





PANDUIT VALUE PROPOSITION

Panduit's broad portfolio offers 75 percent of a typical Electrical Balance of System (BOS) bill of materials, which covers more ground than any other manufacturer. Combine this with direct access to expert consultants and strategic R&D investments that maximize efficiencies and decrease the total cost of ownership across the entire project.

- **Reduce Installation Time** – Panduit solutions are known for patented, time-saving features that reduce the required number of installation steps
- **Longer Operating Life** – Panduit solutions for the solar industry are rated for UV compatibility; the combination of our engineering and manufacturing expertise results in products that deliver optimized product life spans
- **Harsh Environment Applications** – Panduit conducts extensive testing to ensure product performance and under conditions that include high wind, high vibration, intense UV exposure, extreme temperatures, and corrosive atmospheres.
- **The Value of Partnership** – With Panduit as a partner, companies have the confidence of knowing that an entire team of knowledgeable professionals is available to provide a complete solution

CUSTOMERS

TARGET AUDIENCE	LEADING QUESTIONS	CUSTOMER CHALLENGES	BENEFITS
EPC/Contractor Construction / Project Manager	 What safety standards are applicable to your solar farm project?	<ul style="list-style-type: none"> • Project constraints: Time is Money—reduced timelines, productivity, fewer resources, tighter budgets • Workforce training & Safety • Product availability • Product reliability • Ease of Installation 	<ul style="list-style-type: none"> • Tooling and Kitting; the right product at the right time. • Tech Support and Panduit Certified Installer training program • Stock at distribution • Ongoing R&D • Documented reliability – 25 years of operating life
Engineer/Consultant Specification / Design Engineer	 Who is designing and constructing your solar farm? Are you using outside contractors?	<ul style="list-style-type: none"> • Minimize project cost & meet project specs • Adapt vendor-specific codes to local standards • Performance & Reliability • Standards 	<ul style="list-style-type: none"> • Tooling solutions: lowest installed cost due to savings in material and labour • Quantifying solution impact on project • Expertise in standards applicability
OEM Combiner Boxes / Disconnect Boxes / Inverters	 Who is supplying the panels? Are they also providing combiners and inverters?	<ul style="list-style-type: none"> • Maximize energy output (KW /panel) • Increase productivity (# of panels / year) • Minimize operational maintenance 	<ul style="list-style-type: none"> • Part # consolidation – Kitting or bundling products specific to wire management, grounding • Engineering advantage solutions with respect to specific products – nylon 12 cable ties, or plastic and metal edge clips • Superior tool design and training
End User/Owner i.e. Utility Company, Microsoft, Facebook	 What is the size and scope of your project? <i>small <10MW</i> <i>medium >10MW but <100MW</i> <i>large >100MW</i>	<ul style="list-style-type: none"> • Lowest cost of ownership • Regular maintenance / MRO • Uptime / Operating life • Product testing for product reliability, longevity, and overall quality 	<ul style="list-style-type: none"> • Lowers total installed cost • Regional Representation • Warranty Program • Beyond the Balance of System (BOS): Panduit's stewardship of green initiatives



OVERVIEW

As the solar industry has matured, solar-derived power has evolved beyond a scattering of simple panels to complex assemblies of solar conversion devices, control systems, and transmission stations. Solar power technology has advanced impressively while also becoming less expensive. Getting PV panels installed is a perfect way to generate electricity without negatively impacting the environment. Solar energy equipment, whether for a utility-scale application of solar energy, commercial or residential, requires you to consider various components to produce a quality system that will last for the 25+ years that customers are expecting.

MARKET TRENDS

- Tech companies account for 38% of overall renewable energy contracts over the last five years and corporate renewable power purchases reaching 10.6GW in 2020
- Solar photovoltaic (PV) is expected to account for the largest annual capacity additions for renewables, well above wind and hydro, for the next five years.
- More and more, Solar PV installations are being paired with Battery Storage, a balancing act that helps to create a more flexible and reliable grid system when there is more supply than demand
- We are quickly approaching tipping point where new installed solar capacity is cheaper than operating coal or natural gas power plants is expected in 2025
- Balance of System (BOS) will play a larger role in increasing the performance and minimizing the cost of utility-scale PV installations
- Since 2010, the cost of new solar photovoltaic projects has fallen by 82%


ADDITIONAL SALES OPPORTUNITY

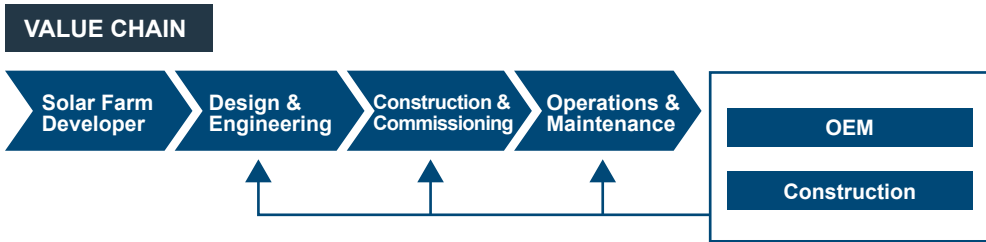
- Solar farms, along with being a power generation utility are also a Network Infrastructure end user. They will have network needs typical of enterprise networks and data centers. As such, they will automatically be users of the entire range of Panduit network infrastructure products such as fiber optic and copper connectors, cables, pathways, racks, cable management systems and cabinets.
- Energy Storage plays an important role in the balancing act and helps to create a more flexible and reliable grid system when there is more supply than demand. This presents an opportunity to sell Panduit's electrical and network solutions.

FAST FACT

Panduit solutions cover up to 75% of a typical PV installation electrical BOS.

www.panduit.solar





Annuity Sales Opportunity

- Typical OEM Panel, Array, Combiner box, Inverter Box, Wire Harness, Transformer Manufacturer
- New Construction: \$1000 installed components sales opportunity per mega watt or 4000 panels

PROJECT TIMELINES & KEY MILESTONES

- Construction timeframe is typically approximately 10 Months
- Grounding and Bonding is specifiable and brand selection is made separately from other balance of system solutions
- Grounding and Bonding solution provider holds key position in the opportunity
- PV Wire Management represents biggest pain point during construction

ADDITIONAL RESOURCES

[Solar Solutions Microsite](#) [Renewable Energy & Electric Vehicle Roadmap](#)

[Solar Solutions Brochure](#)

[Solar Solutions Overview video](#) Sample Bag: Part No. SOLAR-BAG



SOLUTIONS MATRIX	Panel/Array	Combiner Box	Inverter	Transformer	Substation	Remote Data Centers	Energy Storage
	GROUNDING CONNECTOR SOLUTIONS						
CTAPR Series Grounding Connector	•	•	•	•			
Mechanical Connector Split Bolts				•			
Service Post				•			
Grounding & Fence Clamps				•			
CT-2980/STBT	•	•	•	•			
CT-2931/STBT	•	•	•	•			
POWER CONNECTOR SOLUTIONS							
Aluminum & Copper Lugs		•	•	•			•
Aluminum Splice		•	•	•			•
Braided Bonding Straps							
Lay-In Lugs	•	•					•
Aluminum Mechanical Lugs		•		•			•
Ring Terminals		•	•				•
Fork Terminals		•	•				•
CT2300/ST Series		•	•				•
CT-1550 Crimp Tool		•	•				•
CD-550 Die Insert		•	•				•
CABLE MANAGEMENT SOLUTIONS							
Edge Clip with Cable Tie Mounts	•		•				•
Metal Solar Edge Clip			•				•
Plastic Solar Edge Clip	•		•				•
GTS-E	•	•	•				•
GTH-E	•	•	•				•
Weather Resistant Nylon 612 Cable Ties	•	•	•		•		•
Weather Resistant Nylon 12 Cable Ties	•	•	•		•		•
Weather Resistant Nylon 6.6 Cable Ties	•	•	•		•		•
StrongHold Fully Coated Stainless Cable Ties	•	•	•		•		•
UV Rated CLT	•	•	•				•
MLT Double Loop Cable Cleat Configuration						•	•
Polymer Trefoil Cable Cleat Configuration						•	•
Polymer Cable Cleat One-Hole Configuration						•	•
Polymer Cable Cleat Two-Hole Configuration						•	•
SS Solar Wire Hanger	•						

PANDUIT®	Panel/Array	Combiner Box	Inverter	Transformer	Substation	Remote Data Centers	Energy Storage
	IDENTIFICATION SOLUTIONS						
MP300 Mobile Printer			•	•	•	•	•
TDP43ME Desktop Printer			•	•	•	•	•
Arc Flash Labels			•	•	•	•	•
Self-Laminating Wire Markers			•	•	•	•	•
Continuous Tape			•	•	•	•	•
Heat Shrink	•	•	•				
SAFETY SOLUTIONS							
Detectable Tape		•	•	•		•	•
Electrical Tape		•	•				
Lockout Padlocks		•	•	•		•	•
Barricade Tape		•	•	•		•	•
Nylon Marker Plates	•	•	•	•	•	•	•
Safety Tags	•	•	•	•	•	•	•
VeriSafe AVT		•	•	•	•		
Data Access Port					•		
NETWORK COMMUNICATION SOLUTIONS							
Category 6 Copper Cables Shielded						•	•
Category 6 Copper Cables Unshielded						•	•
TX6A Shielded Field Term RJ45 Plug						•	•
Category 6 Din-Rail Adapter						•	•
Category 6 Din-Rail Panel						•	•
TX6000 Category 6 Shielded Solution Horizontal Jack						•	•
TX6A Shielded Solution Horizontal Cable						•	•
TX6A Category 6A Shielded MUD Resistant Solution Non-Armored						•	•
TX6A Category 6A Shielded MUD Resistant Solution Armored						•	•
TX6A Category 6A Shielded MUD Resistant Solution Jack						•	•
Fiber Connectivity Solutions						•	•
Jack Module Block-out Device						•	•
RJ45 Plug Lock-in Device						•	•
LC Duplex Adapter Block Out Device						•	•
SmartKeeper RJ45 Blockout Device						•	•
SmartKeeper USB Type A Blockout Device						•	•
SmartKeeper USB Type C Blockout Device						•	•
SmartKeeper Master Key						•	•