⏻HelioScope

Discover the most advanced solar photovoltaic design tool on the market.

HelioScope™ by Folsom Labs is a robust, design and modeling program which enables designers to build world-class solar arrays in a fraction of the time. By integrating system design and performance modeling, HelioScope improves design speed by a factor of 2-5x – all while providing bankable energy estimates. And with Google Sketchup integration and cloud-based collaboration, HelioScope is also easy to use.

Benefits of HelioScope

Faster Designs

Finally, a single tool integrates site layout and energy yield estimates. With HelioScope, a system engineer can generate a system size / module count, bill of materials, and a rigorous production model in just minutes.

Easy to Use

With auto-layout of modules and electrical components, convenient stringing options, and SketchUp integration for shade, there has never been an easier way to create world-class performance estimates.

### Unparalleled Value Engineering

HelioScope is the best tool on the market for advanced scenario analysis and design optimization. With the ability to clone and modify a design, system engineers can now make every design decision based on a rigorous cost-benefit comparison.

Bankable Math Engine

HelioScope calculates an array's production using the same bankable math that is trusted by the industry: from PAN files to transposition models and IAM adjustments.

SketchUp Integration

Import 3D models from Google Sketchup directly into HelioScope for advanced shade calculations. Combine all of the power of SketchUp's 3D modeling with HelioScope's component-level energy simulation engine.

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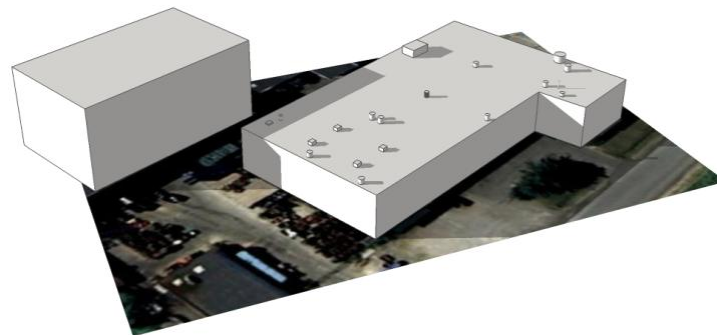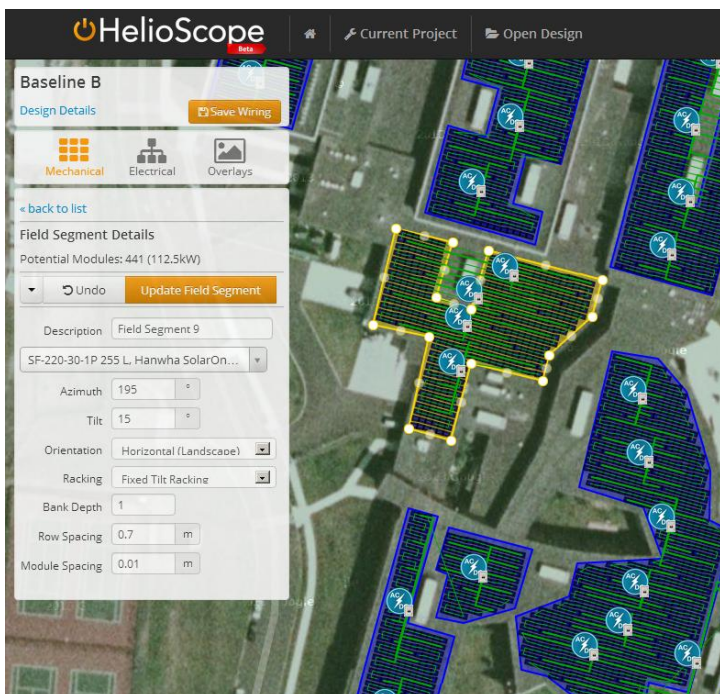
HelioScope Specifications

License and Use Terms	
Number of Projects allowed	Unlimited
Number of Designs allowed	Unlimited
Maximum System Size per Design	Maximum 5MW per single Design
Software Specifications	
Time Intervals	Hourly (8,760)
Geographies Supported	Any location worldwide
Weather File Formats Supported	NREL TMY3, Solar Prospector / NSRDB (satellite-based), DOE Energy Plus Worldwide (EPW) Custom weather files available
Field Layout Methodology	Designer tool based on Google Maps
Shade Calculation	From native SketchUp plugin
Report outputs	8760 hourly report System energy by month Detailed loss tree
Units	Metric and Imperial
Mathematical Specifications	
Sun Angle Calculations	PSA Algorithm
Incident Angle Modifier (IAM) Adjustments	ASHRAE double-integral approach
Diffuse Irradiance Calculations	Hay Model or Perez Model (configurable)
Module Model	PAN characterization or Full-diode model (configurable)
Cell Temperature Calculations	Sandia Labs or linear diffusion (configurable)
Module Level Electronics	Based on manufacturer documentation
Inverter Model	CEC efficiency (voltage and load)
Other Specifications	
Supported Browsers	Modern browsers (Chrome, Firefox, Safari, and Internet Explorer 10)
Additional Programs or Systems	Sketchup for near obstruction shading Solmetric for far horizon shading
Independent verification	Technology Review from DNV GL available on request DNV KEMA

Multi-User Pricing	
Three or more users	10% discount from list price
Six or more users	20% discount from list price
Ten or more users	30% discount from list price

About Folsom Labs

Folsom Labs is a software company based in San Francisco, CA. The team at Folsom Labs combines expertise in solar array design, optimization algorithms and software development to build tools that are both easy to use and mathematically powerful.

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Folsom Labs, LLC
221 Main Street
San Francisco, CA 94105
P: (415) 729-4050
Info@folsomlabs.com