10 jobs during operational phase** of the project. During the construction phase of the project, LFUCG can expect an increase in consumer spending and therefore regional gross domestic product on account of the payroll expenditures associated with the project.

The project will be designed and permitted to operate as a Large Qualifying Facility (LQF) within the Federal Energy Regulatory Commission (FERC) and Kentucky Public Service Commission (KPSC) guidelines. As such, all costs to build the project will be borne by the developer and will have **no cost increase impact on the electricity service rates**. The rates for the power are ultimately determined by the Kentucky PSC. Solar facilities have the lowest levelized cost of power of any source of generation and have demonstrated solar is competitive with all other sources of generation.

Performance Bond

ER/SIS will provide a performance bond for the project to ensure Fayette County residents' interests are being met. The performance bond ensures that the project will be completed as designed and at the anticipated cost, and that the project will be operational and

efficient through the term of the lease. The performance bond becomes active at the start of construction.

The surety value of the performance bond ensures that the project will be delivered to a high standard (e.g., that the project will be completed in a timely fashion and generally meets performance as represented). Surety ensures LFUCG will have funds in place to reconcile any deficiencies or alternative resolutions, should such action be required. The cost of procuring this bond has been included in project development, and it will be provided in addition to a decommissioning bond.

Renewable Energy Certificates

A renewable energy certificate (REC) is a market-based instrument that represents the property rights to the environmental, social, and other non-power attributes of renewable electricity generation. RECs allow businesses and individuals to support renewable energy projects and claim to use renewable electricity, even if their physical location does not have renewable generation, by "unbundling" the renewable attributes from the actual electrons. RECs are issued when one megawatt-hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy resource. Note: one (1) MWh of generated power equals one (1) REC.

The modeled Year-1 photovoltaic system (P50 – highest probability) output based on the current indicative design is expected to be approximately 167,367 megawatt hours (MWh) per year, therefore delivering **167,367 renewable energy certificates (RECs)**.

Based on the indicative design and modeled output **project should reduce greenhouse gas emissions measured by approximately 37,193 metric ton carbon equivalent (MTCE) per year** based on most recent (2023) Environmental Protection Agency (EPA) information. The HPSP system design will include metering that fulfills the requirements of accepted renewable energy certificate (REC) reporting and compliance.

LFUCG REC Strategy

If LFUCG has interest in the purchase of RECs to advance the Imagine Lexington Comprehensive Plan's net-zero goal and to potentially create cost-savings, ER/SIS will facilitate this exploration.

REC values are determined by the market value of the RECs specific to a given project, and the scale of the project. REC values and monetization of RECS are key components of the

current financial model at the indicative system scale. Any change in design that results in a smaller scale will likely result in increased REC cost value being necessary to achieve project financial viability.

Pricing as proposed:

- The currently assigned value for the RECs created by this project is **\$5-\$7 per REC**
- If desired, LFUCG can pursue RECs through various means. For example, a compensation plan such as a reduction in lease fee or other remedies to offset the value may be negotiated. Or, direct purchase is an option.

LFUCG may negotiate to acquire/purchase RECs. LFUCG will have the opportunity to acquire the RECs at an estimated cost of \$5.00 to \$7.00 per REC, or negotiate this as a displacement of the lease fee paid by ER/SIS to LFUCG. The agreed REC acquisition rate will be informed by the city's load and appetite for RECs (or otherwise capped at the number of available credits, estimated at 167,367 RECs). ER/SIS reserves the right to market any remaining RECs, after LFUCG has confirmed load and related interest in available RECs.

ER/SIS asserts that this is competitive pricing for LFUCG to consider. The RECs made available through the HPSP may be marketed as high-quality, locally created RECs, creating an intangible value in addition to the direct transaction (e.g., messaging about local brownfield reuse, demonstration purposes, etc.).

In addition to any RECs LFUCG may obtain, ER has established relationships with a network of large-scale, industrial and big data corporate partners that have an interest in partnering to offset their carbon footprints. Remaining RECs, therefore, may be structured with an additional renewable energy credit (REC) arrangement for any selected corporate partner(s).

The local hosting utility will likely be the offtaker of the power produced by the proposed solar array. ER/SIS is open to discussing additional options to the REC, such as Sleeved Power Purchase Agreements or Green Tariffs, as applicable, at terms equal to any other entity contracting for power under like arrangements.

Lease Terms

ER/SIS proposes \$85/acre for either of two potential lease term scenarios. The decision between options will be determined in collaboration with LFUCG at the outset of the project. These options are necessary for ER/SIS to fully explore the utility market to determine financial viability at the final design scale of the project based on the capacity

and market values of the utility system(s) we may be able to access, and as agreed by ER/SIS and LFUCG.

The options are:

- Option 1: A 21-year initial term with an option to extend for 7 years at the end of year 21 and an option to extend at the end of year 28, for a total potential lease period of 35 years, or;
- Option 2: A 20-year initial term with an option to extend for 5 years at the end of year 20, an option to extend at the end of year 25, and option to extend at the end of year 30, and an option to extend at the end of year 30, for a total potential lease period of 35 years.

The above proposed lease terms are proposed to match the KY Public Service Commission (PSC) tariff terms and PPA terms.

General timeline for term Option 1, as an example:

- Construction Term: Estimated at 18 months (targeting May 2026 start)
- Initial Term: 21 Years (begins Commercial Operation Date)
- Subsequent Terms: With up to two (2) 7-year extensions (35-year total lease period)

4. Environmental Compliance Haley Pike Landfill

The HPSP design team has considered active permits and best practices for landfill redevelopment. It is understood that LFUCG will remain responsible for overall compliance at the landfill, and concurrently, the HPSP core team will be committed to the project partnership and to ensuring the project does not interfere with compliance requirements.

General measures:

- The project team will work with LFUCG to ensure the solar project does not interfere with compliance obligations, including post-closure requirements.
- LFUCG staff will be engaged in the development process to ensure that compliance is maintained.
- Developer will obtain required approvals for permit modifications or any other required regulatory approvals from Kentucky Energy and Environmental Cabinet (KEEC) and Kentucky Division of Waste Management (KDWM).

- The Developer will be responsible for costs associated with approvals or required modification, inspections, or additional compliance measures required or recommended by KEEC or KDWM for operation of the solar facility at the Haley Pike Landfill.

Haley Pike Landfill active permits in consideration:

- Kentucky Department for Environmental Protection, Division of Waste Management (Solid Waste Permit #SW03400007).
 - o Relevance: Pertains to regulation of closed landfill cells (Area A and Area B), potential future landfill cells (Areas H, I, J), mulch operations and spray field (Area G).
 - o Permit revision required for Area A & B, H, I, and J. No usage of Area G.
 - o ER/SIS in collaboration with LFUCG will submit a written request to the Division for Waste Management (DWM) detailing the requested changes (i.e., operational adjustment to allow for solar). The KDEP will determine if the modification is major or minor. In the case of a “major modification” finding, developer will submit the "Application for a Major Modification to a Solid Waste Permit" form ([DEP7016](#)) and provide supporting documents (drawings and calculations), and \$1,000 fee. ER/SIS understands that a major modification may require public notice and fees.
- Kentucky Pollutant Discharge Elimination System (KPDES Permit #KL0092100).
 - o Relevance: Ensuring wetland treatment system permit requirements are met (e.g., leachate and water sampling, monitoring discharge in relation to limits).
 - o HPSP will survey the Wetland Treatment System upgrades completed in 2024 and commit resources to ensure the addition of panels does not harm the system.
 - o Engage LFUCG to understand how Water Quality Management Fee is used in relation to any in situ impact.
 - o Should there be an extension in the monitoring period required by the new use of the parcels adjacent to the wetland treatment system, developer will partner with LFUCG to navigate revisions and compliance.

Summary of relevant environmental and landfill regulations

- **Coordination with the Kentucky Energy and Environmental Cabinet (KEEC):** The Kentucky EEC and its Brownfield program offer a full spectrum of resources to developers to help identify barriers and ensure governmental compliance on

redevelopment projects. ER/SIS will work closely with this organization and use these resources to guide and plan an effective strategy to move this project forward.

- **Coordination with the Kentucky Division of Waste Management (KDWM):** The Kentucky EEC's Division of Waste Management (KDWM) oversees landfill closure and post-closure care. The HPSP final design will not interfere with the long-term maintenance and monitoring of the landfill's final cover, ground water monitoring systems, or gas collection systems.
- **Update the post-closure care plan:** ER/SIS will partner with LFUCG to submit a revised post-closure care plan to the KDWM for approval. This updated plan will detail how the landfill will continue to meet regulatory requirements with the new solar infrastructure in place.
- **Environmental performance standards:** The final project design will comply with state environmental performance standards for solid waste site or facility permits, which are outlined in the Kentucky Administrative Regulations (KAR), specifically 401 KAR Chapters 47 and 48.
- **Solar panel disposal plan:** The KDWM requires a plan for the proper management and disposal of solar panels at the end of their lifecycle. The HPSP decommissioning plan will address this, and all relevant issues related to the end of service life of the solar array and related equipment.

5. Social and Educational Impacts and Initiatives

Edelen Renewables/Social Impact Solar LLC was the first to employ a “Social Impact Solar” approach to ensure communities that host projects are positioned to directly benefit from positive results and legacy impact. Edelen Renewables’ Social Impact SolarSM approach to renewable energy entails a three-pillar approach to ensuring projects deliver legacy, community-scale economic and social impact with a focus on local workforce development.

Image 6: ER branding reflecting service-marked approach and longstanding commitment to Social Impact pillars.



At the Haley Pike Landfill site, the ER/SIS team imagines several opportunities for LFUCG to activate additional, achievable projects to increase positive local social impact of the project. These include but are not limited to project messaging aligned to the LFUCG comprehensive plan, framing for demonstration projects, and educational and training opportunities for local citizens.

Past Participation in Community, Social, and Educational Programs

ER/SIS has a demonstrated track record of designing community benefit programs that authentically integrate local stakeholder input, create coalitions of education, workforce, and nonprofit institutions to remove barriers to employment and create measurable improvements to economic, environmental, and social outcomes.

Coal-to-Solar Workforce Development

To support solar development in rural communities, workforce development has been a focus for the firm. For example, as development service providers for the Martin County Solar Project, ER collaborated with local partners to provide training for fifty-seven (57) workers that led to one hundred-seventy-seven (177) industry credentials earned on a utility scale solar project in the rural Appalachian county with the lowest labor force participation rate in Kentucky. These credentials included OSHA-10, HAZWOPER-40, lead/asbestos/mold mitigation, CAT simulation, first aid/CPR/AED, and Northstar digital literacy. Creating transferable skills is an investment in the local workforce that opens doors for future employment opportunities.

To reach these high output workforce impact goals, ER built coalitions with the local Economic Development District, Community and Technical College system, workforce board, regional career center, local and regional nonprofits, and individual advocates

to identify barriers to employment and engagement for local workers, design localized outreach strategies, and increase participation in job fairs.

Furthermore, the first job fair for the Martin County Solar Project had over 500 attendees when local officials anticipated 50 attendees at best. These proven methods for building coalitions and partnerships that remove barriers and increase access to training, credentials, employment, and high-quality wages can be replicated to support local hiring on the HPSP. ER will utilize contract language with the selected EPC contractors to establish preferences and metrics for local hiring to ensure the project yields local and regional investment during construction of the project and once completed, the ongoing management of the site.

Catholic Diocese of Lexington - Net Zero Advisory Board

In April 2024, Bishop John Stowe of the Catholic Diocese of Lexington announced a “net zero” initiative to make the Lexington Diocese the first in America to adopt such a commitment. The diocese has 45,000 members across 59 parishes and 50 counties that span Central and Eastern Kentucky.

The taskforce is chaired by ER Founder and CEO, Adam Edelen, who assembled leaders in sustainability from Alltech, Solar Energy Solutions, Appalachian Regional Healthcare, Lexmark, and Boxcar PR to accelerate the Dioceses' goals, timelines and outcomes so that they will not only be the first Diocese in the world to make such commitments but also the first to bring those commitments to fruition.

Comprehensive Plan & Sustainability Contributions

The Haley Road Solar Project (HPSP) will help to advance the Imagine Lexington: 2045 Comprehensive Plan. The project is fully aligned to the LFUCG objective to pursue community-wide net zero greenhouse gas emissions by 2050 (Goal 2 in the comprehensive plan). Furthermore, Lexington's Race to Net Zero plan addresses the emissions portion of Empower Lexington, the city's overall sustainability plan. As a direct advancement toward these aims, the HPSP yields projected reductions of greenhouse gas emissions measuring approximately **37,193 metric ton carbon equivalent (MTCE)** per year for the lifetime of the project.

Not only does the HPSP represent a tremendous opportunity for LFUCG to strive toward the goal of net zero greenhouse gas emissions by 2050, but the project will also support implementation of or furtherance of additional Comprehensive Plan goals:

- **Theme A: GROWING AND SUSTAINING SUCCESSFUL NEIGHBORS**

- o **Goal 2:** Support infill and redevelopment throughout urban service area a strategic component of growth.
- **THEME B: PROTECTING THE ENVIRONMENT**
 - o **Goal 1:** Protect water resources by improving urban stormwater and sanitary sewer infrastructure
 - o **Goal 2:** Identify and mitigate local impacts of climate change by tracking and reducing Lexington-Fayette County's carbon footprint and greenhouse gas emissions, and commit to community-wide net zero greenhouse gas emissions by the year 2050.
 - o **Goal 3:** Apply environmentally sustainable practices to protect, conserve, and restore landscapes and natural resources.
- **Theme C: CREATING JOBS & PROSPERITY**
 - o **Goals 1 and 2:** Support and showcase local assets to further the creation of a variety of jobs AND attract a wide array of employment opportunities that encourage an entrepreneurial spirit and enhance our ability to recruit and retain a talented, creative workforce by establishing opportunities that embrace diversity, equity, and inclusion in our community.
- **Theme E: MAINTAINING A BALANCE BETWEEN PLANNING FOR URBAN USES AND SAFEGUARDING RURAL LAND**
 - o **Goals 1 and 4:** Uphold the urban service area concept AND Protect Lexington's invaluable rural resources and inform long-range planning for housing, infrastructure, community facilities, and economic development by finalizing on the work of the sustainable growth task force and the goal 4 workgroup...for determining long term land use decisions involving the urban service boundary and rural activity centers.
- **Theme F: IMPLEMENTING THE PLAN FOR LEXINGTON FAYETTE COUNTY AND THE BLUEGRASS**
 - o **Goals 1, 2, and 3:** Engage and educate the residents of Lexington Fayette County in the planning process AND implement the 2045 comprehensive plan AND increase regional planning to ensure greater collaboration and stewardship of shared resources.

HPSP Social & Educational Programs

LFUCG, ER/SIS, and local education institutions and nonprofits will have the opportunity to frame the HPSP as an initiative to foster community accountability, civic engagement, and showcase Lexington-Fayette County leadership.

The HPSP team anticipates close collaboration with the LFUCG staff responsible for Environmental Quality and Public Works, Sustainability Program, Environmental Education

Program, Comprehensive Plan tracking, and potentially the communications team to deliver and message HPSP outcomes.

The HPSP also represents key collaboration opportunities to deliver Social Impact, including developing and messaging for best practices in land use, agrivoltaics, and local hires/training.

Land Use Best Practices

The proposed project is located 11.5 miles from downtown Lexington, making the site easily accessible for demonstration purposes. If the capacity and land allow, the proposed project will be one of the largest solar arrays installed on a retired landfill in the nation. This scale provides LFUCG the opportunity to demonstrate best-in-class emerging practices for developing brownfields to meet sustainability goals, generate revenue, and offset energy costs, while positioning local elected officials and economic development staff to demonstrate national thought leadership in the ongoing conversation about land use and development as the site is an easy drive for visitors to the downtown city offices.

Initial discussions with the Fayette County Public Schools (FCPS) Office of Innovation leadership have yielded a preliminary concept to introduce a HPSP student task force to potentially guide demonstration project design (informationally) and related messaging, with guidance provided by the ER Vice President of Social Impact. This task force may be called upon to support the programs detailed below.

Additionally, early conversations with the National Association of Development Organizations (NADO) and the National Association of Counties (NACo) note that landfill-to-solar models, like the Haley Pike Solar Project, are of high interest for their members' professional learning, case studies, and conference presentations, positioning our local leaders as national experts on brownfield development, land use, sustainability, and economic development.

Agrivoltaics

Agrivoltaics is the dual use of land for solar energy generation and agriculture. Edelen Renewables is partnered with American Farmland Trust on a separate initiative, titled Farmers Powering Communities, wherein best practices and implementation of agrivoltaics are deployed using national standards agreed upon by the agricultural sector.

As examples of agrivoltaic applications, a selected area within the HPSP layout may include the introduction of native species or grazing species, or the introduction of native pollinators.

Through the conceptualized student task force, the FCPS Office of Innovation has expressed interest to ER/SIS in identifying student leaders across academic and Career

and Technical Education (CTE) pathways – pulling largely from agriculture students at the Locust Trace Agri-Science Center and electrical pathway students at the downtown Hub for Innovative Learning and Leadership – to participate in co-designing potential demonstration project logic models, strategies and outcomes that create opportunities for the next generation of community leaders here in Central Kentucky. The Bluegrass Community and Technical College (BCTC) and additional higher education partners may also be engaged, in partnership with FCPS leaders, to form a coalition that removes barriers and creates access to opportunities for 16-to-25-year-olds interested in the emerging field of agriculture and energy.

Local Hires & Training

Edelen Renewables was the first to employ a “social impact” approach to solar development to ensure the benefits of solar investments are felt locally. In practice, this approach includes:

- Building coalitions of education and workforce partners to remove barriers and create training opportunities for the local workforce
- Intentional recruiting of local workers
- Prioritizing the hiring and training of local workforce to construct projects
- Payments in lieu of taxes tailored to each community’s needs
- Working closely with local stakeholders to create legacy projects that maximize community benefits that live beyond the life of the solar project

Leveraging our trademarked Social Impact SolarSM framework, ER/SIS is committed to recruiting, hiring, and preparing a local workforce to construct the HPSP through local partnerships with the Kentucky Career Center, Kentucky Workforce Innovation Board (KWIB), the Kentucky Solar Energies Industry Association (KYSEIA), BCTC, FCPS and local trade unions, such as LiUNA, International Brotherhood of Electrical Workers (IBEW), the International Union of Operating Engineers, and the Central Midwest Carpenters. Through these partnerships, low barrier workforce training programs and pathways from CTE and academic coursework to solar industry jobs will be codesigned to prepare our local Central Kentucky workforce for the on-the-job tasks and competencies necessary to be employable in the available civil, labor and electrical jobs on the HPSP.

Based on the JEDI tool, managed by National Renewable Energy Laboratory (NREL, industry standards for projecting the number of jobs estimate 140 to 200 jobs during the construction phase and 5 to 10 jobs during the operational phase of the project. All persons employed through this project will be paid prevailing wages based on Lexington, Kentucky metrics. Project and labor elements of the development process will be compliant with federal regulations (2 CFR Part 200 and 2 CFR Part 1500) and EPA-specific

guidelines, including Davis Bacon and Related Acts (DBRA) requirements. Edelen Renewables will comply with DBRA and submit certified payroll reports/submissions on its own behalf and for any subcontractors. That submission will include a Signed Statement of Compliance.

Additionally, ER/SIS will work with training providers such as KY Career Center, Kentucky Workforce Innovation Board (KWIB), Kentucky Community and Technical College System (KCTCS) and local trade unions to recruit and source local subcontractors, create pathways to employment for local workers seeking to enter the solar construction workforce, provide on-the-job training as necessary in service to project outcomes, and ensure that any worker seeking an industry credential is able to earn one through a local provider so that the worker is equipped to earn prevailing wages, get necessary work experience, be more employable on future solar projects, and have the opportunity to earn a stackable credential that leads to upward economic mobility long term.

With close proximity to FCPS, the specialty programs at Locust Trace, and the new HILL program, as well as the BCTC campus, there is ample opportunity to engage the next generation of community leaders in this future-focused project.

CONCLUSION

The Edelen Renewables/Social Impact solar LLC team is well prepared to deliver the Haley Pike Solar Project to supply renewable energy to power the local energy grid, as per the ultimate qualification of transmission system capacity available to inform the final, confirmed scale of the project.

As proposed, the HPSP yields no expected negative impact to rate-payers and will deliver revenue to LFUCG alongside progress toward the Net Zero comprehensive plan goals for our community. Our team is highly qualified and locally invested in positive outcomes for LFUCG – and our offer terms are comprehensive and competitive. The ER/SIS team will welcome any feedback or questions you may have on the Project as proposed.

Haley Pike

Solar Project

Appendix A
Tracker Spec Sheet #1:
GameChange Genius
Tracker 1P

TECHNICAL DATASHEET

GENIUS TRACKER™ 1P

HIGH POWER PRODUCING & FAST INSTALLING SOLAR TRACKER

ACTUATOR

Rugged design for 40-year field life
in harsh environmental climate:
IP66 rated.

PRE-ASSEMBLED DRIVE SYSTEM



50% FASTER

No machines or driveline for industry's
fastest install.

SADDLE BRACKET

Allows efficient alignment
with row tube.

CONTROLLER

24V battery charged by small solar module drives.
24V actuator motor, Zigbee wireless communication.

DRIVE POST

Available as either 8 in. [20.3 cm] wide SuperPost™
or Wide Flange.

SELF-LUBRICATING DRIVE BEARING

Self lubricating open form polymer bearing
that improves damping.

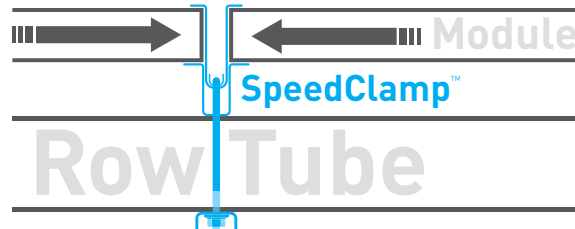
OWNER BENEFITS

UP
TO

2% MORE POWER PRODUCTION
RESULTS IN **HIGHER** KWH OUTPUT
based on project specifics

INSTALLER BENEFITS

200% FASTER INSTALL SPEED WITH **SPEEDCLAMP™** THAN ANY OTHER TRACKER



OWNER BENEFITS

UP TO 2% MORE POWER PRODUCTION
Results in higher kWh output.

HIGHER MODULE DENSITY

Increased row spacing means more time facing the sun and less time running from the shade. Adds up to 5% more power production than competitors.

WEATHERSMART™

Proprietary algorithm optimizes tilt angle based on weather data to maximize power production. Adds up to 1.25% additional power production.

LOWEST O&M COST

Lowest grass cutting & module washing cost.

ZERO MAINTENANCE DRIVE SYSTEM

INSTALLER BENEFITS

FASTEST INSTALLING SYSTEM

Advanced design innovations & pre-assembled components.

SPEEDCLAMP™

Mounts modules with no mounting hardware, speeds module installation up to 200%.

PRE-ASSEMBLED DRIVE ARM

Can be lifted by one worker. No machine required. 50% faster than most competing systems.

PE STAMPED DRAWINGS

Design loads according to local building codes: ASCE 7, NBC, Eurocode, AS1170, IS 875.

PROPRIETARY INTEGRATED-HARDWARE™

Proprietary hardware allows for faster structure assembly, module mounting, and reduced O&M cost. Oversized Serrated Flange Nyloc Nut and Oversized Flange Star Bolt with integrated star washer eliminates the need for washers and star washers.

GameChange Solar

HEADQUARTERS

230 East Ave, Suite 100, Norwalk, CT, USA
Phone: +1 (203) 769-3900
Fax: +1 (646) 607-2223
gamechangesolar.com
media@gamechangesolar.com

GLOBAL LOCATIONS

El Paso, TX
Florence, SC
Dublin, Ireland
Madrid, Spain
Wuxi, China
Bangalore, India
Dubai, UAE
Buenos Aires, Argentina
Johannesburg, South Africa
Newcastle, Australia

SERVICE SUPERCENTERS

& TRAINING FACILITIES
Lakeland, FL, USA Santiago, Chile
Mesa, AZ, USA Madrid, Spain
Bogotá, Colombia

RESEARCH & DEVELOPMENT CENTER

Brimfield, MA, USA

DISCLAIMER: GameChange Solar provides this documentation without warranty in any form either expressed or implied. GameChange Solar may revise this document at any time without notice.

Modules	Modules Supported	Most commercially available modules, including frameless crystalline and thin film
Civil	Slope Tolerance (N-S)	7% standard, can go to 15% special order
	Slope Tolerance (E-W)	15%
	Tracker follows slope (Y/N)	Yes
Structural	Drive Type	Robust linear actuator stainless steel & aluminum
	Posts per MW	350-400/MW for 1 up portrait / 2 up landscape or 250-300/MW for 2 up portrait
	Design Wind Load	105 mph [46.9 m/s](Std) / 130 mph [58.1 m/s](Premium 1) / 160 mph [72 m/s](Premium 2)
	Snow Load	5 psf [0.24 kPa](Std) / 20 psf [0.96 kPa](Premium 1) / 40 psf [1.92 kPa](Premium 2) / 60 psf [2.87 kPa](Premium 3)
	Tracking Range (Std)	45°, 52°
	Tracking Range (Premium)	60°
	Post Sections	Wide Flange or Roll formed posts
	Coatings	G90/120/180 Pregalvanized, ZnMgAl, and HDG available
	Post Size (Interior) & (Exterior)	6 x 6 in. [15.24 x 15.24 cm] roll form shape or W6x7, W6x9, W6x12 or W6x15 wide flange
	Motor Foundation	6.5 x 8 in. [16.51 x 20.32 cm] roll form hat or W6x15 or larger wide flange
	Standard Embedment	5 - 7 ft. [1.52 - 2.13 m]
	Flood Plain Allowance	Up to 6 ft. [1.83 m]
Design	Module Configuration	1 or 2 up in portrait for crystalline & First Solar Series 6™, 2 up landscape or 1 or 2 up in portrait for Bifacial, 3 to 4 up landscape for First Solar Series 4™
	Length per Table	Up to 500 ft. [150 m]
	Module Attachment	SpeedClamp™ or bolts available for bottom mount frame modules or clamps for glass on glass modules
	Ground Coverage Ratio	0.25 to 0.65
	Rows per Drive	1 drive per tracker(table), distributed drive system
	Powering System	Onboard solar module with battery
	Ground Clearance To Module	18 - 48 in. [45.7 - 121.9 cm] typical
	Min / Max Ground to Top of Post	3'-8" [1.12 m] typical + 9 in. [22.86 cm] min. adjustment range
	Backtracking / Anti-shading	Yes, although can be turned off as requested (i.e. for FSLR modules)
	Temperature Range	-20° C [-40° C also available] + 48° C
Install	Electromagnetic Interference	Compliant with FCC guidelines/ Applicable sections EN 61000
	Specialty Tools Required	No
Electrical	Max Offload for Deliveries	As per customer requirement
	Tracking Method	Time and location based algorithm
	String Design	Compatible with any string size
	Cable Supports	Hole punching per customer requirement for nominal cost
	Linear Actuator Motor	24V DC UL Listed
	Parasitic Loss	0 amps
	Controller Box	Zigbee wireless communications, 24V solar module and battery
	Control System	Master to Node: Zigbee wireless communications Master to SCADA/DAS: Modbus TCP communications
	# of Motors	20 to 52 / MW depending on module wattage and loading conditions (35 for typical conditions)
	1000V System or 1500V System	Both
	Grounding Method	Tracker structure is part of grounding path per UL 2703
	UL Compliance	UL 2703 / UL 3703
	Ingress Protection	IP66 Actuator [NEMA 4 equivalent]
	# Anemometers	1 per 6 MW - 10 MW typical
	Monitoring System	Web portal interface available Compatible with all standard third party monitoring vendors
	Snow & Flood Sensors	Move modules to optimum location for weather events
	Backup Power	Solar module and battery providing integrated backup - 3 days
O&M	Warranty	5 year drive & control, 10 year structural standard, 10 / 20 also available
Shipping	Max load	International - 18.5 to 22.5 metric tons per container USA - 45,000 lbs. [20,411 kg] per truckload, 5,000 lbs. [2,267 kg] maximum bundle size, 2,900 lbs. [1315.4 kg] or other maximum as requested by customers
	Shipping Containers or Flatbeds	Flat beds for structure, dry vans for hardware
	# Trucks or Containers per MWdc	4 typical for trucks, 5 typical for containers
Commissioning	Backfeed required?	No, generator for power as alternative

Haley Pike

Solar Project

Appendix B
Fixed Rack Spec Sheet #2:
GameChange Pour-in Place
Ballasted Ground System

TECHNICAL DATASHEET

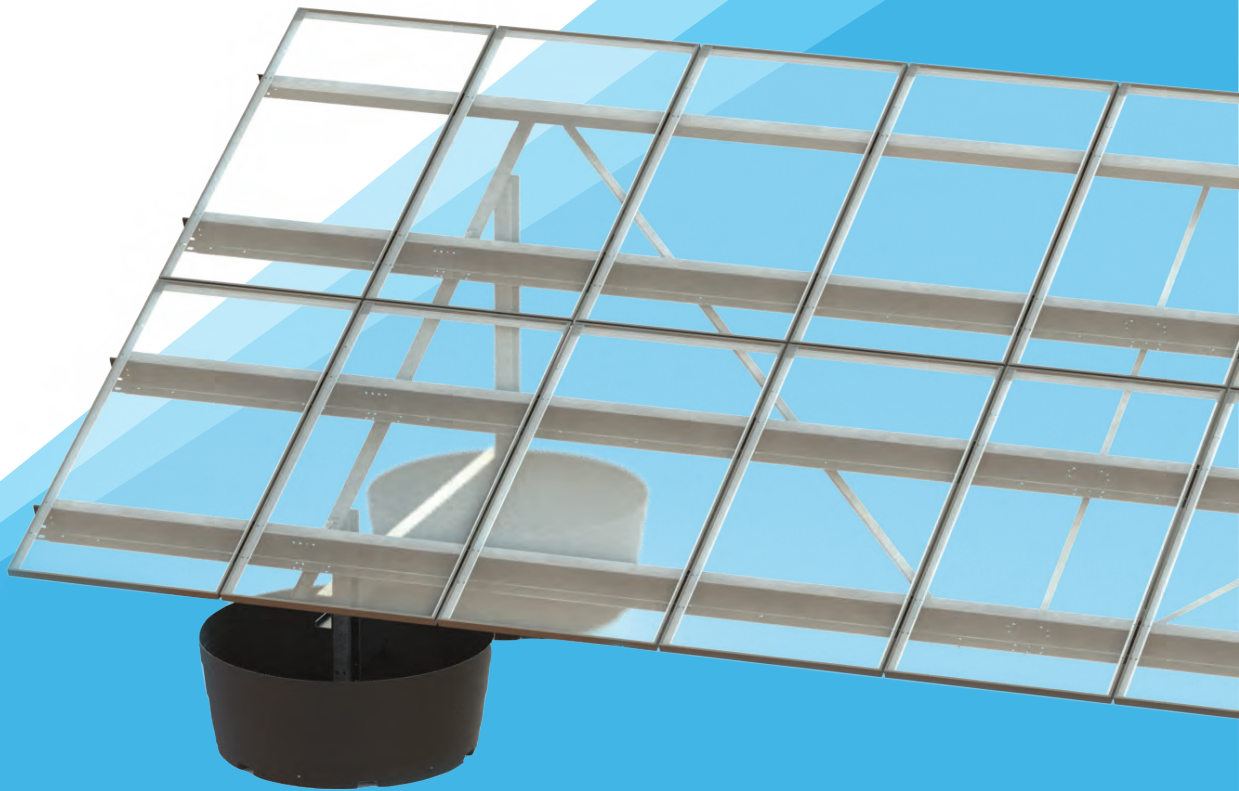
POUR-IN-PLACE™
BALLASTED GROUND SYSTEM

LANDFILL LEADER AND
BEST SOLUTION FOR ROCKY SITES

PLACE
LEAVE BEHIND TUBS

BUILD
SELF LEVELING RACKING

POUR
STANDARD CONCRETE



WHY FIGHT ROCKY GROUND WITH POSTS OR SCREWS?

- **68% FASTER THAN PRECAST**
- **MINIMAL IMPACT ON DRAINAGE**

POUR-IN-PLACE™ BALLASTED GROUND SYSTEM

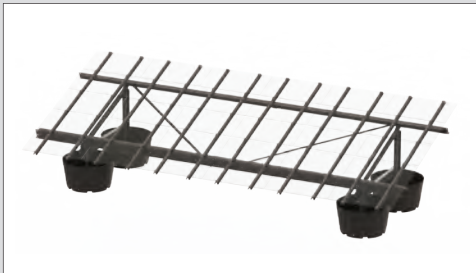
- ✓ Complete your site on time and on budget
- ✓ Peace of mind with risk-free install
- ✓ Up to 20% lower install racking cost than screw or post systems

SCREW OR POST SYSTEMS

- ✗ Slow drilling needed for every hole
- ✗ Slow and uncertain install timeline and budget
- ✗ Up to 25% higher install racking cost for screw or post systems



Pour-in-Place™ Ballasted Ground System has self-leveling technology which enables fast install



Pour-in-Place™ thin film panel clamps mount using socket head bolts



Slots combine with rail support self-leveling technology enables up to 7" [18 cm] vertical adjustment



Galvanized purlins with integrated wire management tray



Large hoop-shaped brackets slide to enable over 7" [18 cm] of vertical adjustment to facilitate install on ground sloping in all directions

FEATURES

- Pour-in-Place™ Ballasted Ground System: less concrete, faster install, steeper slopes
- Substantial adjustability allows for slopes up to 15%
- Self-leveling technology enables up to 7" [18 cm] total vertical adjustability including use of slots
- No gravel beds or other expensive ground preparations required for leveling as needed for precast - save up to USD 0.05/watt
- Up to 4'-0" [122 cm] high ground clearance to allow for snow and vegetation
- 10° to 35° tilt with multiple inter-row spacing options
- Full layout and engineering analysis for every project
- Integrated grounding and wire management

TEST & CERTIFICATION

- Wind tunnel tested by industry leader CPP and rated for 175 mph [78 m/s] wind speed
- Independent assessment by Black & Veatch
- Rated up to 90 psf [4,300 Pa] snow load
- ETL / UL 2703 tested (similar to the relevant sections of IEC 61215 & 61730)
- Meets IBC and ASCE standards for structural loading
- Warranty 20 years

CALCULATIONS

- PE Stamped Drawings - Design loads according to local building codes: ASCE 7, NBC, Eurocode, AS1170, GB 50009
- 100% code compliant designs for any jurisdiction
- Individual system structural calculations

MATERIAL

- Rail support structure components and module mounting rails: G90+ [20 µm] galvanized steel. Standard up to G180 [40 µm] special order.
- HMWPE forms
- Magnicoat bolts and serrated flange nuts for structural member connections
- Module mounting hardware - Top mount: module mounting clips & serrated flange nuts: magnicoat. Bottom mount: hex bolts, serrated flange nuts, star washers: magnicoat
- Integrated grounding with star bolts or teethed module clamps included - both approved under ETL / UL 2703, (similar to the relevant sections of IEC 61215 & 61730)
- Proprietary Integrated Hardware™: For faster structure assembly, module mounting and reduced O&M cost. Oversized Serrated Flange Nyloc Nut and Oversized Flange Star Bolt with integrated star washer eliminates the need for washers and star washers.

GameChange Solar HEADQUARTERS

152 W 57th Street 44th Fl.
New York, NY 10019, USA
Phone: +1 (212) 388-5160
Fax: +1 (646) 607-2223
media@gamechangesolar.com
gamechangesolar.com

EUROPE OFFICES

Dublin, Ireland
Zug, Switzerland
Madrid, Spain

ASIA OFFICES

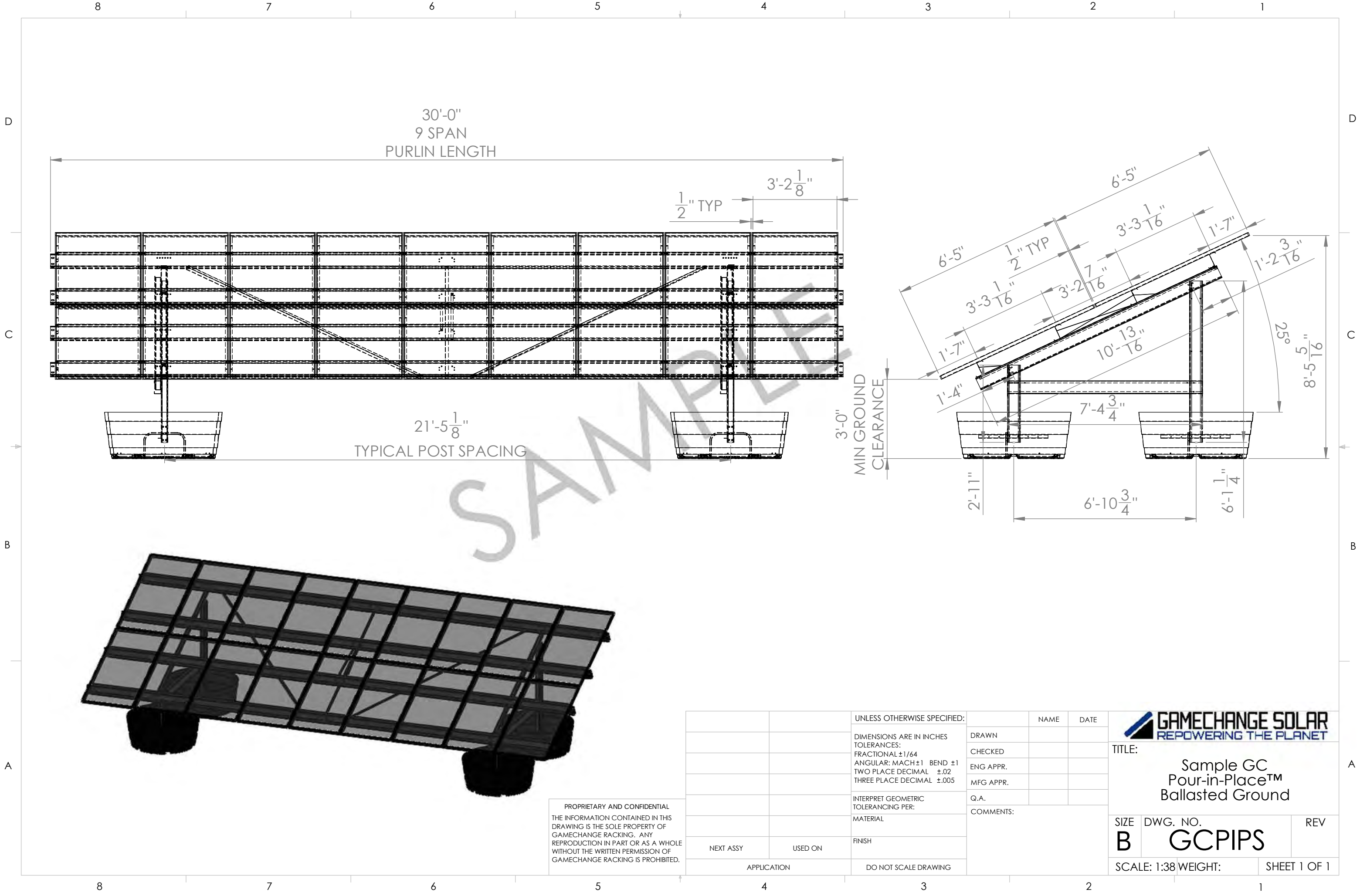
Wuxi, China
Mumbai, India

DISCLAIMER: GameChange Solar provides this documentation without warranty in any form either expressed or implied. GameChange Solar may revise this document at any time without notice.

Haley Pike

Solar Project

Appendix C
Fixed Rack: GameChange
Pour-in-Place Ballasted
Ground System Diagram



PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS
DRAWING IS THE SOLE PROPERTY OF
GAMECHANGE RACKING. ANY
REPRODUCTION IN PART OR AS A WHOLE
WITHOUT THE WRITTEN PERMISSION OF
GAMECHANGE RACKING IS PROHIBITED.

		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/64 ANGULAR: MACH±1 BEND ±1 TWO PLACE DECIMAL ±.02 THREE PLACE DECIMAL ±.005	DRAWN	NAME	DATE				
			CHECKED			TITLE:			
			ENG APPR.			Sample GC Pour-in-Place™ Ballasted Ground			
			MFG APPR.						
			INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:			SIZE	DWG. NO.	REV	
NEXT ASSY	USED ON	FINISH				B	GCIPLS		
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:38		WEIGHT:	SHEET 1 OF 1

Haley Pike

Solar Project

Appendix D
Inverter Spec Sheet: SMA
Medium Voltage
Power Station



Medium Voltage Power Station

4000-S2-US / 4200-S2-US /
4400-S2-US / 4600-S2-US

Turnkey solution for PV, storage and
PV plus storage power plants



Robust

- Complete station is UL 1741-listed* for higher safety and lower risk
- Station and all individual components type-tested for maximum reliability
- Optimally suited to extreme ambient conditions with galvanized base frame

Simple Integration

- Plug and play concept
- Completely pre-assembled for easy set-up and commissioning

Cost-Effective

- Fully integrated transformer and switchgear simplifies logistics
- Minimum O&M requirements create lowest cost of ownership

Flexible

- One product for all markets and applications
- Ideally suited for PV applications, PV plus storage (DC coupled) and storage applications (AC coupled)

With the power of the SMA's robust central inverters, the Sunny Central UP or Sunny Central Storage UP, and with perfectly integrated medium-voltage components, the Medium Voltage Power Station (MVPS) offers high power density in a turnkey solution available worldwide.

The solution is the ideal choice for next-generation PV power plants and battery-storage power plants operating at 1500 VDC. Delivered pre-configured on a 20-foot container-integrated skid, the solution is easy to transport and quick to commission. The UL 1741-listed* MVPS combines rigorous plant safety with maximum energy yield and minimized operating risk.

*All individual components are UL or IEEE listed. When specified with Siemens switchgear, the complete platform is UL listed.

MEDIUM VOLTAGE POWER STATION

4000-S2-US / 4200-S2-US

Technical Data	MVPS 4000-S2-US	MVPS 4200-S2-US
Input (DC)		
Available inverters	1 x SC 4000 UP-US or 1 x SCS 3450 UP-US or 1 x SCS 3450 UP-XT-US	1 x SC 4200 UP-US or 1 x SCS 3600 UP-US or 1 x SCS 3600 UP-XT-US
Max. input voltage	1500 V	1500 V
Number of DC inputs	dependent on the selected inverter	
Integrated zone monitoring	○	
Output (AC) on the medium-voltage side		
Rated power with SC-UP-US (at -25°C to +35°C / 40°C optional 50°C) ¹⁾	4000 kVA / 3600 kVA	4200 kVA / 3780 kVA
Rated power with SCS-UP-US (at -25°C to +25°C / 40°C optional 50°C) ¹⁾	3450 kVA / 2930 kVA	3620 kVA / 3075 kVA
Charging power with SCS-UP-XT-US (at -25°C to + 25°C / 40°C optional 50°C) ¹⁾	3590 kVA/3000 kVA	3770 kVA / 3150 kVA
Discharging power with SCS-UP-XT-US (at -25°C to + 25°C / 40°C optional 50°C) ¹⁾	4000 kVA / 3400 kVA	4200 kVA / 3570 kVA
Typical nominal AC voltages	12 kV to 34.5 kV	12 kV to 34.5 kV
AC power frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
Transformer vector group Dy11 / YNd11 / YNy0	● / ○ / ○	● / ○ / ○
Transformer cooling methods	KNAN ²⁾	KNAN ²⁾
Transformer efficiency: Standard / Eco Design 1 / Eco Design 2	● / ○ / ○	● / ○ / ○
Max. total harmonic distortion	< 3%	
Reactive power feed-in (up to 60% of nominal power)	○	
Inverter efficiency		
Max. efficiency ³⁾ / European efficiency ³⁾ / CEC weighted efficiency ⁴⁾	98.7% / 98.6% / 98.5%	
Protective devices		
Input-side disconnection point	DC load-break switch	
Output-side disconnection point	Medium-voltage vacuum circuit breaker	
DC overvoltage protection	Surge arrester type I	
Galvanic isolation	●	
Internal arc classification medium-voltage control room (according to IEC 62271-202)	IAC A 25 kA 1 s	
General data		
Dimensions equal to 20-foot HC shipping container (W / H / D)	6058 mm / 2896 mm / 2438 mm	
Weight	< 18 t	
Self-consumption (max. / partial load / average) ¹⁾	< 8.1 kW / < 1.8 kW / < 2.0 kW	
Self-consumption (stand-by) ¹⁾	< 370 W	
Environment: standard / harsh / harsh+	● / ○ / ○	
Maximum permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month per year) / 0% to 95%	
Max. operating altitude above mean sea level 1000 m / 2000 m	● / ○	
Fresh air consumption of inverter	6500 m³/h	
Features		
DC terminal	Terminal lug	
AC connection	Outer-cone angle plug	
Station enclosure color	RAL 7004	
Transformer for external loads: without / 10 / 20 / 30 / 40 / 50 / 60 kVA	● / ○ / ○ / ○ / ○ / ○ / ○ / ○	
Fuses for external transformers: without / 120 kVA / 180 kVA	● / ○ / ○	
Medium-voltage switchgear: without / 1 panel / 3 panels / 600 A / 800 A		
2 cable feeders with load-break switch, 1 transformer feeder with circuit breaker, internal arc classification IAC A FL 25 kA 1s, partly with UL or ETL Listing	● / ○ / ○ / ○ / ○	
Short circuit rating medium voltage switchgear (20 kA 1 s / 20 kA 3 s / 25 kA 1 s)	● / ○ / ○	
Integrated oil containment: without / with	● / ○	
Industry standards (for other standards see the inverter datasheet)	IEC 60076, IEC 62271-200, IEC 62271-202, EN50588-1 IEEE 1547-2018 ⁵⁾ , IEEE C37.100.1, IEEE C57.12, C37.20.9, UL 1741 listed ⁶⁾ , CSC Certificate, UL 347	
● Standard features ○ Optional features – Not available		
Type designation	MVPS-4000-S2-US	MVPS-4200-S2-US

1) Data based on inverter. Further details can be found in the data sheet of the inverter. Cold weather -37° is an option.

2) KNAN = Natural ester fluid with natural air cooling

3) For SCS UPS, for other efficiency values check specific inverter datasheet

4) Efficiency measured at inverter with internal power supply

5) Harmonics are within IEEE 1547-2018 limits with at least two inverters in operation.

6) UL listing of the MVPS skid requires UL listed medium voltage switchgear

* Preliminary

MEDIUM VOLTAGE POWER STATION

4400-S2-US / 4600-S2-US

Technical Data	MVPS 4400-S2-US	MVPS 4600-S2-US
Input (DC)		
Available inverters	1 x SC 4400 UP-US or 1 x SCS 3800 UP-US or 1 x SCS 3800 UP-XT-US or 1 x SCS 4400 UP-S-US	1 x SC 4600 UP-US or 1 x SCS 3950 UP-US or 1 x SCS 3950 UP-XT-US or 1 x SCS 4600 UP-S-US
Max. input voltage	1500 V	1500 V
Number of DC inputs	dependent on the selected inverter	
Integrated zone monitoring	○	
Output (AC) on the medium-voltage side		
Rated power with SC-UP-US (at -25°C to +35°C / 40°C optional 50°C) ¹⁾	4400 kVA / 3960 kVA	4600 kVA / 4140 kVA
Rated power with SCS-UP-US (at -25°C to +25°C / 40°C optional 50°C) ¹⁾	3800 kVA / 3230 kVA	3960 kVA / 3365 kVA
Charging power with SCS-UP-XT-US (at -25°C to +25°C / 40°C optional 50°C) ¹⁾	3950 kVA / 3300 kVA	4130 kVA / 3455 kVA
Discharging power with SCS-UP-XT-US (at -25°C to +25°C / 40°C optional 50°C) ¹⁾	4400 kVA / 3740 kVA	4600 kVA / 3910 kVA
Rated power with SCS-UP-S-US (from -25°C to +35°C / 40°C; optional 50°C) ¹⁾	4400 kVA / 3960 kVA*	4600 kVA / 4140 kVA*
Typical nominal AC voltages	12 kV to 34.5 kV	
AC power frequency	50 Hz / 60 Hz	
Transformer vector group Dy11 / YNd11 / YNy0	● / ○ / ○	
Transformer cooling methods	KNAN ²⁾	
Transformer efficiency: Standard / Eco Design 1 / Eco Design 2	● / ○ / ○	
Max. total harmonic distortion	< 3%	
Reactive power feed-in (up to 60% of nominal power)	○	
Inverter efficiency		
Max. efficiency ³⁾ / European efficiency ³⁾ / CEC weighted efficiency ⁴⁾	98.7% / 98.6% / 98.5%	
Max. efficiency of SCS-UP-S-US ³⁾	99.2%	
Protective devices		
Input-side disconnection point	DC load-break switch	
Output-side disconnection point	Medium-voltage vacuum circuit breaker	
DC overvoltage protection	Surge arrester type I	
Galvanic isolation	●	
Internal arc classification medium-voltage control room (according to IEC 62271-202)	IAC A 25 kA 1 s	
General data		
Dimensions equal to 20-foot HC shipping container (W / H / D)	6058 mm / 2896 mm / 2438 mm	
Weight	< 18 t	
Self-consumption (max. / partial load / average) ¹⁾	< 8.1 kW / < 1.8 kW / < 2.0 kW	
Self-consumption (stand-by) ¹⁾	< 370 W	
Environment: standard / harsh / harsh+	● / ○ / ○	
Maximum permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month per year) / 0% to 95%	
Max. operating altitude above mean sea level 1000 m / 2000 m	● / ○	
Fresh air consumption of inverter	6500 m³/h	
Features		
DC terminal	Terminal lug	
AC connection	Outer-cone angle plug	
Station enclosure color	RAL 7004	
Transformer for external loads: without / 10 / 20 / 30 / 40 / 50 / 60 kVA	● / ○ / ○ / ○ / ○ / ○ / ○ / ○	
Fuses for external transformers: without / 120 kVA / 180 kVA	● / ○ / ○	
Medium-voltage switchgear: without / 1 panel / 600 A / 800 A	● / ○ / ○ / ○ / ○	
2 cable feeders with load-break switch, 1 transformer feeder with circuit breaker, internal arc classification IAC A FL 25 kA 1s, partly with UL or ETL Listing	● / ○ / ○ / ○ / ○	
Short circuit rating medium voltage switchgear (20 kA 1 s / 20 kA 3 s / 25 kA 1 s)	● / ○ / ○	
Integrated oil containment: without / with	● / ○	
Industry standards (for other standards see the inverter datasheet)	IEC 60076, IEC 62271-200, IEC 62271-202, EN50588-1 IEEE 1547-2018 ⁵⁾ , IEEE C37.100.1, IEEE C57.12, C37.20.9, UL 1741 listed ⁶⁾ , CSC Certificate, UL 347	
● Standard features ○ Optional features – Not available Last revised: 08/2025		
Type designation	MVPS-4400-S2-US	MVPS-4600-S2-US

1) Data based on inverter. Further details can be found in the data sheet of the inverter. Cold weather -37° is an option.

2) KNAN = Natural ester fluid with natural air cooling

3) Efficiency measured at inverter without internal power supply

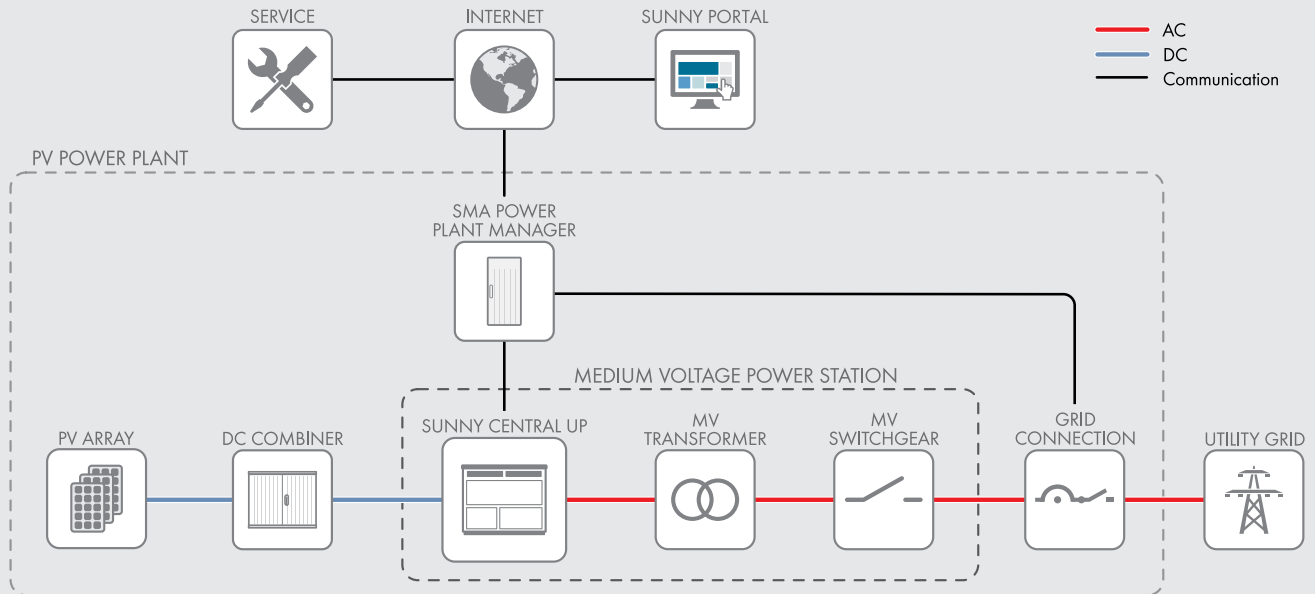
4) Efficiency measured at inverter with internal power supply

5) Harmonics are within IEEE 1547-2018 limits with at least two inverters in operation.

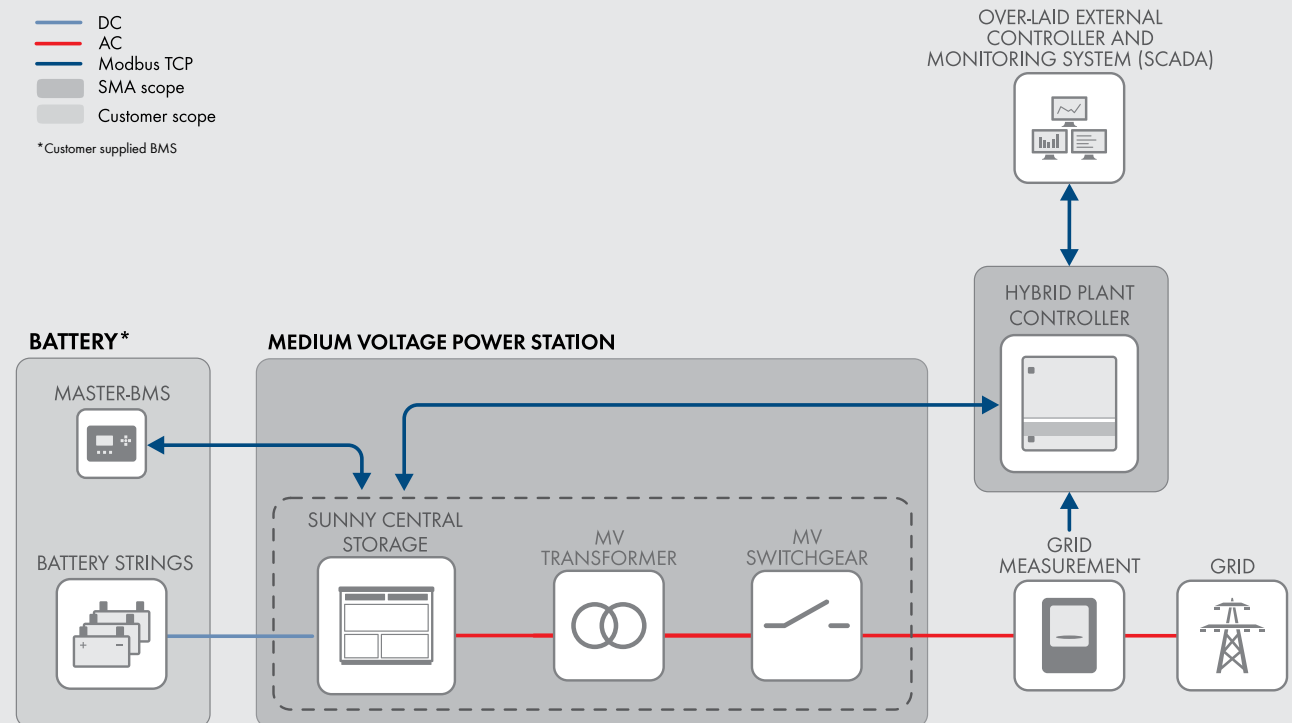
6) UL listing of the MVPS skid requires UL listed medium voltage switchgear

* Preliminary

PV system diagram



Storage system diagram



Haley Pike Solar Project

Appendix E
Landfill Cap Transportation and
Laydown Protective Measures
(examples)

Landfill Cap Transportation and Laydown Protective Measures



Example: Light hauling eqpt with floatation tires.
Equipment to be lifted onto capped areas via crane.



Example: ground protection mats for laydown and staging areas etc.

Haley Pike Solar Project

Appendix F Water Quality Management Fee Calculations

Appendix F: Water Quality Management Fee Calculations

Water Quality Management Fee Calculation													
	Number of		Total Unadjusted	Area Adjustment	Total Adjusted	Equivalent Residential Unit			Total Monthly	Total Annual			
	panels	Panel size Sq Ft	Sq Ft	%	Sq Ft	(ERU)	Rate		Rate	Rate	Acres	Fee/Acre/Year	
Trackers	63,560	33.5	2,129,260	46.95%	999,642	399.86	\$ 4.32	\$	1,727	\$20,729	219	\$ 94.65	
Fixed	40,223	33.5	1,347,471	81.92%	1,103,783	441.51	\$ 4.32	\$	1,907	\$22,888	138	\$ 165.86	
										\$43,617	357	\$ 122.18 Average fee per acre	

Tilt Calculation									
	Storage at 0 Degrees	Maximum Tilt During Day	Minimum Tilt During Day	Max in Radians	Min in Radians	% Coverage Max Tilt (+)	% Coverage Max Tilt (-)	Average Tilt	Total Adjusted Area %
Trackers	50%	35	-35	0.611	-0.611	82%	82%	94%	46.95%
Fixed	0%	Tilt 35	Tilt in Radians 0.611	% Coverage 0.819	Total Adjusted Area % 81.92%				

Panel Type Acreage Calculation			
	Number of panels	Panel size sq. ft.	Acres leased for panels
	103,783	33.5	357
		Percentage of Total Panels	Acres per Panel Type
Trackers	63,560	61.24%	219
Fixed	40,223	38.76%	138
	103,783		357