

Company Overview



Our Mission

To bring to communities low-cost, clean energy; economic development and jobs; and partnerships they can count on for the life of their projects.



- Proven **team** with a disciplined approach and an unwavering commitment to the Company's **guiding principles**
- ✓ A customer-focused, fully integrated independent power producer with a comprehensive platform to develop, design, finance, construct, own, operate and maintain utility-scale solar and battery energy storage solutions tailored to meet customer needs
- ✓ Develop-to-own business model provides ability to deliver value through all aspects of the project life cycle
- √ 100% success rate of converting signed PPAs into highperforming operating projects
- Works in concert, rather than in competition, with utilities to foster deployment of solar to meet the needs of C&I customers and drive economic development that benefits local communities
- Pursues **continuous improvement** as long-term owners to deliver superior performance across the value chain, including its trademarked, transformative industry standard for land management, **Regenerative Energy®**
- ✓ Acquired clean tech pioneer Clearloop® to support C&I buyers seeking to meet decarbonization and broader community impact goals

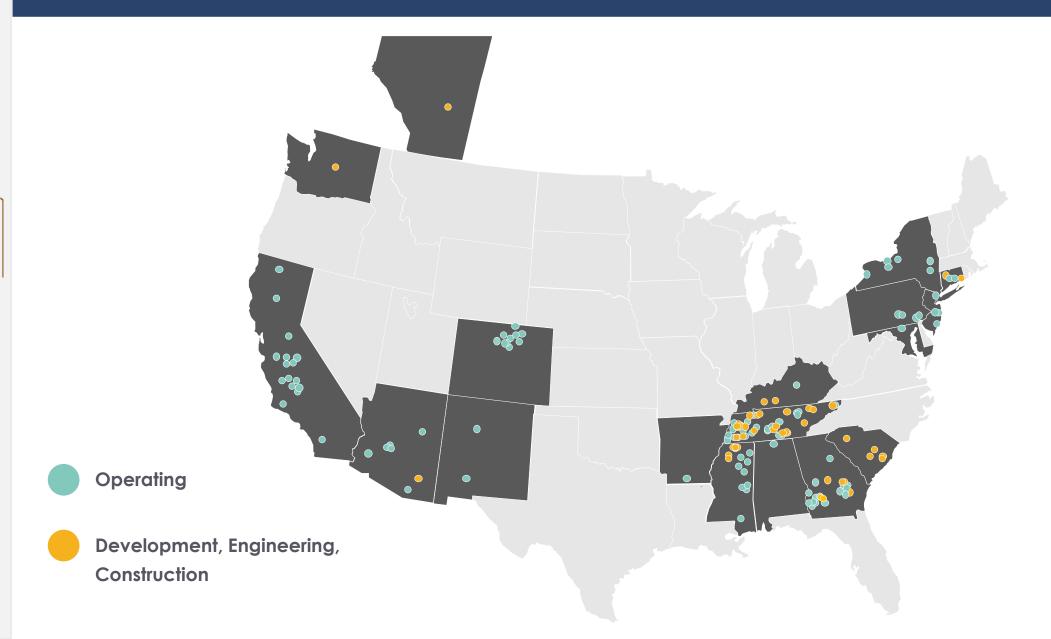
Silicon Ranch Maintains an Unwavering Commitment to Our Core Values

- We believe communities deserve reliable, costeffective CHOICES for their source of power.
- 2. We believe solar energy projects when developed responsibly create enduring, long-term value and deliver a meaningful legacy to their communities.
- 3. We believe our employees can make a difference in the communities we serve.
- 4. We believe in the power of collaborative partnerships.
- 5. We believe we are only successful when our partners are successful.
- 6. We require honesty and integrity in everything we do.
- 7. We listen, learn, and respond.
- 8. We do what we say we will do.
- 9. We believe in square corners.
- 10. We choose the right path over the easier path to get the job done.



Geographically Diverse Portfolio

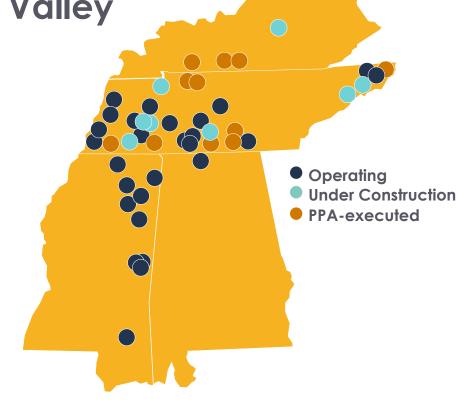
Silicon Ranch's Operating, Under Construction and PPA-Executed Projects Span Across 17 States Coast-to-Coast and Alberta, Canada



Silicon Ranch in the Tennessee Valley

Silicon Ranch pioneered utilityscale solar in the Tennessee Valley and remains committed to our home market, with more than 35 operating facilities and ~30 more under contract across the region.

- Pioneered utility-scale solar in 2012
- **Proud to be headquartered** in the Valley and serve the communities where we live and work
- **Productive relationships** with TVA, LPCs, state and community leadership, as well as organizations such as TenneSEIA, TAEBC, and the Tennessee Business Roundtable
- Proud of our role in growth and vitality of local industry
- Significant investments throughout the Valley and deep history of supporting local economic development
- Contracted Capacity(1): 1,100MW+



\$1.9 Billion

Capital Investments *Through 2025

Total Tax Payments to Counties of Tennessee Valley

2.500 **Jobs Created**



Jobs

2.4k Construction 100 Operation & Service Jobs



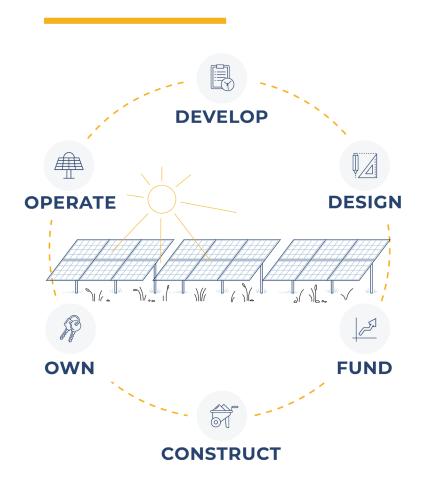
9.000 **Acres Developed**



9k

8k Managed Regeneratively to Restore Soil and Grasslands

Silicon Ranch Business Model: A Fully-Integrated Platform



In-House Expertise

Develop

- Originate development process based on customer demand, not policy
- Secure favorable interconnection in consultation with utility partners and experienced utility planning team
- Secure quality sites through strong community relations and reputation

2. Design

- Projects engineered for 40-year design life
- Tier 1 equipment selected to maximize long-term performance
- Experienced O&M team provides continuous feedback to improve fleet performance and de-risk portfolio

3. Fund

- Access to captive finance companies allows financial optimization and streamlines project finance process
- National award winning in-house financial team has deep experience with all tax equity structures

4. Construct

- SR EPC is a licensed general contractor in 20+ states, allowing Silicon Ranch to control all aspects of plant and interconnection construction
- SR EPC subcontracts with leading national construction firms and directly procures from leading module and transformer manufacturers

5. Own

- Unlike most solar developers, Silicon Ranch <u>owns</u> 40,000+ acres of prime solar sites and has <u>purchase</u> options on over 55,000 additional acres, strategically located to support its contracted backlog and development pipeline
- Regenerative Energy® model of land management sequesters carbon and restores land to functioning grassland ecosystem

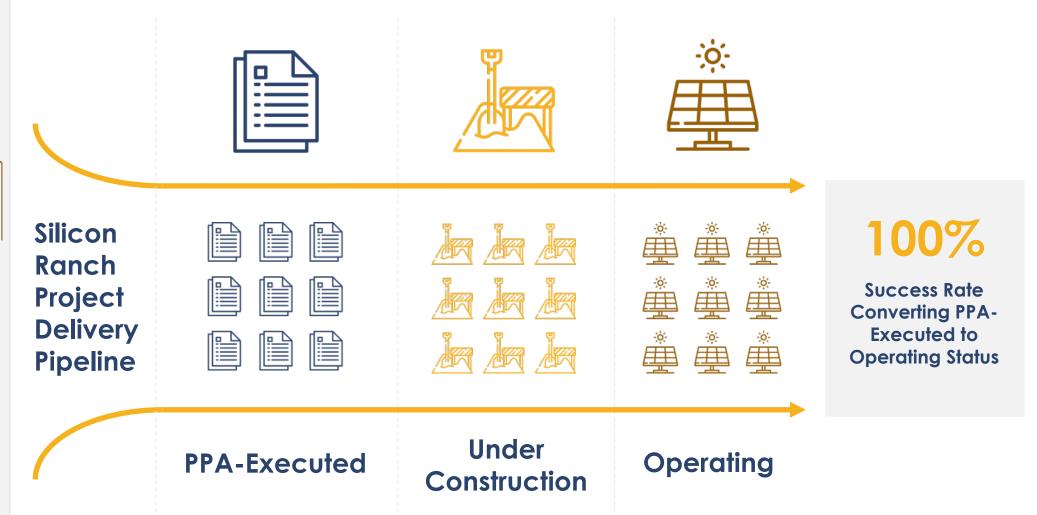
6. Operate

- Industry-leading O&M team deploys cutting-edge predictive analytics to reduce downtime, optimize performance, and extend the facility's lifespan
- State-of-the-art control center at headquarters

SILICON BANCH

Perfect Track Record of Project Delivery

Silicon Ranch's Methodical and Diligent Approach to Pipeline Development Has Ensured 100% Success Rate in Converting Signed PPAs into Successful Operating Projects.





Solar Process





Step 1: Sun hits modules and electrons are knocked off silicon modules and run as DC current through wires



Step 2: DC Current circuits come together and are adjoined by a combiner box



Step 3: Combiner Box connects to the inverter that converts the DC Power to AC Power



Step 4: The Inverters then send the newly converted AC Power to a local transformer to step up the voltage (usually 34.5kV)



Step 5: The local transformer then sends the stepped-up AC Power to the Main Transformer in the substation where it will be either stepped up again or stepped down depending on the grid

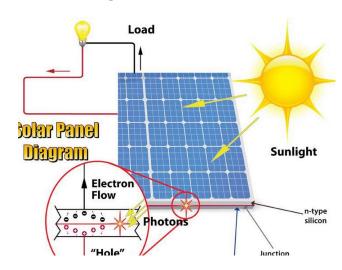




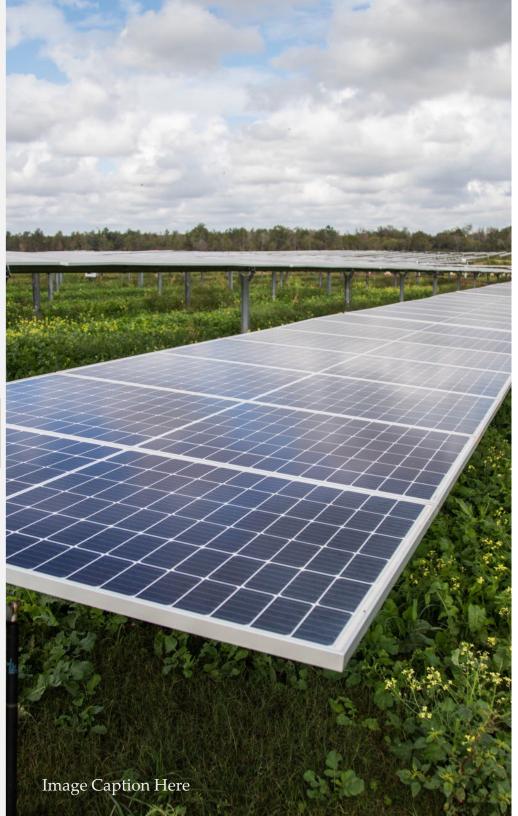


Step 1: Electrons Knocked off PV Cells

When the sun shines onto a solar panel, energy from the sunlight is absorbed by the PV cells in the panel. This energy creates electrical charges that move in response to an internal electrical field in the cell, causing electricity to flow.







Step 2: DC Current circuits come together and are adjoined by a combiner box

The panels are all connected in series by wire management that carries the DC (Direct Current) Electricity from the panels into the combiner box.

Solar photovoltaic array combiners (solar panel combiner boxes) are commonly used to combine several solar panels (or strings of panels) into a common bus. They are basically junction boxes that are specially designed for the types of wiring used in PV systems.







Step 3: Combiner Box connects to the inverter that converts the DC Power to AC Power

Once all the DC Current is combined, it is then sent to the inverter which "inverts" the electricity from DC to AC

An inverter is one of the most important pieces of equipment in a solar energy system. It's a device that converts direct current (DC) electricity, which is what a solar panel generates, to alternating current (AC) electricity, which the electrical grid uses.





Step 4: The Inverters then send the newly converted AC Power to a local transformer to step up the voltage (usually 34.5kV)

The Inverter sends the AC Power to the Local MV (Medium Voltage) Transformer in order to step up the voltage and send it off to the substation. We do this because it is much easier to send power with this voltage over long distances. 34.5kV is an industry standard.

Transformers are critical components in solar energy production and distribution. Historically, transformers have "stepped-up" or "steppeddown" energy from non-renewable sources. There are different types of solar transformers including distribution, station, sub-station, pad mounted and grounding.





Step 5: The local transformer then sends the stepped-up AC Power to the Main Transformer in the substation where it will be either stepped up again or stepped down depending on the grid

SRC projects connect into various utilities. We need to make sure that we are connecting at the same voltages as them so that we are not putting out "bad power". Because of this, we make sure that the voltage that we connect into the utilities is the same.

The Main Transformer is the heart of the substation. The transformer changes the relationship between the incoming voltage and current and the outgoing voltage and current. Substation transformers are rated by their primary and secondary voltage relationship and their power carrying capability.

String Inverters vs Central Inverters

String inverters use a distributed rather than centralized architecture, with a small inverter for smaller sections of the array. They convert much less power than a central inverter, but the advantage is that should an inverter fail, only the power from one small section is lost as opposed to an entire power block.



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Trackers



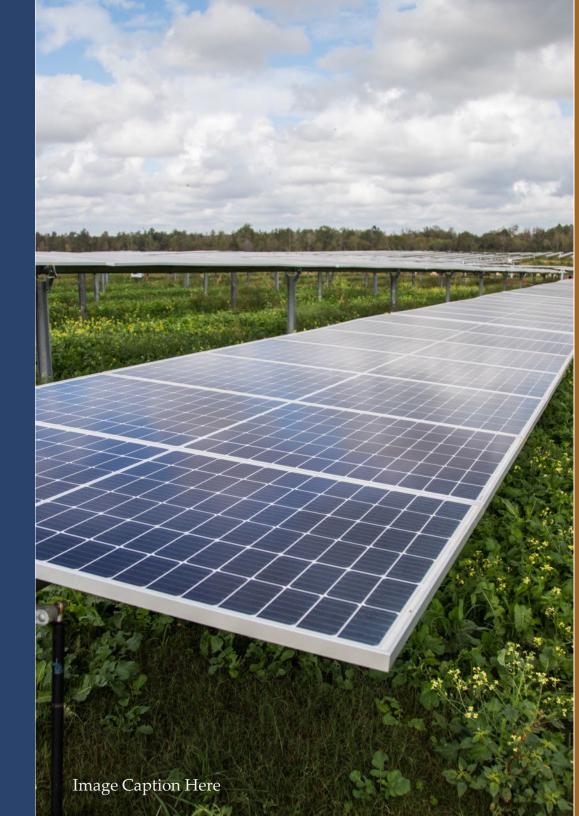
Self Powered Controller (SPC) – Determines which angle the tracker should be at to maximize the amount of energy produced. It is a small box that can also be controlled manually. You can see it in this picture in Black on the Torque Tube Self powered Tracker (SPT) - Brings self-contained motor power to each row, eliminating power wiring and trenching.

Network Controlled Unit (NCU) – This is what the SPCs report to. It lets each SPC know if there is too much wind, and the trackers need to go to stow (the most stable position the modules can assume to withstand the highest wind loads) or there is another catastrophic event, and a different angle must be assumed Torque Tubes - long cylindrical tubes that hold the modules Slew Gear - Go into the Torque Tube to rotate them to the correct angle Piles – Driven into the ground to hold up the torque tubes

Fixed-Tilt vs Single Axis Trackers

Fixed-tilt projects are easier to plan and execute at a cheaper cost. However, despite these cost and land barriers, single-axis trackers allow for greater energy production at a given site, since the solar panels track the sun from east to west at its peak intensity.

At SRC we use single axis tracking because of the lifespan of our projects (40 years). This makes the investment in the single axis trackers worth it





Development Process



SILICON RANCE

Phase 0: Greenfield

Deliverables:

- Land:
 - Executed Option Agreement(s)
- Site Diligence:
 - Internal Desktop Review
 - HST Layout
- Community/Permitting:
 - Early outreach to Economic Development Groups or Similar local group
 - Community Engagement Plan Draft with Anticipated Schedule
- Interconnection:
 - Transmission screening report
 - Interconnection Application Submitted

Once an asset has all items, the commercial lead will host a Framing Workshop

Phase 1: Early Stages

Deliverables:

- Land:
 - Initial Title Commitment
 - Title Memo
 - Option MOU Recorded
 - Site control on all required acres and path to POI
- Site Diligence:
 - Full Project Development Budget & Schedule Approved
 - Task Orders Executed and NTP to vendors provided
- Community/Permitting:
 - Initial Community Meetings
 - Community Engagement Plan Finalized
 - Includes land permitting schedule
- Interconnection:
 - System Impact Study complete
 - Approved to move forward with asset

^{*}Once an asset has successfully achieved all bolded items, it is considered Power Market Ready for sales team

Phase 2: Mid Stages

Deliverables:

- Land:
 - Option Payments Made on Schedule
 - Vegetation Management Plan in place
 - Tax PILOT MOU Executed (if applicable)
- Site Diligence:
 - Final Diligence Reports Complete
 - 3rd Party Engineered Layout with constraints from field diligence
- Community/Permitting:
 - Permit Applications Submitted
 - Use and Environmental when applicable
- Interconnection:
 - Facilities Study Complete (if applicable)

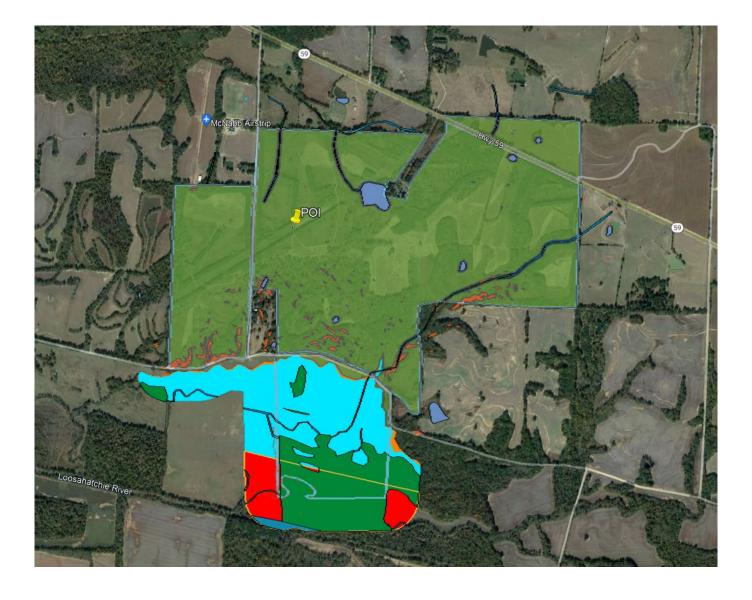
^{*}Once an asset has successfully achieved all bolded items, it is considered Power Market Ready for sales team

Phase 3: Final

Deliverables:

- Land:
 - Land Purchased/Leased
- Site Diligence:
 - EPC Handoff
- Community/Permitting:
 - AHJ Approvals
- Interconnection:
 - Interconnection Agreement Executed

Desktop Buildable Area (Sample)



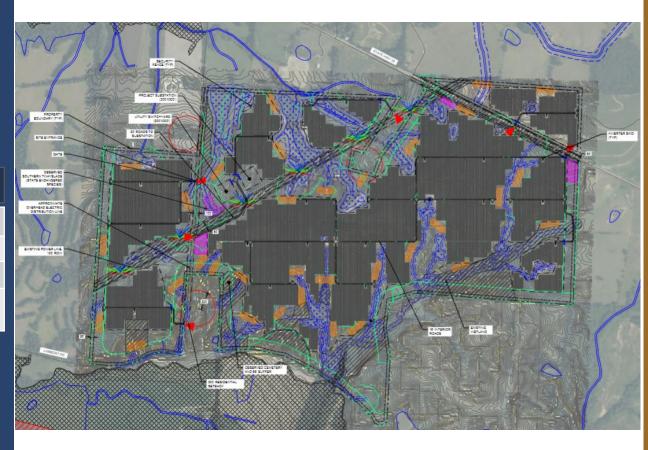


Current Layout

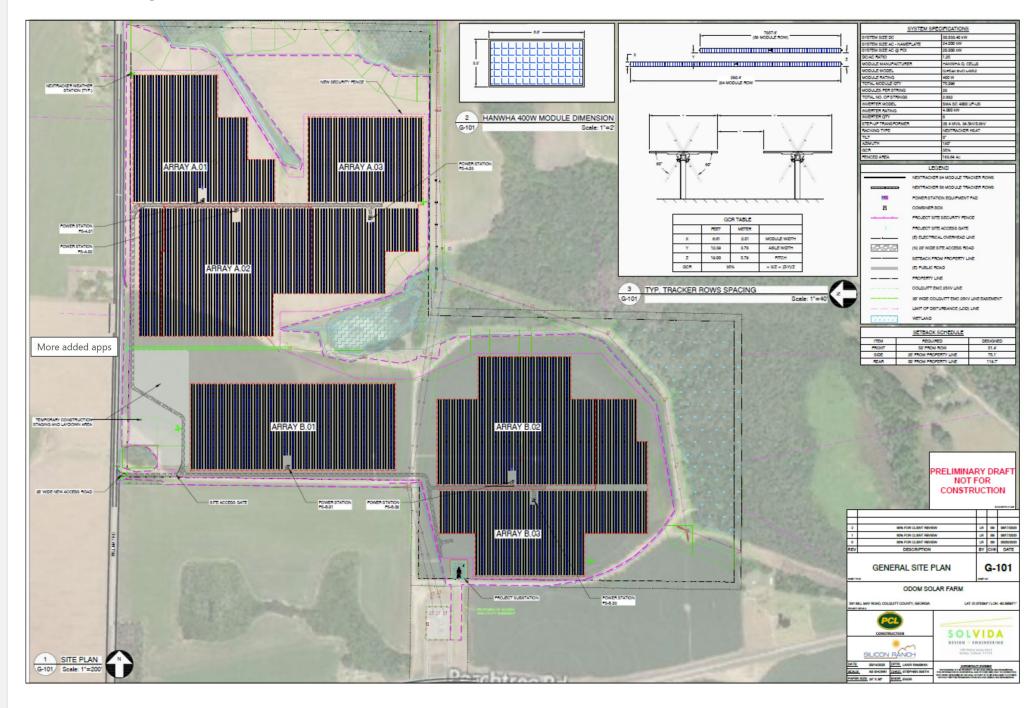
REVAMP Report Link – https://siliconranch.app.box.com/fil e/1248431228372

REVAMP Constraints

GCR	40%
Row spacing	16.60 ft
DC/AC Ratio	1.40
Buildable area used	424 acres



Project Layout



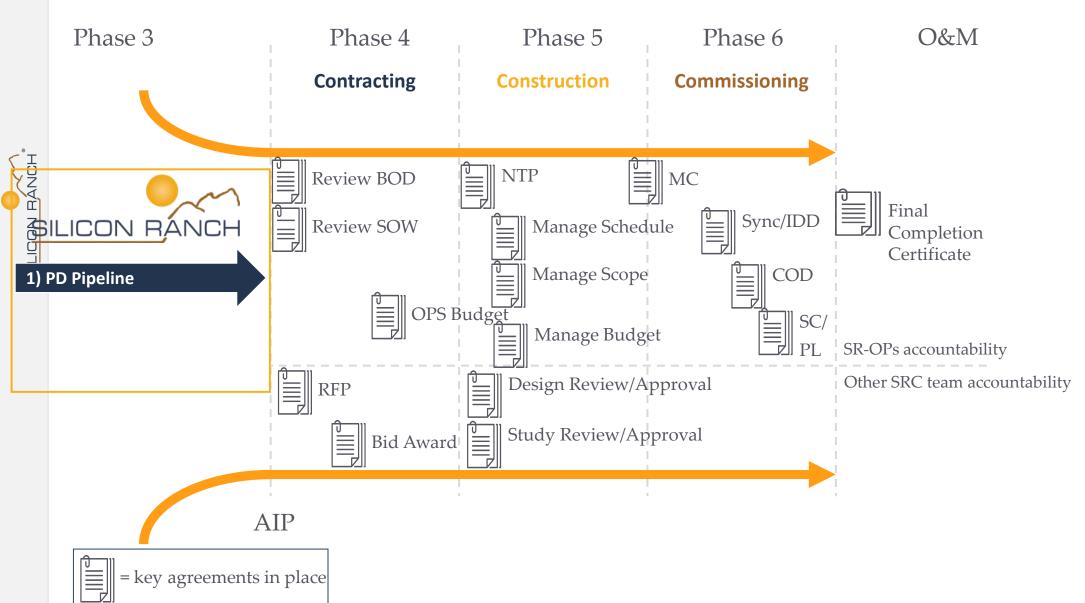


Construction Process

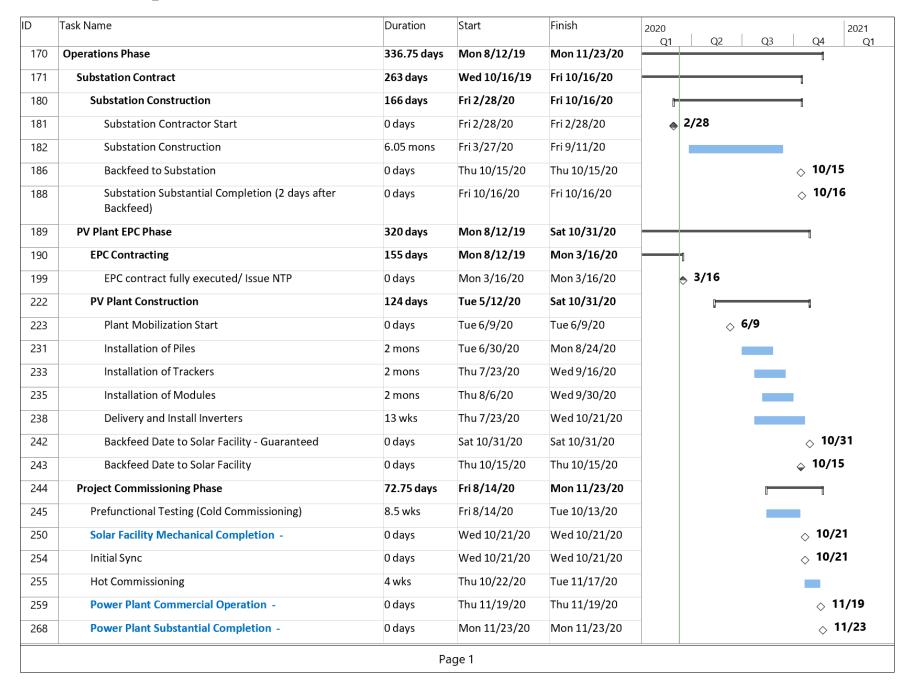


Project Management milestones to FC

SR-OPS manages construction in a methodological, repeatable and scalable process to ensure a safe, high quality, predictable and timely hand-over to O&M.



Sample Schedule



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Key Agreements in Place (AIP)

- Power Purchase Agreement (PPA)
- Interconnection Agreement (IA)
- EPC Agreement
- Procurement Agreement(s)

How we do it

Daily Rhythm

Daily Contractor POD

Update Risks and Opportunities Log

Update Change Order Log

Daily Meetings and calls with Stakeholders

Review RFI and Submittal logs in Procore

Review Daily SM reports

Review submitted project deliverables

Update Module procurement logs

Monthly Rhythm

Offtaker Monthly Report

Finance Monthly Report

Schedule Update from Contractor

Concur Invoice Review and Payment

Review PPA/IA dates and Testing Requirements

Update Mercatus

Update safety portal with contractor monthly hours

Cash Flow

Site Visit

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SILICON RANCH



Sample Progress Drone Image



Completion Report – Modules (09/29/2020)

Torque tubes completion status



Remaining

Inspection Area

Completed Project (~30 MW)



Commercial Lead – Site Control to Substantial Completion

The Commercial Lead owns schedule and budget during each part of a project's lifecycle.

The commercial Lead owns selledule and badget during each part of a project's inceycle.			
Commercial Lead	Project Developer	Project Manager	
		14	
Prior to Site Control	Site Control to PMR to Power Market Agreements in Place (AIP)	AIP to Full FNTP to MC to Notice to Mechanical Substantial Proceed Completion Completion (FNTP) (MC) (SC)	
Optimal Site Screen AO Site Screen	100% Site Control Purchase Plan Engineered Layou Delivery Handoff	Contracting MC Checklist Asset Mgmnt Handoff OFE Plan Cx Plan NoT Plan	
Fatal Flaw Analysis Land Approval	CE & Permit Plan AHJ Approval		
Package Framing Workshop Notify BD/CL asset PMR (Kickoff of Monthly		FQM EM	
Other Key Reportiti		Essential Engagement (PD) Neighbor Issues Stakeholder Engagement Customer Programs Essential Engagement (PD)	



Operations & Maintenance



Quality Maintenance and Support Services



Internal Site Maintenance

- Lead by Director of Power Plant Maintenance, James Millis
- 8 Technicians across 6 states
- Perform full wrap maintenance on 14 sites

3rd Party Site Maintenance

- 4 Vendors
- ~160 sites across 14 states
- Under contract for 5-10 years



Asset Management

Financial Assessment

- ROI tools for maintenance decision making
- Assessment of site performance on financial basis
- Business cases for specific maintenance needs

Operations & Maintenance Budgeting

- Projection of annual spend by category based on equipment performance and maintenance history
- Budget to actual tracking for operations and asset management team

Renewable Energy Credits (RECs)



Compliance

National Generation Regulation

- National Energy Regulatory Commission (NERC)
- Energy Information Administration (EIA)
- Federal Energy Regulatory Commission (FERC)

Regional Generation Regulation

 State, city, or county regulations for operations

Optimizing Performance: Data and Analytics Capabilities

SR EPC streams plant sensor data to a modern cloud storage and computation platform to enable continuous plant monitoring and optimization

Data: Streaming sensor data is normalized and archived with short-term retention of 1 second data and long-term retention of 5-minute data

Alarm handling: Our SCADA and monitoring platform generates and prioritizes equipment anomaly alerts which are reviewed and responded to 7 days per week

Analytics: Plant operating data is cleaned and corrected for weather conditions. Results are compared against high fidelity performance models and site energy budgets. Losses are evaluated for economic impact enabling optimized maintenance activities including PV module washing and transformer tap settings, among others.

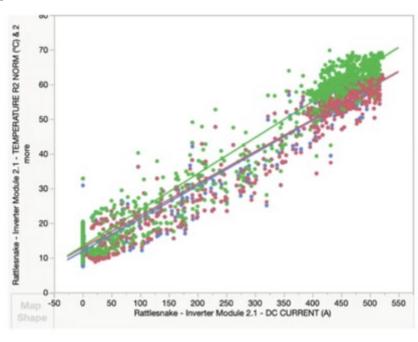
Predictive Analytics: Plant operating data and calculations are analyzed to detect the earliest indications of equipment degradation. Action is taken to prevent equipment failure and minimize the impact to plant operations and performance

Predictive **Analytics** PV Module Degradation Inverter DC Voltage Floor / Reactive Power Losses DC Health / PV Module Soilina & Cleanina **Production Loss Calculations Energy & Weather Corrections**

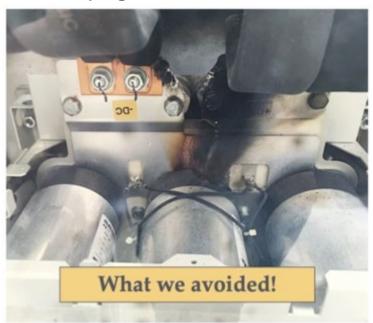
Optimizing Performance: Predictive Analytics for Preventative Maintenance

Inverter IGBT Failure Detection

Proactive monitoring of IGBT health trends across a wide range of ambient conditions and inverter output enabled detection and minimization of the impact of a developing IGBT failure.



Early detection of the IGBT issue resulted in \sim 2 hours of downtime to implement repair.



Historically this type of failure would result in > 2 weeks of equipment downtime with significant lost power generation and much higher equipment repair costs.

Optimizing Performance: Best Practices

SR EPC strives to be on the cutting edge, implementing industry best practices across each department.

Design and Build Practices: SR EPC has and continues to create guides on how to design (grading, dc voltage window, above vs below grade) and build (wire management, terminations, vegetation establishment) to best performance beyond the 2 year EPC warranty period

Commissioning: Utilize what we believe are the most thorough commissioning standards in the industry to dive deep into the quality of the facility, ensure every string and module is in service, and evaluate the adherence to each element of the PVSyst waterfall rather than relying on an overall performance test and basic vendor commissioning practices

Quality: Clear quality expectations built into contracts (continuously improved with feedback) and established golden row/block practices with daily site manager engagement help reduce punchlists while reducing arguments when misses are discovered

Severe Weather Protection: This starts in site design with sensors to cause site equipment to self protect when an event occurs, civil designs to minimizes impact from heavy rain, and tempered glass modules. This continues through operation with prequestion of the start of th







Optimizing Performance: Continuous Feedback Loop

As a long-term Owner of our facilities, SR EPC has been able to establish an Operations to Delivery feedback loop which manages continuous improvement of delivered projects each year through leveraging of data analysis and observations on the operating fleet.

Robust Design: Quality and reliability truly begins in design, and the engineering team members across SR EPC work together to continually improve design standards with the goal of maximizing quality and reliability without overspending for marginal improvements. We place a high value on system solutions with demonstrated value during 40-year design life

Robust Construction Quality Standards: Operate under "trust but verify" mentality, with in-field quality assurance audit process that inspects crew performance and documents quality assurance plans to promote safe and high-quality construction.

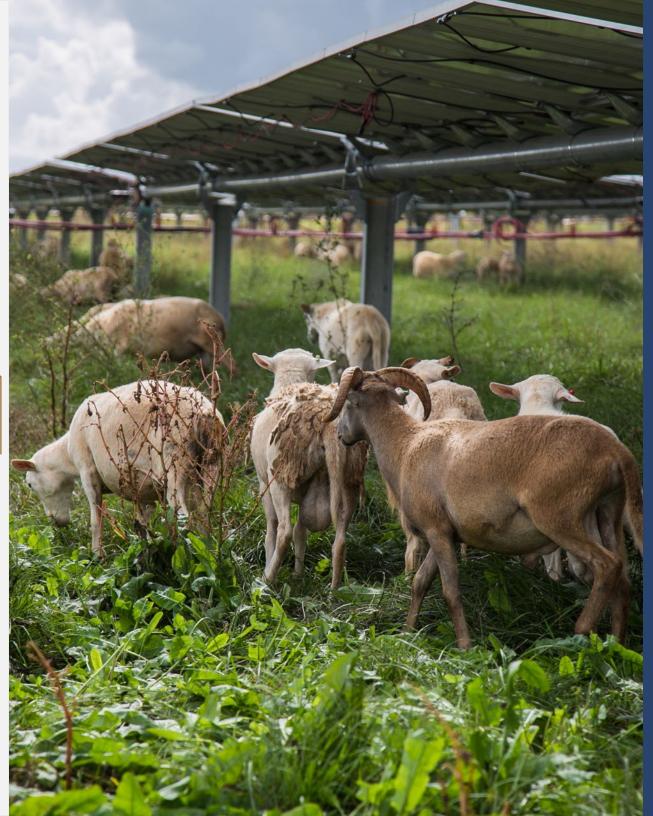
Technology Selection: Utilize performance data, service responsiveness tracking, and failure tracking to both drive our equipment selections as well as our warranty service and serial defect terms with our partners.

Real Time Feedback: We do not wait for annual lesson learned cycles, but rather provide notices as issues are discovered to allow more immediate corrective actions to be implemented.









Responsible Development:

Making Solar Do More®

Bancroft Station Solar Farm (103MWac), where 2,000+ sheep help support Regenerative Energy® land management practices

Regenerative Energy: Nature Based. Data-Driven. Community-Focused.

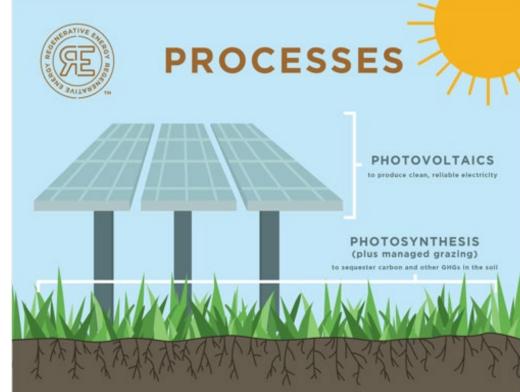
Regenerative Energy is Silicon Ranch's outcome-driven holistic approach to the design, construction, and operation of solar farms that is good for the land, the environment, local economies, and people.

Regenerative Energy and Agriculture: At many projects, Silicon Ranch employs in-house or partners with local farmers, ranchers, and land managers to keep solar project land in agricultural production. Silicon Ranch maintains the largest flock of sheep owned by a renewable energy company in the US, with the goal of offering pasture-raised meats and sheep products in partnership with local and regional regenerative farmers and ranchers.

Biodiversity: Regenerative Energy accelerates the return of carbon back into the soil, which leads to greater biodiversity. We take additional intentional actions to promote biodiversity, including cultivating regionally adapted grazing seed mixes, installing wildlife habitat corridors, creating pollinator habitat and territory for endangered species, and designing soft buffer areas between the solar array and surrounding lands to create an "edge effect."

Verified Impacts: We third-party monitor, quantify, and verify ecological outcomes of Regenerative Energy®, including soil health, biodiversity, habitat creation, water infiltration, and ecosystem function, through application of the Savory Institute's Ecological Outcome Verification assessment methodology.





Making Solar Do More®

Through our procurement and operational choices, we demonstrate the value of "choosing the right path over the easier path to get the job done"

Silicon Ranch: Making Solar Do More®

Domestic Manufacturing and Decarbonizing Supply Chain





- 6.2 GW MSA with First Solar
- 4.5 GW MSA with NexTracker

Community Impact





- Long term ownership approach allows
 Silicon Ranch to truly put the community first
- Clearloop emphasis on community impact informs site selection activities

Responsible Land Management





- Pioneered integration of renewable energy and regenerative land practices
- Largest agrivoltaics portfolio in the U.S.

Responsible End of Life





- Community recognition of incentive alignment through land ownership
- Pioneering module recycling as SOLARCYCLE's first utility-scale partner

Aligned with Partners



Showcasing community impact through Regenerative Energy



First industry signatory to Beyond the MegaWatt clean energy buyers' principals



Featured partner in sustainability reports and community impact study



Featured in 2022 environmental sustainability report

Thank You

John Thompson

Vice President, Business Development



John.Thompson@siliconranch.com



615.653.5809

