



Performance Engineering Services

Our performance engineering team plays a key role in analyzing our fleet data to continuously improve our preventative and corrective maintenance service, executes performance reporting, and is a technical advisor to the rest of the business. In addition, there are a variety of services that portfolio system owners can procure to gain additional support and results from our engineering team.

Our Custom Scoped Engineering Services:



Root cause analysis of underperformance



Asset due diligence when buying or selling assets



Warranty inspections



Commissioning performance testing



Soiling analysis & washing optimization



DAS Monitoring Platform Setup & Verification, Alerts & Modeling

CUSTOMER TESTIMONIAL

“We have found Borrego O&M’s Performance Engineering services to be valuable. They helped us analyze performance deficiencies in one of our systems and made recommendations for improvement that helped us solve the problem.”

Carter Carlton
Asset Manager
Renewable Properties

Contact us today

omspecialprojects@borregosolar.com | 888-898-6273
www.borregoenergy.com/operations-and-maintenance

Performance Engineering Service Descriptions



SERVICE	DESCRIPTION	SCOPE ITEMS
<p>Root-cause analysis of site underperformance</p>	<p>Analysis will be conducted and a report created that provides recommendations to improve performance of the project. The analysis will take into account:</p> <ul style="list-style-type: none"> • Performance Modeling • Module & Other Equipment Failures • Soiling Losses <p>Economic analysis of performance improvements will also be included.</p>	<ul style="list-style-type: none"> • New Performance Model • DAS Platform Review • System Performance Analysis • Aerial Thermal Inspection Mapping • Maintenance Record Analysis • Equipment Failure Prognosis • Interconnection Relay Settings • Repower Opportunity Evaluation • System Upgrade or expansion with ROI analysis • Complete IE styled report
<p>Asset due diligence when buying or selling assets</p>	<p>Our team will evaluate the condition of the site equipment and translate how that relates to site performance. We'll also include improvement recommendations to increase the project value.</p>	<ul style="list-style-type: none"> • System Performance Analysis • Maintenance Record Analysis • Pre-purchase technical evaluation • Equipment failure prognosis • DAS Platform Review
<p>Warranty Inspections</p>	<p>This service is to identify any warranty obligations before an OEM's warranty ends or there is a change in O&M service provider. It ensures the site is operating at peak performance and protects the project budget.</p>	<ul style="list-style-type: none"> • System Performance Analysis • Maintenance Record Analysis • Equipment failure prognosis • DAS Platform Review • Aerial Thermal Inspection Mapping • Complete IE Styled Report

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CUSTOMER TESTIMONIAL

"We used Borrego O&M's Performance Engineering team to deliver a tailored engineering report to our proposed lender based on the bank's scope of work. The timeframe to get the work done was limited yet the team worked expeditiously to generate a custom deliverable that satisfied all the bank's requirements. We were pleased with the final report and will definitely use Borrego O&M for other out-of-the-box requests."

— Gemma Sherman, Managing Member of SunRay Power, LLC

Performance Engineering Service Descriptions, CONTINUED



SERVICE	DESCRIPTION	SCOPE ITEMS
<p>Commissioning performance testing</p>	<p>This post-construction inspection service is to ensure that the project is built to the specifications agreed upon and so that the owner understands the quality of the work performed and condition of the project so final project completion documents can be signed with confidence.</p>	<ul style="list-style-type: none"> • New Performance Model • System Capacity Testing • Pre-purchase technical evaluation • AHJ Local Code Review • Post-Commissioning Inspection • DAS Platform Review • Aerial Thermal Inspection Mapping • Site Arc Flash Study & Labeling • Interconnection Relay Settings • Complete IE Styled Report
<p>Soiling analysis & washing optimization</p>	<p>This service includes a review of past site performance in conjunction with the energy value and cost of washing to determine the optimum number of washes and their timing.</p>	<ul style="list-style-type: none"> • Analysis of soiling impact on performance • Use of comparable sites if a new site • Evaluation of energy value and washing cost • Optimization of frequency and timing of washes
<p>DAS monitoring platform setup, verification, alerts & modeling</p>	<p>This service would be used to identify deficiencies in the DAS/SCADA hardware and software, typically conducted at project on-boarding.</p> <p>It would be used to identify and make recommendations regarding hardware or communication problems, gaps in alert configurations, and performance modeling.</p> <p>Recommendations can be implemented to improve monitoring & understanding of on-site performance.</p>	<ul style="list-style-type: none"> • New Performance Model • System Capacity Testing • Pre-purchase technical evaluation • AHJ Local Code Review • Post-Commissioning Inspection • DAS Platform Review • Aerial Thermal Inspection Mapping • Site Arc Flash Study & Labeling • Interconnection Relay Settings • Complete IE Styled Report

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