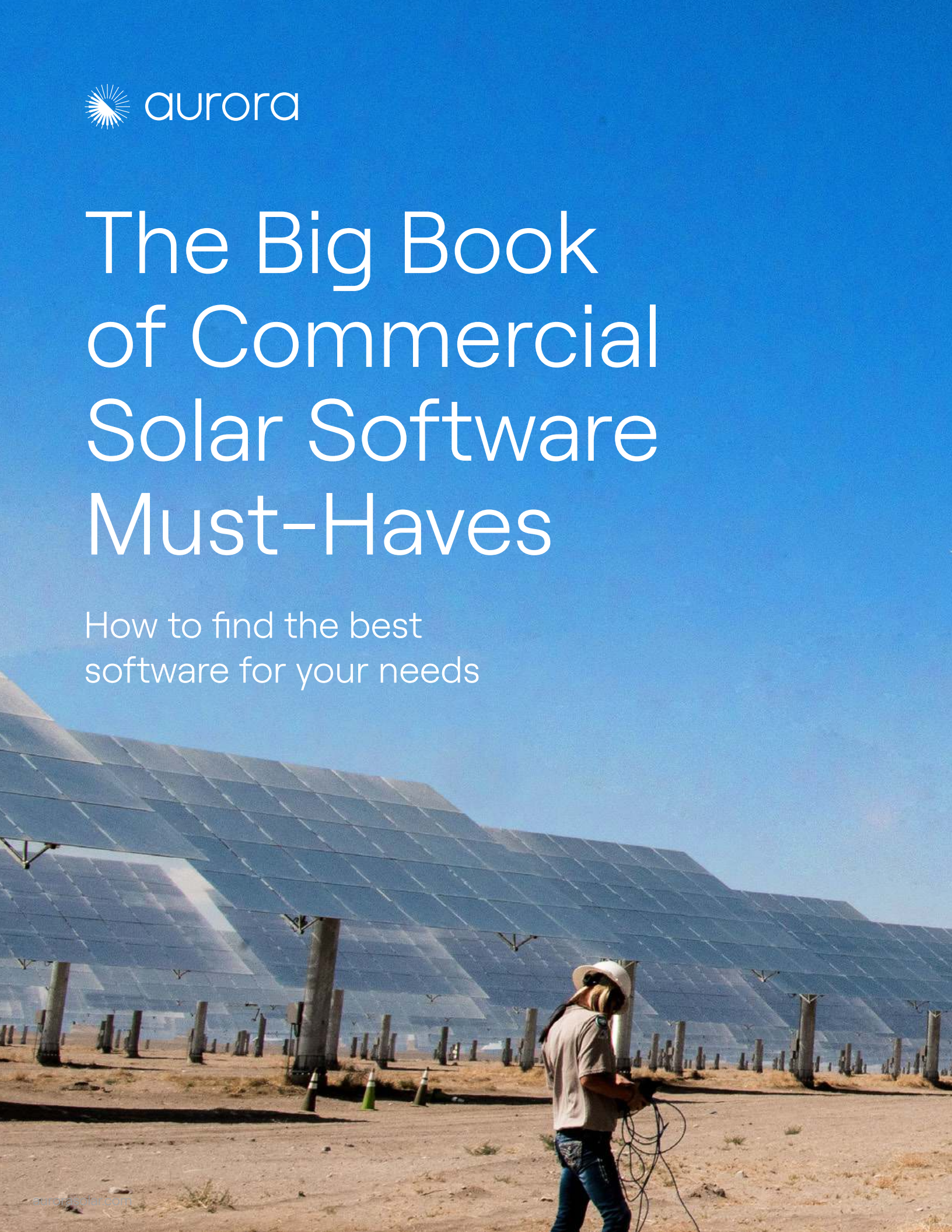
aurora

The Big Book of Commercial Solar Software Must-Haves

How to find the best software for your needs



Introduction

To help commercial solar businesses navigate the solar software landscape, we've assembled a comprehensive guide of must-haves you should look for when choosing solar software. We've also included some special features that make top software solutions stand out from the rest. And, we've even scripted a list of questions that you should ask a solar software provider to help you evaluate if their solution is a good fit for your needs.

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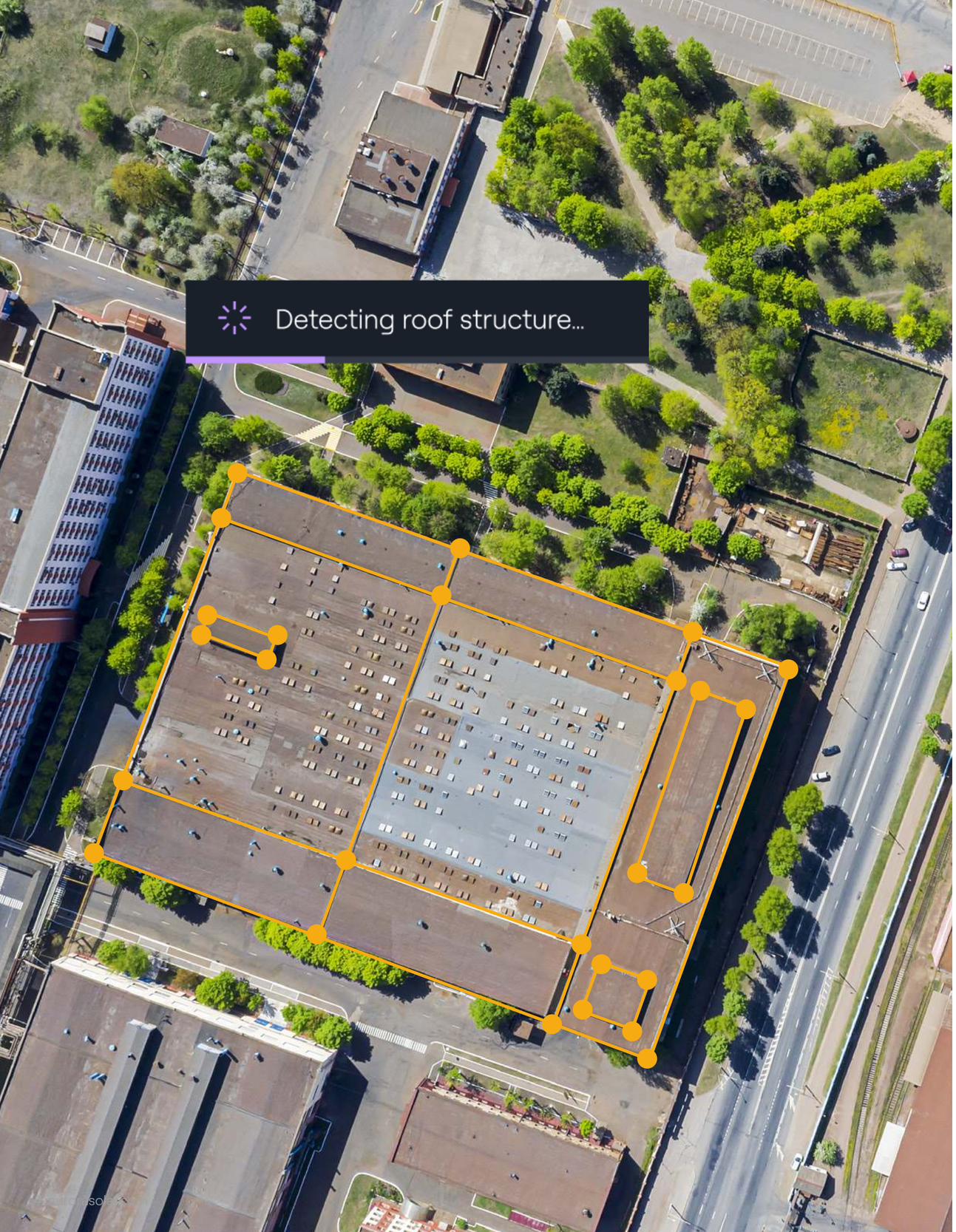


Design Must-Haves

1

Easy User Interface

A key aspect of choosing solar software is its ease of use. Having an easy-to-use interface is important for several reasons:

1) It reduces the onboarding time for current and future team members
2) It empowers your salespeople to create designs themselves
3) It speeds up your workflows so you can scale faster.

Key Takeaways

- Speeds up onboarding
- Speeds up workflows
- Empowers your sales team

2

HD Imagery

HD imagery is key to any solar software because it enables you to do remote site assessments. Instead of sending someone on-site, with HD imagery you can assess the feasibility of a site directly from your office. Most solar software providers will have HD imagery, but some may have limited coverage, so be sure to ask what coverage they have in your target market. Top providers should have Nearmap integrated into their platform. If you have other image resources you use — like from drones, for example — the software should let you upload them seamlessly.

Key Takeaways

- Enables remote design
- Increases accuracy
- Reduces change orders

PRO TIP

Pair HD Imagery with LIDAR to create accurate designs and virtually eliminate change orders.

3

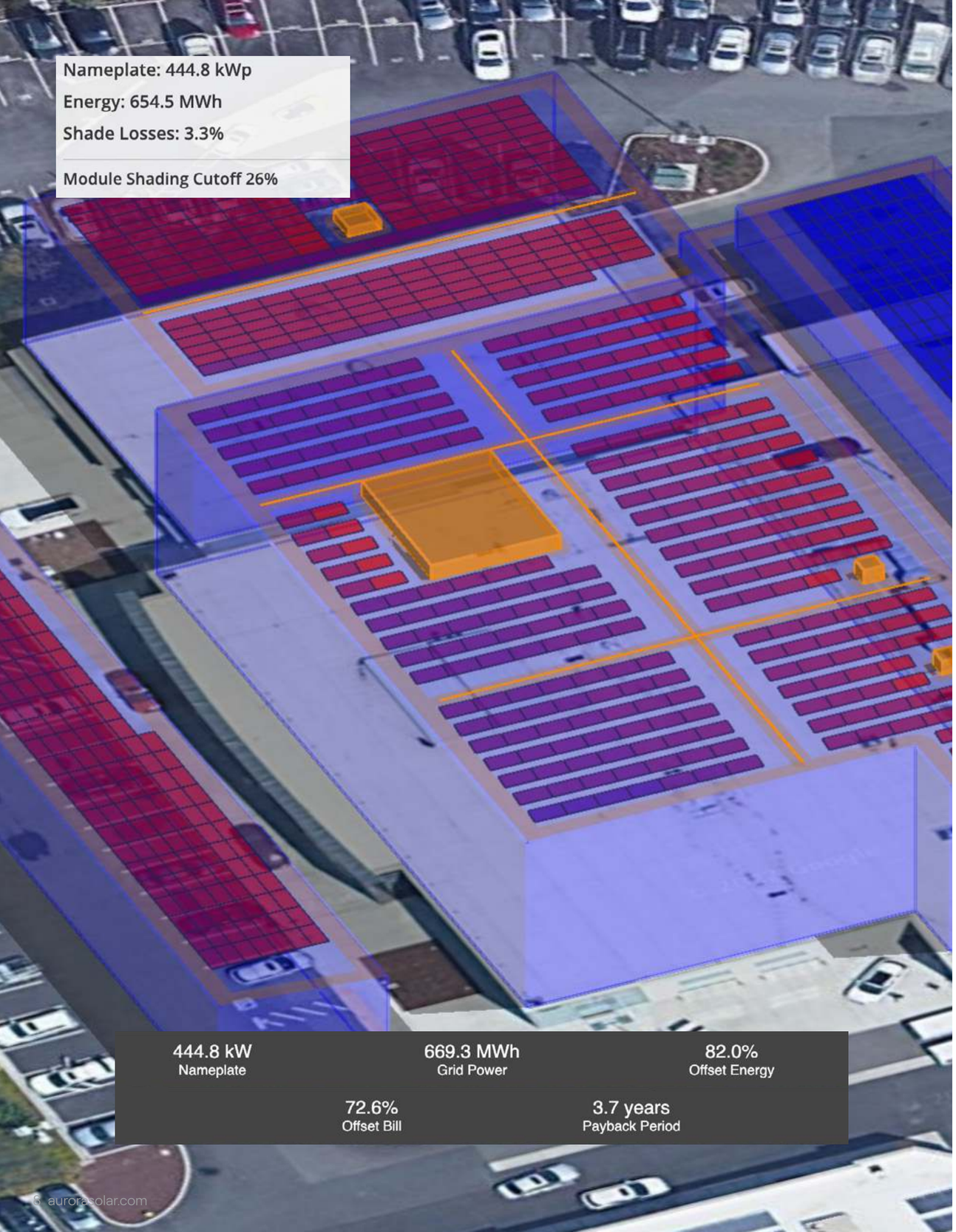
Bankable Shade Reports

Shade modeling improves the accuracy of your energy estimates by calculating how shading from nearby trees, obstructions, and surrounding buildings will affect performance. Make sure that your solar software provider has been validated by NREL and all major rebate authorities.

Key Takeaways

- Increases accuracy
- Reduces change orders
- Secures financing faster

Description	Tilt	Azimuth	Modules	Nameplate	Shaded Irradiance	AC Energy	TOF[2]	Solar Access	Avg TSRF[2]
office	1.0°	179.7°	220	70.4 kWp	1,655.6kWh/m²	97.9 MWh[1]	88.3%	90.0%	79.5%
west building	10.0°	179.7°	258	82.6 kWp	1,945.0kWh/m²	132.5 MWh[1]	94.5%	98.8%	93.4%
carport 2	0.0°	89.1°	308	98.6 kWp	1,822.9kWh/m²	148.6 MWh[1]	87.5%	100.0%	87.5%
carport 1	0.0°	89.1°	224	71.7 kWp	1,822.9kWh/m²	108.0 MWh[1]	87.5%	100.0%	87.5%
carport 3	0.0°	89.1°	224	71.7 kWp	1,822.9kWh/m²	108.0 MWh[1]	87.5%	100.0%	87.5%
carport 4	0.0°	270.2°	156	49.9 kWp	1,796.2kWh/m²	74.2 MWh[1]	87.5%	98.5%	86.3%
» subarray 1	0.0°	180.2°	78	25.0 kWp	1,796.1kWh/m²	37.1 MWh[1]	87.5%	98.5%	86.2%
» subarray 2	0.0°	0.2°	78	25.0 kWp	1,796.2kWh/m²	37.1 MWh[1]	87.5%	98.5%	86.3%
Totals, weighted by kWp			1,390	444.8 kWp	1,816.1kWh/m²	669.3 MWh	89.0%	98.0%	87.2%



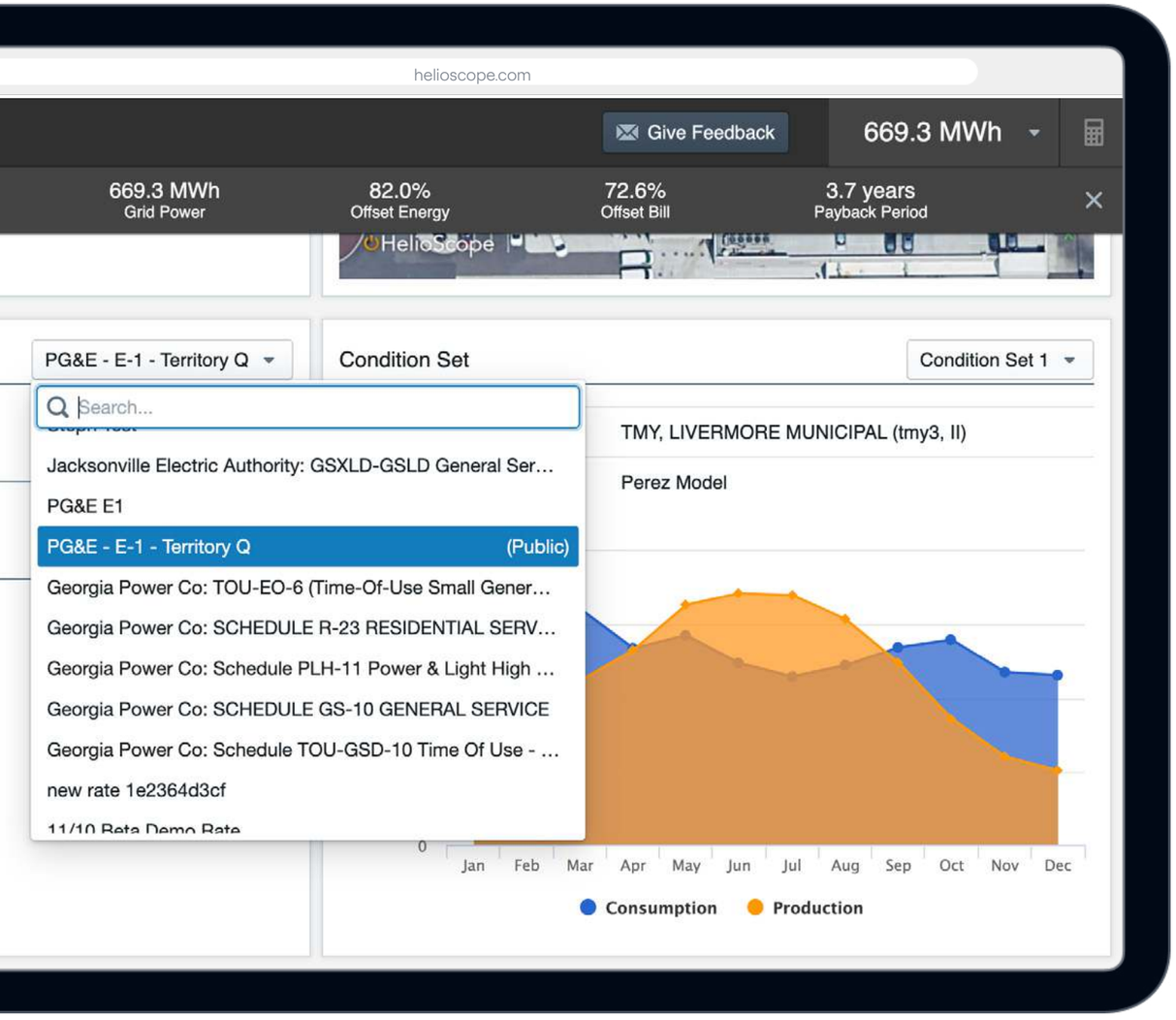
4

Performance Simulation

Performance simulations and shading calculations allow you to forecast the energy production of your designs in a realistic 3D environment and provide those estimations to your customer. Look for software tools that allow you to easily simulate and rerun simulations so you can make changes to your project in real time with your customer.

Key Takeaways

- Increases accuracy
- Increases sales



5

Easy-to-Use Utility Rate Building Tool

Commercial utility rates are complicated, so it's great to have an easy-to-use tool to build utility rates with good accuracy. Software providers often provide access to utility rate libraries, however, they should also include a utility rate building tool that can help you create, edit, and update any utility rate.

Key Takeaways

- Increases accuracy
- Speeds up workflows

6

Permit-Ready Designs

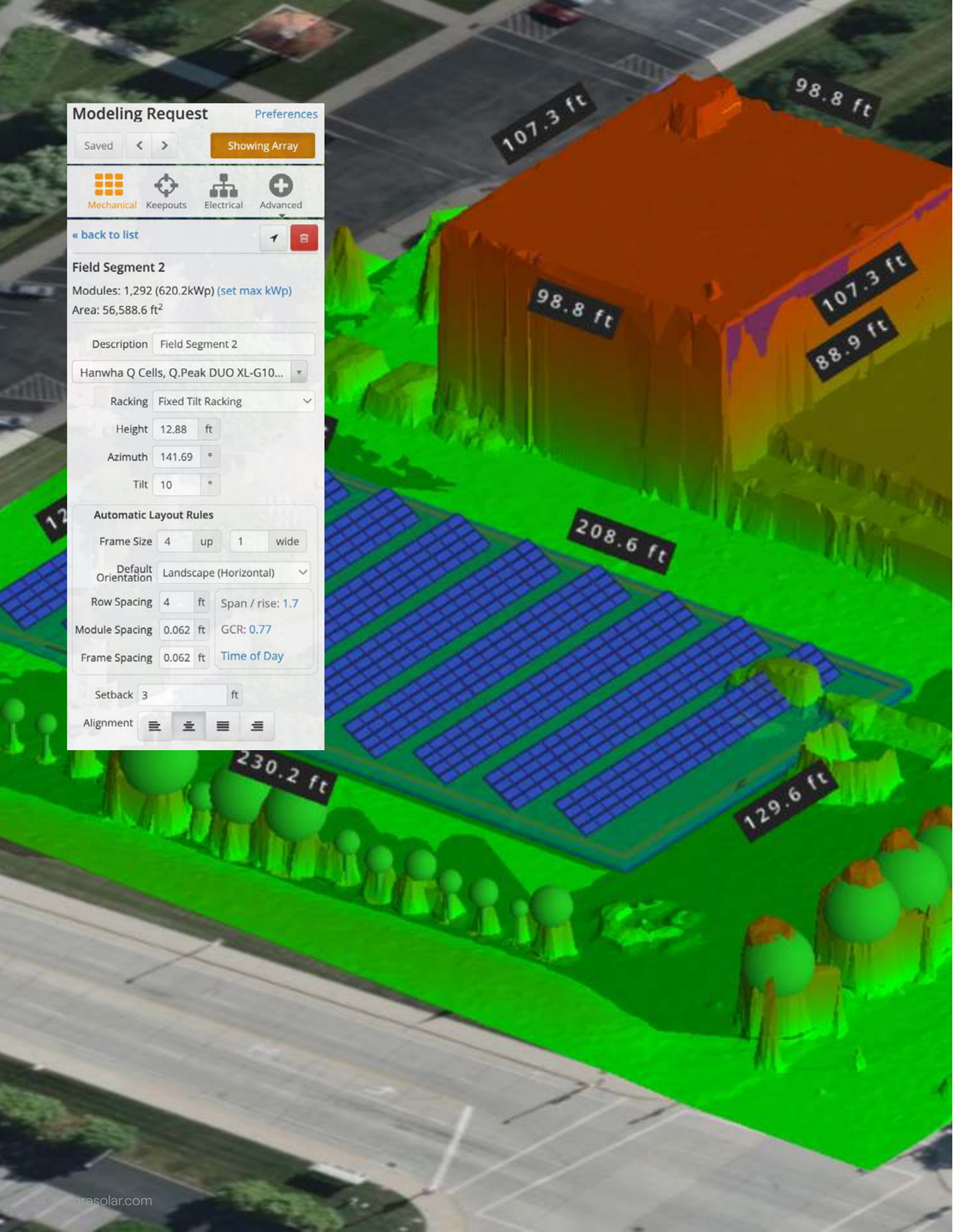
One of the biggest obstacles that can slow down your growth as a solar business are change orders. If your solar software isn't set up to create permit-ready designs, you'll end up wasting a lot of time going back and forth between your design and the permitting authority. You should look for software that provides single-line diagrams and DXF files, which can speed up your sale to installation time and reduce your headaches tremendously.

Key Takeaways

- Reduces change orders
- Speeds up workflows

PRO TIP

Pair Permit-ready Designs with Bankable Shade Reports to remove bottlenecks in securing permits and financing.



Design Special Features

1

LIDAR

LIDAR is one of the most powerful advancements in solar design so far. LIDAR data allows you to know the heights of buildings, trees, and obstructions with pinpoint accuracy. This allows you to complete site audits remotely and eliminate costly in-person visits while knowing that your measurements will be as close as possible to real-world measurements.

Key Takeaways

- Enables remote design
- Decreases site visits

2

Assisted Solar Design

Some solar software solutions can automatically place modules to fill out the entire area available, or up to a maximum system size. When the racking product changes, or when the target ground coverage ratio changes, the software should allow you to easily update existing values in your design. These changes should automatically update the number of modules and recalculate the new energy yield, speeding up your system design time.

Key Takeaways

- Speeds up workflows
- Increases accuracy
- Reduces change orders

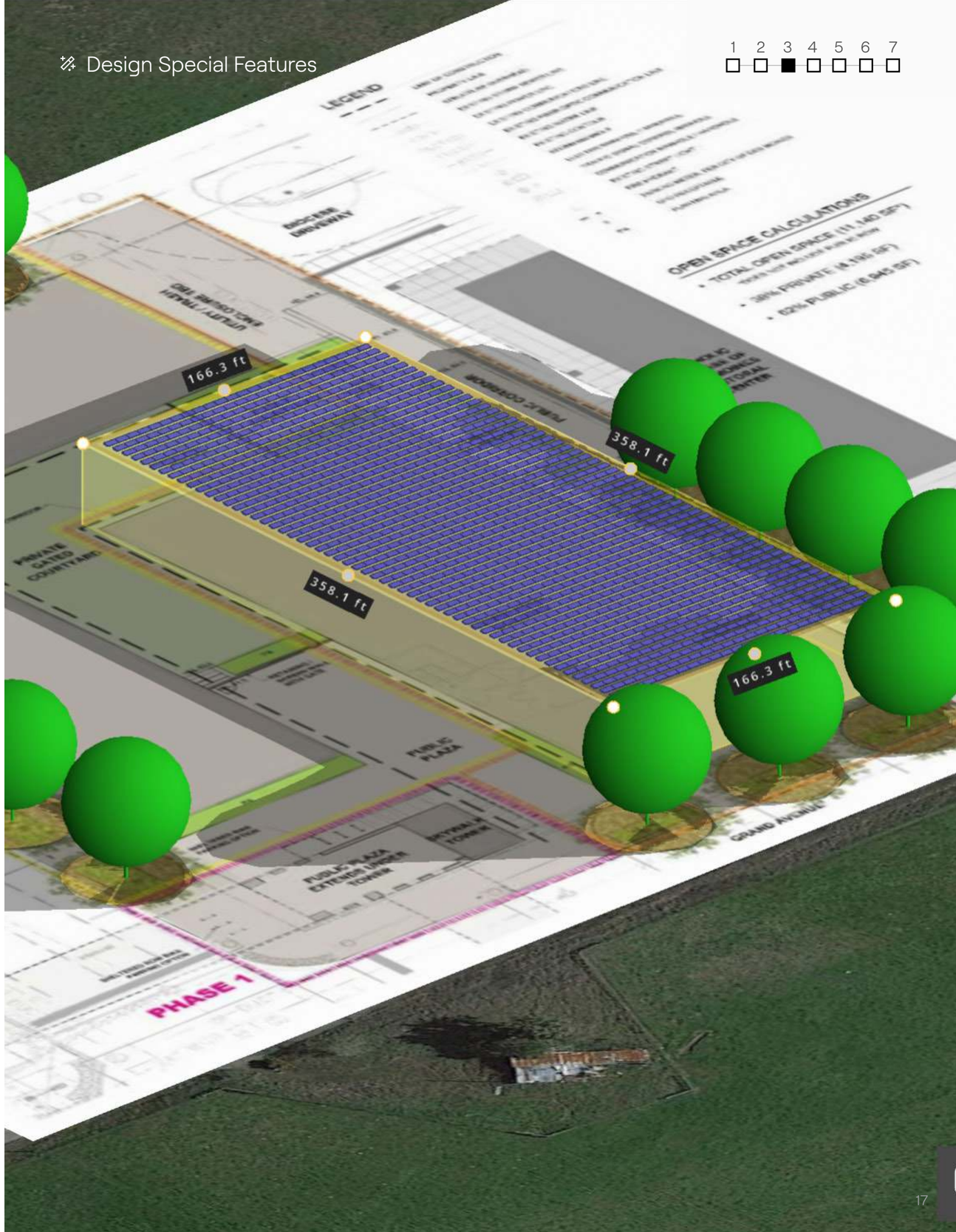
3

Design for New Construction

Being able to model a solar system on a site that hasn't been built yet can give you a huge edge over your competition and help you expand your business. Some solar software allows you to design an accurate system with just a blueprint or site imagery of the new building. Be sure to ask your solar software vendor if they have this functionality and how it works.

Key Takeaways

- Increases accuracy
- Reduces change orders
- Secure financing faster



4

Auto-stringing

Auto-stringing allows your solar software to connect the panels in your design automatically. Some solar software can even do intelligent stringing by using shading data to maximize the efficiency of the system and decrease loss due to shading. Any adjustments made to the desired string length should not only make real-time updates to the design, but to the single line diagram as well. As an added bonus, some software providers that offer auto-stringing can also automatically calculate conductor lengths and power losses based on conductor length and type/size.

Key Takeaways

- Increases system efficiency
- Speeds up workflows

5

Consumption Modeling

Oftentimes, the billing information may be incomplete. This can make accurately sizing a system difficult. Some solar software can fix this problem by modeling the annual consumption of the customer from a single energy bill using predictive algorithms based on consumption profiles for the specific location and building type. This not only helps with accuracy, but also increases the potential customers you can service and speeds up your sales process.

Key Takeaways

- Increases accuracy
- Increases market potential
- Speeds up workflows

6

On-demand Modeling Service

Every solar installer understands the seasonal nature of the solar business. To help with peak times in your business, some solar software companies provide on-demand modeling services. This means you can have an expert model the project for you, allowing you to scale your capacity to meet increased demand without the need to hire and train new designers. Keep in mind that turn around times (TAT) differ by vendor, so make sure to ask about TAT when choosing new software.

Key Takeaways

- Increases market potential
- Scales your business

7

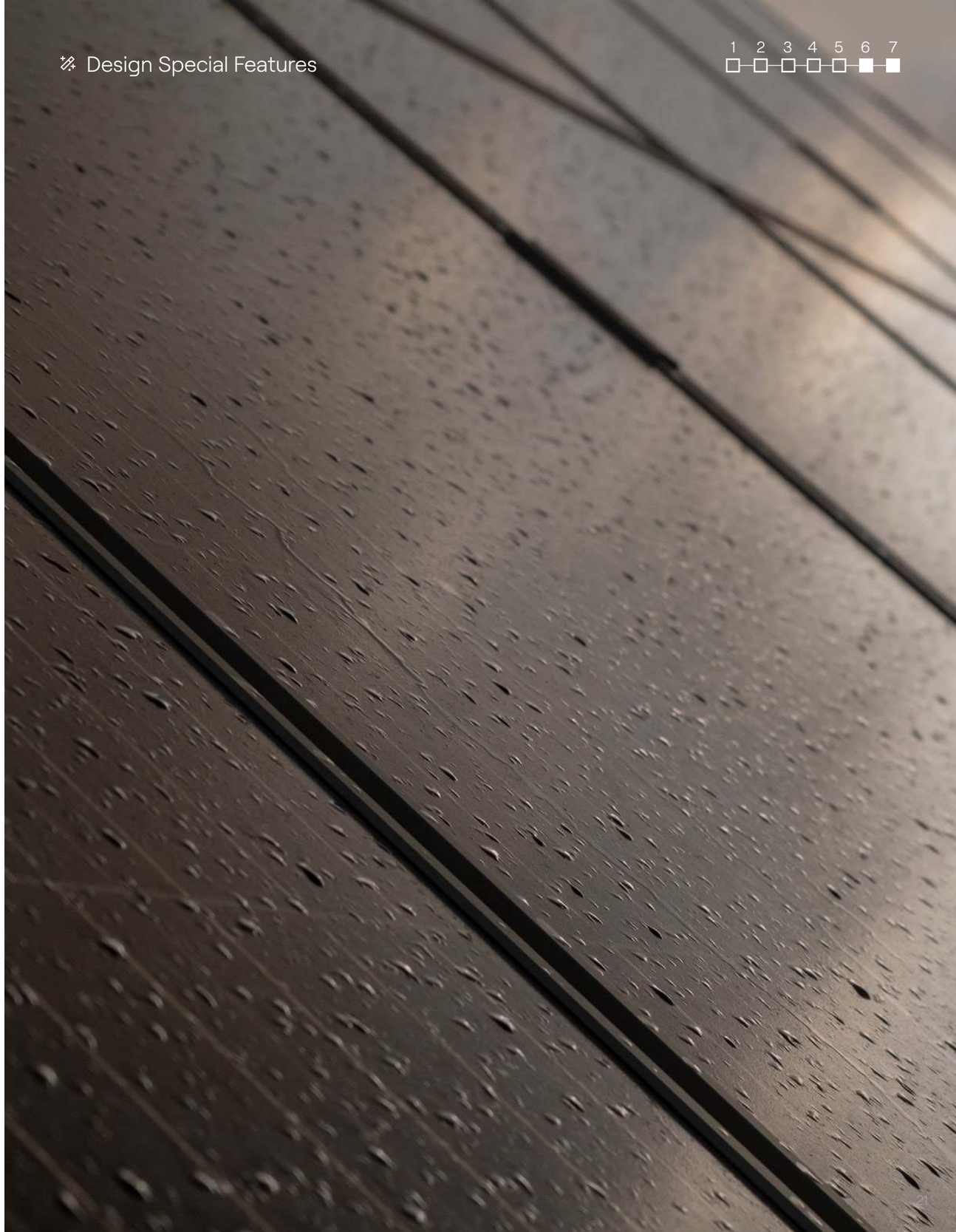
Global & Custom Weather Files

Global meteorological resources make sure your simulations are as accurate as possible no matter where in the world your project is located. When designing a system, your software should accurately simulate the energy output of each individual module throughout the year so that you can design for optimal efficiency. Some software supports custom weather files, too, giving you the flexibility to upload a weather file for a specific area.

Be sure to ask your solar software vendor which weather sources they use, how extensive their records are, how often they are updated, and if the software carries multi-year data to enable P90 analysis.

Key Takeaways

- Increases accuracy
- Reduces change orders



DesignOps Bonus Features

1

Seamless Tech Stack Integration

It's important to consider how your commercial software fits into your overall software "stack" of tools. Ideally, you want a set of tools that will integrate seamlessly and provide the flexibility necessary for your team to succeed.

Key Takeaways

- Increases market potential
- Streamlines processes
- Empowers your team

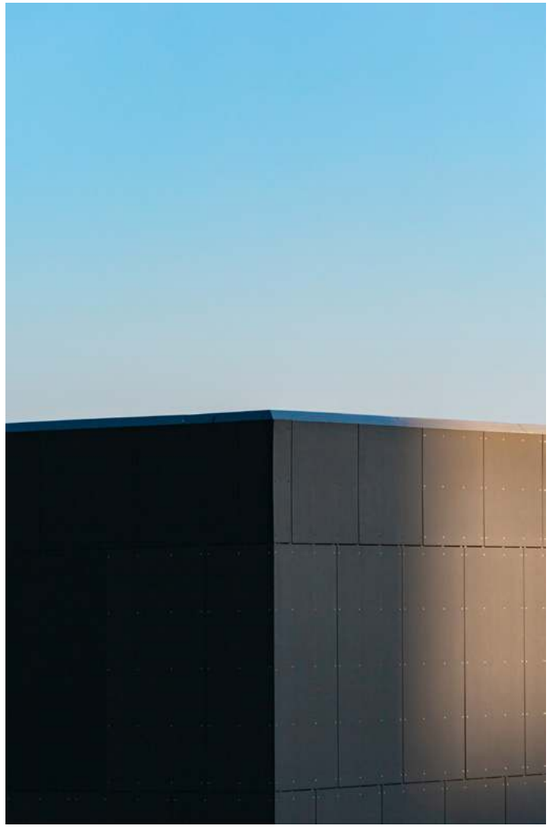
2

Design Project Profiles

Some commercial software providers offer "Project Profiles." to automate common design styles. A user can create specific "profiles" for each type of building or location. These "profiles" can be set as a user's default with parameters already in place, or selected when creating a new project. This saves time and help your employees design projects with confidence.

Key Takeaways

- Improves design accuracy
- Speeds up workflows
- Reduces change orders



Financing Solutions

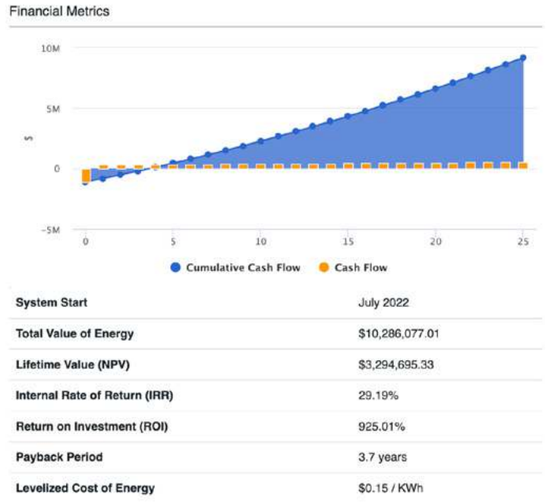
1

Pay-back Modeling

One of the most important aspects of closing a solar sale is showing the pay-back period. A good solar software should be able to model pay-back periods based on system cost, tax incentives, financing options, etc. Some solar software will even be able to compare pay-back periods for multiple financing options. The best solar software will have federal, state, and even a solar sale is showing the pay-back period.

Key Takeaways

- Improves sales
- Increases customer confidence



System Start	July 2022
Total Value of Energy	$10,286,077.01
Lifetime Value (NPV)	$3,294,695.33
Internal Rate of Return (IRR)	29.19%
Return on Investment (ROI)	925.01%
Payback Period	3.7 years
Levelized Cost of Energy	$0.15 / KWh

2

Monthly/Yearly Savings

The most common question that a customer will ask is, "how much will I save if I switch to solar?" To answer this question, you'll want your solar software to provide you with both monthly and yearly utility bill savings.

Key Takeaways

- Improves sales
- Increases customer confidence

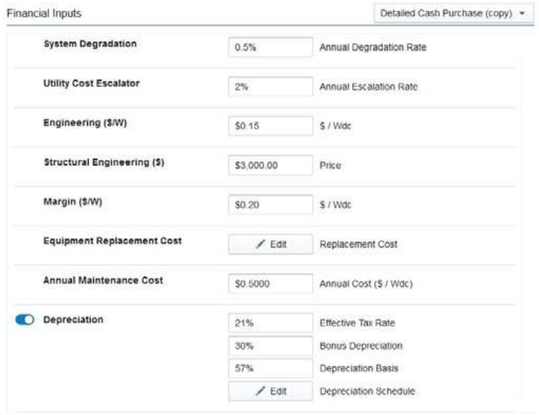
3

Incentives Database

Good solar software should have an extensive incentives database. Being able to add incentives directly in the software will help you accurately create pay-back reports and monthly/yearly savings estimates.

Key Takeaways

- Improves sales
- Increases customer confidence
- Improves sales city incentives



4

Multiple Financing Options

Some solar software will allow you to compare financing options directly in the app. This can help you show the customer multiple ways of paying for their system so you can overcome any financial objections. The best solar software will be able to show a side-by-side comparison between options such as cash, loan, lease, and Power Purchase Agreement (PPA).

Key Takeaways

- Improves sales
- Increases customer confidence

5

Depreciation Schedules

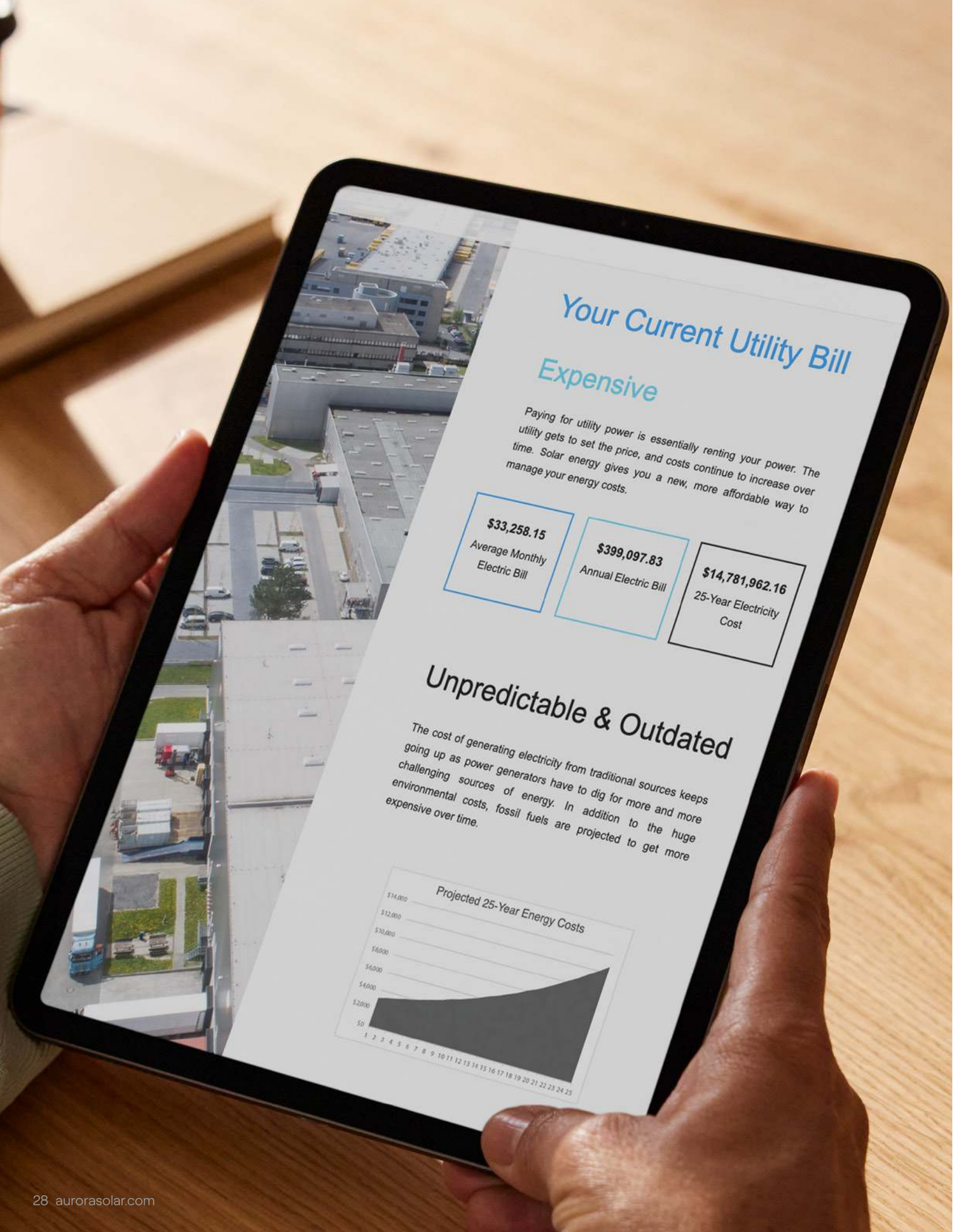
A depreciation schedule shows you how a system's value diminishes over time based on the life expectancy of the components. Being able to show your customer the expected lifespan and value of their system will help build trust and give them confidence that you really understand what you're selling.

Key Takeaways

- Increases customer confidence

PRO TIP

Pair multiple financing options with depreciation schedules to show your customer you've thought of all contingencies and gain their trust.



Sales Solutions

1

Fully Customizable Proposal Templates

Cookie-cutter sales proposals work in the early stages of your business, but as you grow you'll want to make your proposals customized to your needs. A good solar software will allow you to change the branding, layout, fonts, and colors of your sales proposal so it fits your brand.

Key Takeaways

- Improves brand perception
- Empowers your sales team
- Increases market potential

2

Proposal Editing Features

Your solar software should have capabilities to make editing sales proposals as easy as possible for your salespeople. Being able to quickly and intuitively modify sales proposals will encourage your sales team to adapt their pitch to fit each customer's needs.

Key Takeaways

- Increases sales
- Speeds up workflows
- Empowers your sales team

3

Placeholder Values

Some sales proposal templates include placeholder values to help guide the user on what information they should include. Placeholder values can help jumpstart your sales proposal generation and save time when generating a sales proposal.

Key Takeaways

- Speeds up workflows

☆ Sales Special Features

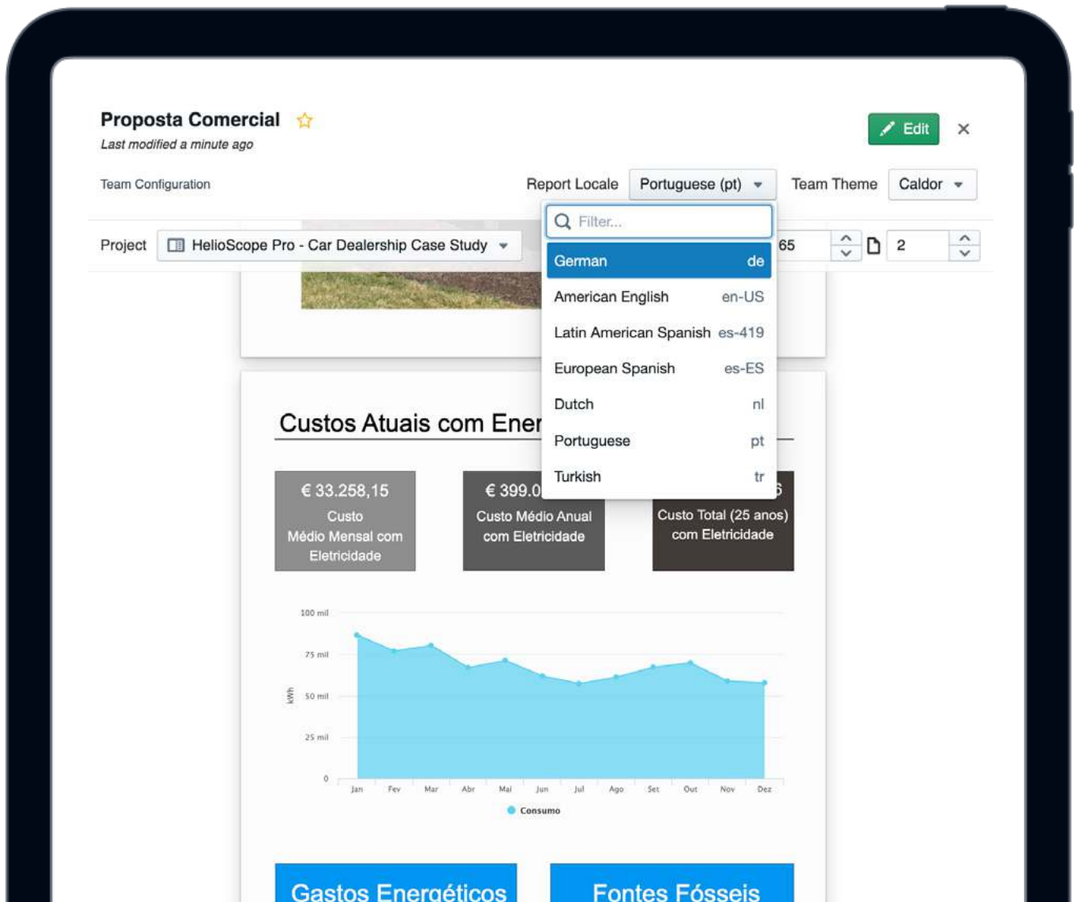
1

Embedded Site Design

One way to make your sales proposals stand out is by adding elements of the customer's solar design into the sales proposal. Some solar software allows you to embed your site design directly into your proposal, and the best solar software will do this for you automatically.

Key Takeaways

- Improves brand perception
- Increases sales
- Speeds up workflows



2

Global Languages & Formats

Some sales proposal templates have the ability to support multiple languages and currencies. This can offer you the flexibility to work in different markets.

Key Takeaways

- Increases market potential
- Speeds up workflows

3

The Fully Integrated Lead to Close Solution

An all-in-one solution enables your team to unify their design and sales operations in one streamlined package. Your team will be able to effortlessly compare different designs and financial variables to come up with the best solution for your customer.

Key Takeaways

- Increases market potential
- Empowers your sales team
- Speeds up workflows

Conclusion & Takeaways

Your commercial solar software should help empower your sales team to minimize inefficiencies, improve proposal accuracy, and ultimately close more deals.

As you look into your next solar software solution, look beyond the standard features. The right solar software can unlock immense opportunities for your solar business down the road.

See how these features can improve your next solar project.

Sign up for a free trial at https://www.helioscope.com/signup today!