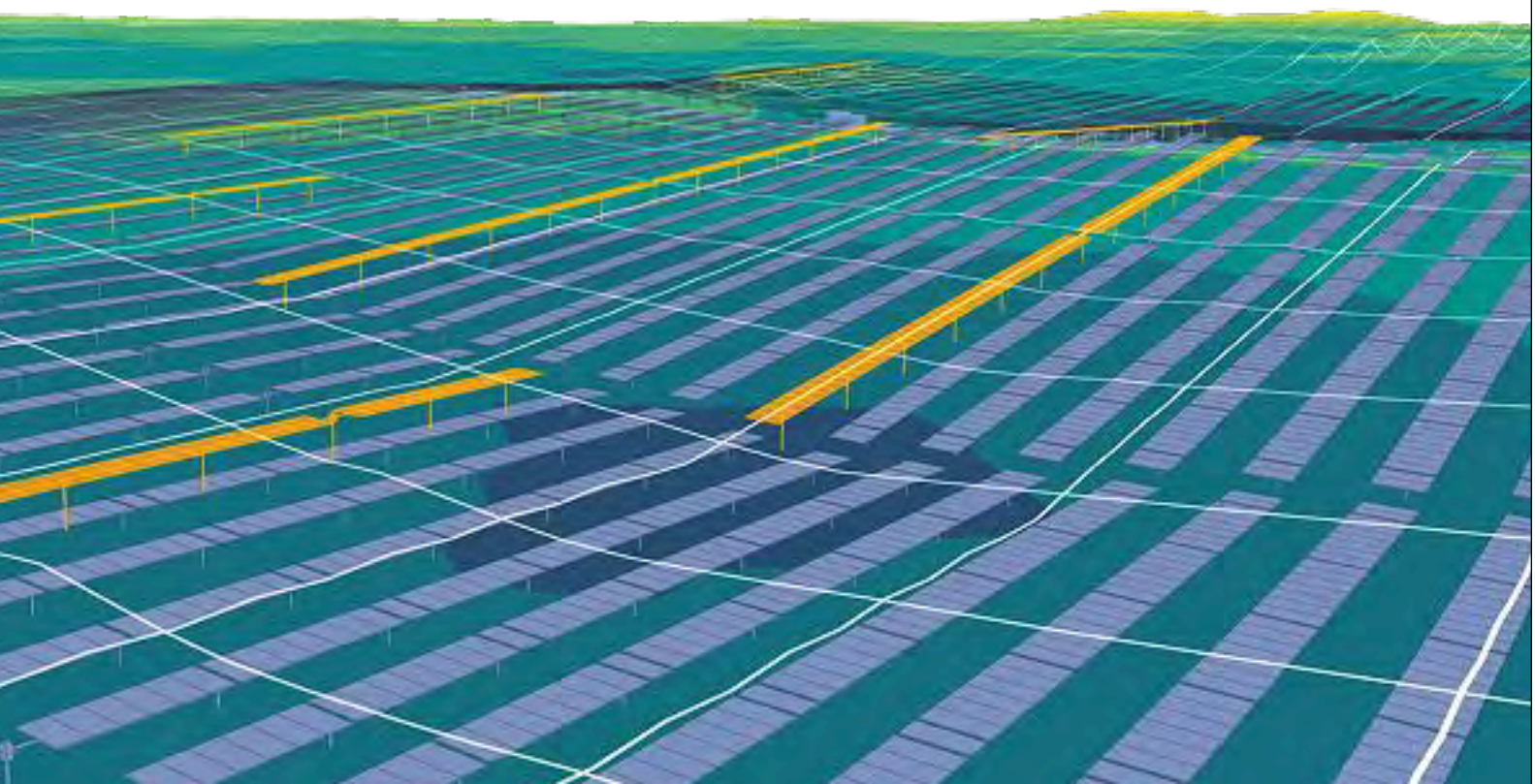
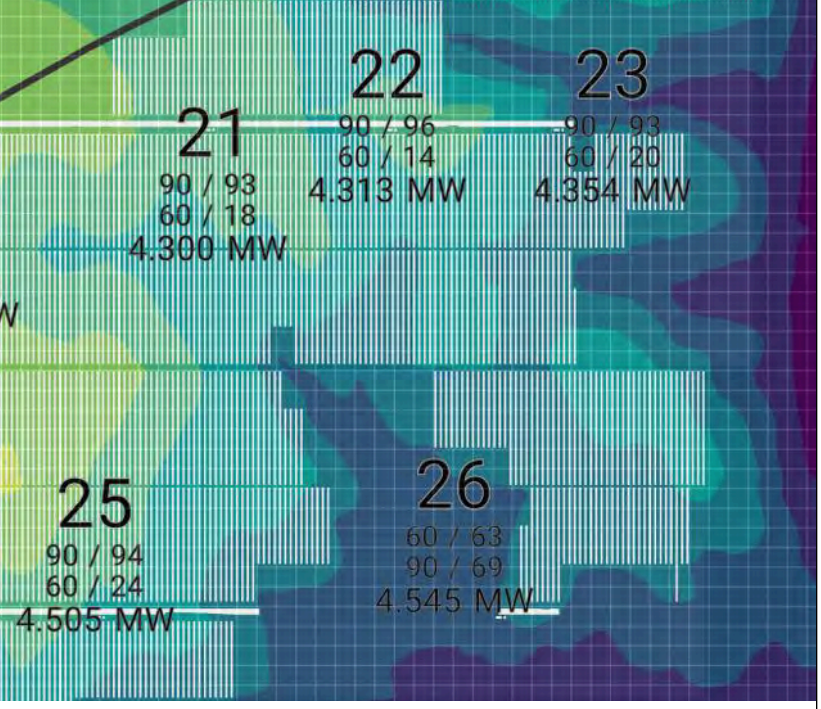
OMCO SOLAR

PVFARM

& OMCO Solar PVFARM

increased efficiency by **18x**
and improved quote accuracy



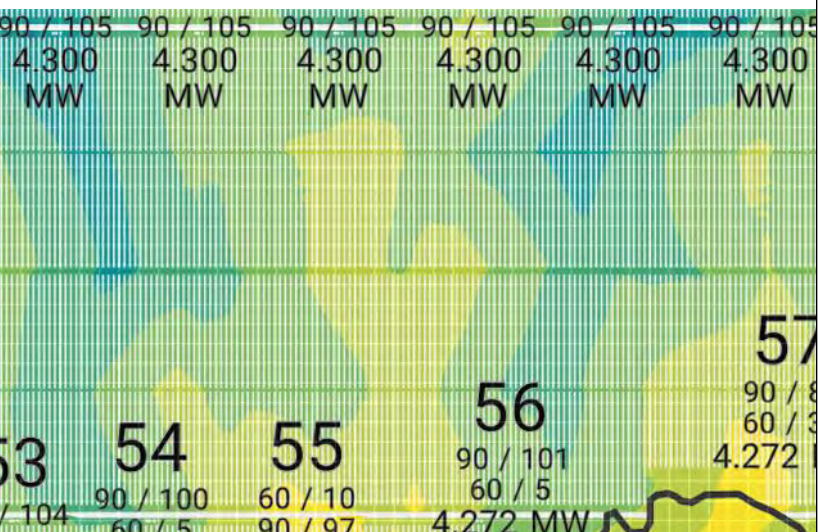


Dave Wilson,
Director of Engineering

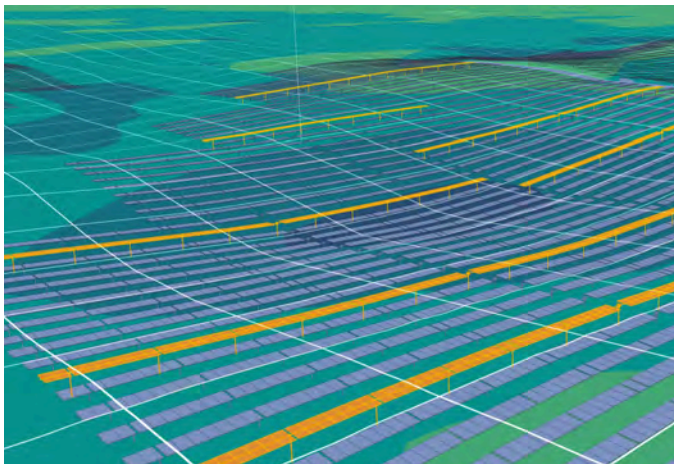
Dave Wilson is an experienced engineering manager with a strong background in the renewable energy sector. Currently based in Phoenix, Arizona, he serves as the Director of Engineering at OMCO Solar, where he spearheads the design and implementation of solar energy solutions. Dave holds a degree from Lehigh University and is known for his expertise in engineering management and renewable energy technologies.

Summary

OMCO Solar is a leading provider of solar trackers and fixed tilt solutions. With 5 manufacturing plants in 4 states, this US-based team has a large footprint in the industry with continuous, rapid growth. They were seeking a way to streamline their design process, improve accuracy, and enhance collaboration between their engineering teams. They found the solution in PVFARM, a cutting-edge solar design platform that has revolutionized their workflow and delivered significant time and cost savings.



The Challenge



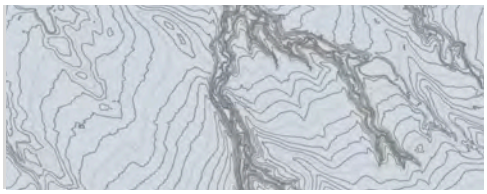
Accelerated tracker layout generation

OMCO Solar has long been recognized by its customers for its exceptional responsiveness and ability to meet tight deadlines – a testament to their dedicated team and efficient processes. However, this high level of service came at a cost. The engineering team was consistently working extended hours, navigating the complexities of manual topography analysis and layout creation using AutoCAD, Civil 3D, and Excel.

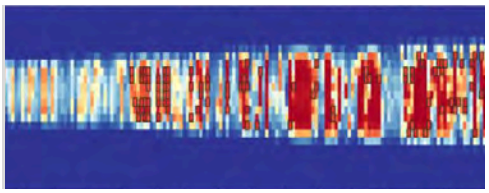
The opportunity for manual data entry errors also lingered, adding a layer of potential risk that the team diligently worked to mitigate. While OMCO Solar consistently delivered on its commitments, the time-intensive nature of these tasks presented a challenge to scaling operations and maximizing team efficiency.

"It would take hours to populate the data needed to give a customer what they needed to install the piles, and then to iterate that process when even small changes are made is really the difficult part."

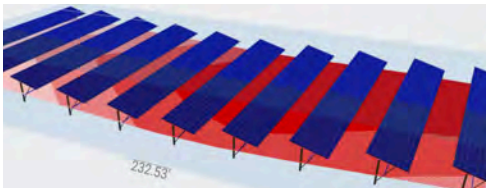
Dave Wilson,
Director of Engineering



Manual topography analysis & layout creation

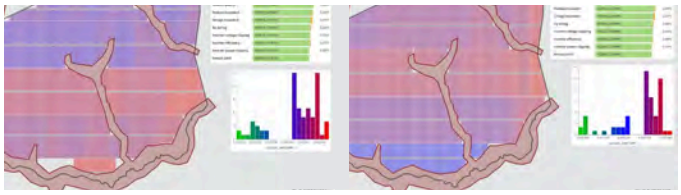


Time-consuming processes creating long hours for iterations

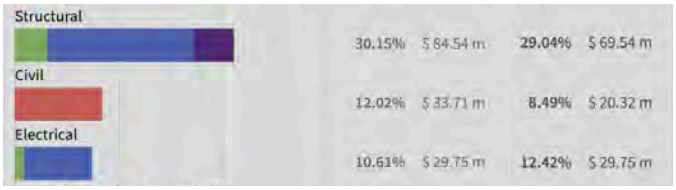


Opportunity for error

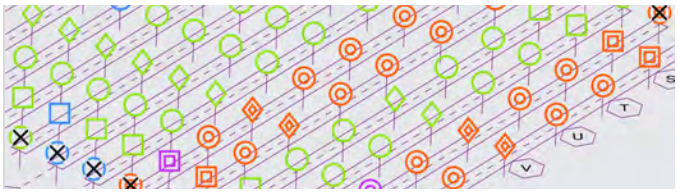
PVFARM seamlessly integrated into OMCO Solar's existing workflow, enabling their engineers to quickly adapt to the new software. The platform's collaborative features also fostered better communication and coordination between different engineering disciplines.



Rapid project iteration for clients



Process consolidation to eliminate opportunities for error



Accelerated tracker layout generation

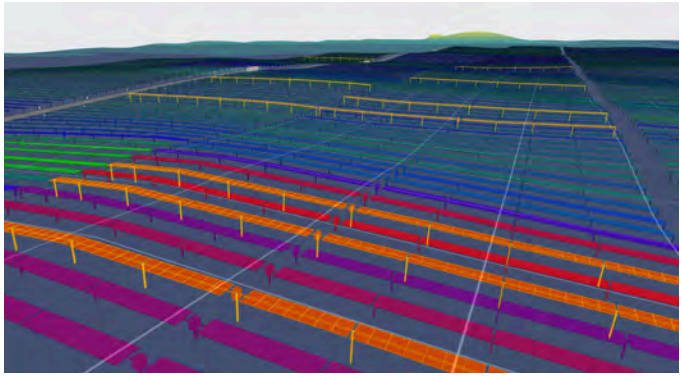
“After the layout was created, it would take a couple of hours to provide a customer the information they needed. Now the same process takes minutes at most.”

Dave Wilson,
Director of Engineering

Results

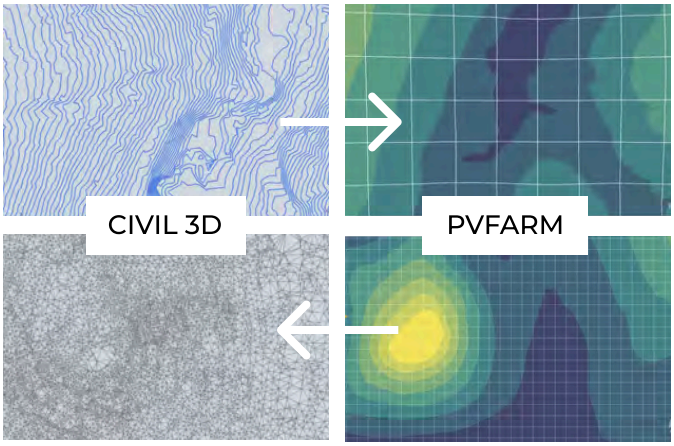
Beyond Efficiency

PVFARM has facilitated better collaboration between different departments. The mechanical engineering team can now perform calculations that were previously handled by the electrical engineering team, freeing up the latter to focus on other critical tasks.



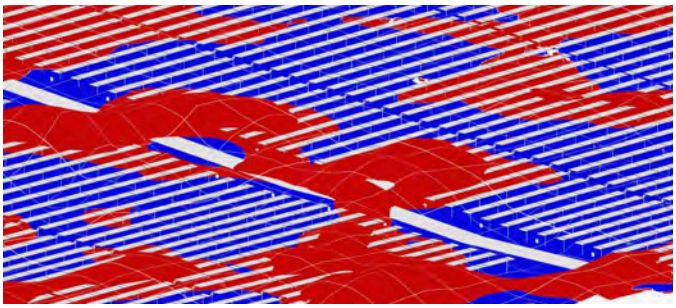
"The biggest advantage that we've seen is just being able to process topography and some layout creation on the tracker side"

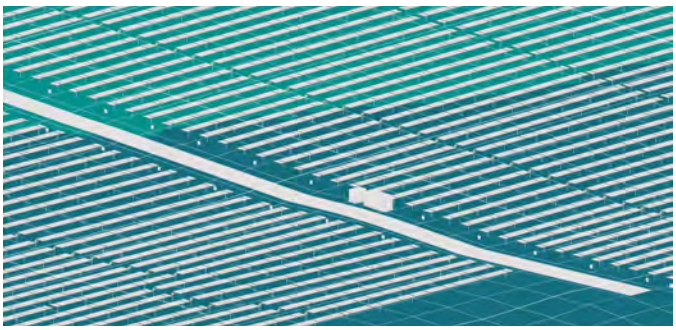
Dave Wilson,
Director of Engineering



Increased accuracy in project quotes

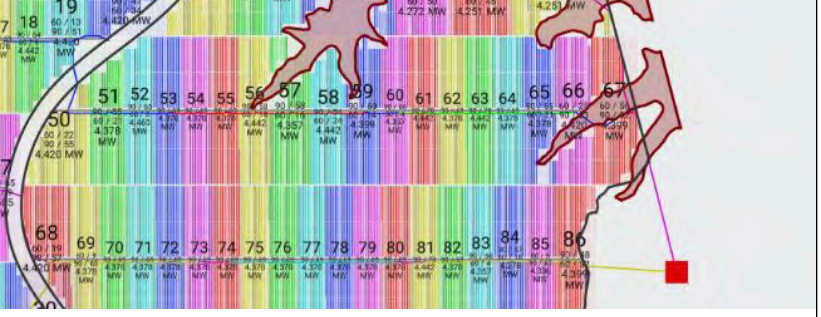
in addition to time savings, PVFARM also improved the accuracy of calculations, eliminating the risk of errors associated with manual data transfer between different software programs. This resulted in more accurate project quotes leading to less change orders after the PO.





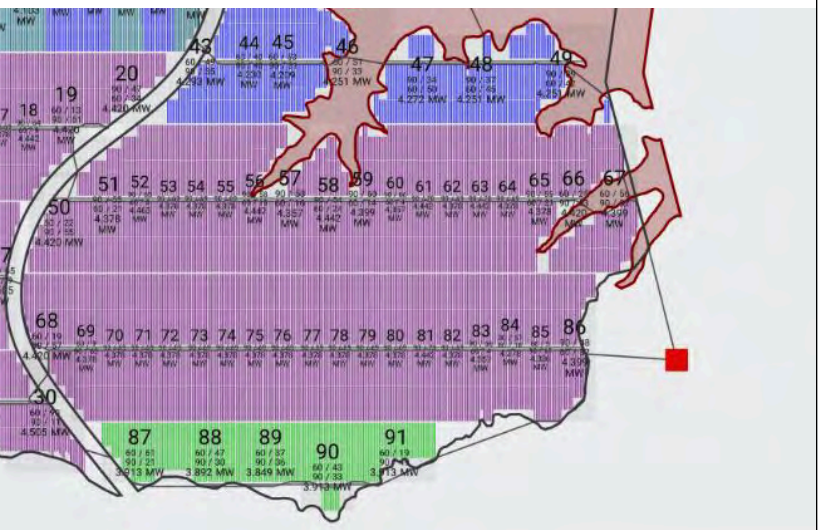
18x improvement in efficiency

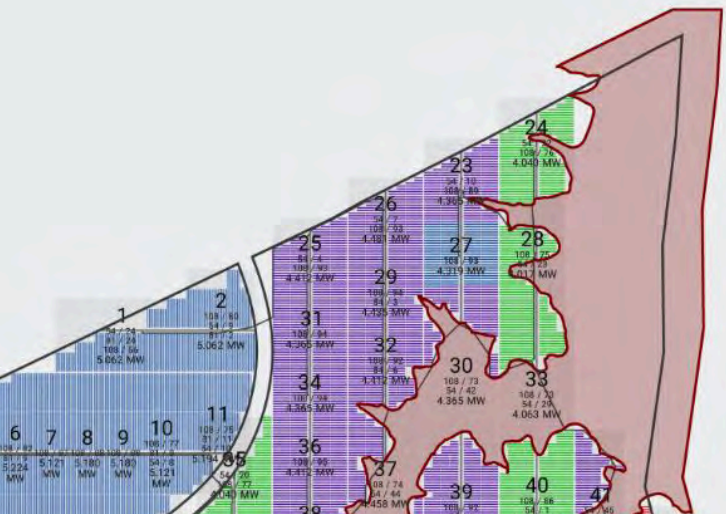
PVFARM reduced the time required for topography analysis and layout creation from hours to just minutes, representing an 18x improvement in efficiency. This dramatic time saving allowed the team to respond to client requests much faster and deliver projects even more efficiently.



3x ROI

Wilson estimates that PVFARM will deliver a 3x return on investment for OMCO Solar once the team is fully proficient with the software. PVFARM has not only streamlined OMCO Solar's design process but has also enabled them to expand their service offerings. They can now confidently provide layout creation services to clients who don't have their own designs, opening up new business opportunities.

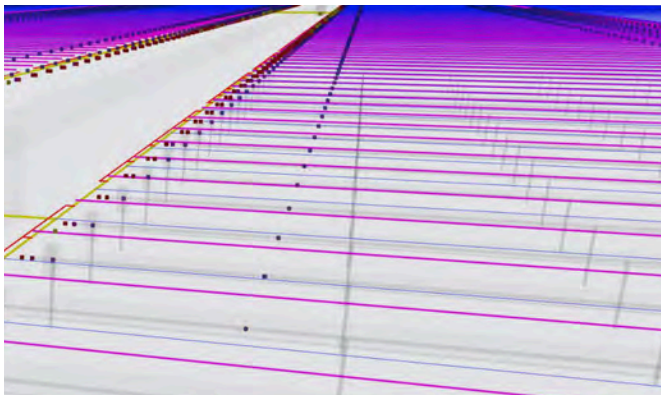




Construction cost breakdown	**$ 308,944,479.47**	**$ 351,761,034.30**
PV Modules	$ 144,697,105.35	$ 162,845,949.00
PCS	$ 22,739,318.35	$ 27,606,649.00
Electrical	$ 31,839,308.37	$ 36,562,541.21
Civil	$ 29,712,145.40	$ 32,950,039.60
Structural	$ 70,238,819.24	$ 80,750,141.09
Design and Engineering	$ 9,717,782.76	$ 11,045,714.40
Construction cost per DC Watt	**$ 0.89**	**$ 0.89**
PV Modules	$ 0.42	$ 0.41
PCS	$ 0.07	$ 0.07
Electrical	$ 0.09	$ 0.09
Civil	$ 0.09	$ 0.08
Structural	$ 0.20	$ 0.20
Design and Engineering	$ 0.03	$ 0.03
evelized cost of Energy		
LCOE	120.18 MWh	64.82 MWh
area		
te area	1336.61 ac	1336.61 ac
uildable area	1144.26 ac	1144.26 ac
ootprint	1078.38 ac	1057.10 ac
oads	51219.58 ft	34235.01 ft
	1024391.57 ft2	684700.26 ft2
olar arrays rows	**4116**	**3890**
ipment		
V modules	**752058**	**559560**
Longi Solar LR4-72HIBD-430M 430.0 W		546156
JA Solar JAM72D30-545/MB 545.0 W		205902
CSI Solar CS7N-705TB-AG 705.0 W		559560
Modules area	18890760.70 ft2	18709724.95 ft2
GCR	0.44	0.43
Any trackers	**2016**	
XTR JAM72D30-545/MB 27/108MOD	1730	
XTR JAM72D30-545/MB 27/54MOD	152	
XTR JAM72D30-545/MB 27/81MOD	134	
Trackers		**6964**
DuraTrack HZ v3 CS7N-705TB-AG 30/60MOD		2240
DuraTrack HZ v3 CS7N-705TB-AG 30/90MOD		4724
North-facing trackers		3808
Fixed-tilt	**5295**	
TF3 LR4-72HIBD-430M 54/108MOD	4819	
TF3 LR4-72HIBD-430M 27/54MOD	476	
Combiner boxes	**1540**	**1602**
DC Combiner Box 1500V 405.0 A	1540	1602
Inverters	**77**	**91**
Sungrow Central SG3600UD 3600.0 kW 1MOD		55
Sungrow SG4400UD 4400.0 kW 1MOD		22
Generic Central 3605 3605.0 kW 1MOD		91
Transformers	**77**	**91**
Generic Transformer 8800.0 kW 35500.0 V	55	91
Sungrow Transformer 4400.0 kW 34500.0 V		22
Sectionalizing cabinets	**11**	**2**
1.8 ft 4.0 ft 2.5 ft	11	2
Substations	**1**	**1**
100000.0 W	1	1
Energy		
Max CI CB circuit length	**1418**	**1457**
Solar arrays circuit length 1	122	145
Solar arrays circuit length 2	1418	1457

Final Thoughts

PVFARM has proven to be very impactful for OMCO Solar, delivering significant time and cost savings, improving accuracy, and enhancing collaboration. The platform has empowered the engineering team to work more efficiently and effectively, ultimately benefiting both the company & its clients.



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About PVFARM

With PVFARM, you can design and deliver large-scale solar projects more easily and make more money doing it. The software automates a lot of the complicated stuff, gives you clear data to work with, and helps your team collaborate effectively. It's all about getting better results, quicker.

- **Effortless mix & match equipment & electrical designs in the same project.**
- **Multiple grading strategies with just a few clicks, fast & easy.**
- **Seamless integration with your favorite tools to fit into your existing workflows.**
- **User-friendly, web-based interface built on industry-leading technology.**