

Risen Energy all set to be Pakistan's long-term partner in energy transition

Song Yifeng (Danny Song)

Director of Product Center
at **Risen Energy**



Song Yifeng says we shipped over 100GW of products to more than 90 countries and regions worldwide; on the product side, we're pushing our heterojunction (HJT) modules hard—specifically the 740Wp Hyper-ion HJT series; our HJT modules don't just cut your electricity bills—they back it up with a 25-year power performance guarantee

Mustafa Tahir

Energy Update magazine conducted an interview with Mr Song Yifeng (Danny Song) pertaining to Pakistan's struggling energy sector. The details of the interview are given below:

Q. Risen Energy has established itself as a leading player in the global solar market. Could you share your perspective on the company's recent growth and its plans for Pakistan?

Ans: Absolutely. Let me start by saying—we're not new to this game. With 39 years

under our belt in photovoltaics, innovation has always been our go-to engine. Back in 2002, when we first dipped our toes into the new energy sector, we zeroed in on solar cells and modules. Fast forward to today, we've shipped over 100GW of products to more than 90 countries and regions worldwide. That's not just numbers—it's proof the market trusts us, and it speaks volumes about the value of our tech groundwork.

Then, in 2018, we took a big leap by acquiring SYL. That move let us branch into energy storage, and now we've built up the know-how to handle all kinds of scenarios with "solar + inverters + storage" solutions. Whether it's a massive 5MWh utility-scale system or a compact 5kWh

home setup, whether we're talking about our self-developed PCS/BMS/EMS tech or custom "kit packages"—we're equipped to cover every need.

Now, focusing on Pakistan. Let's be honest, it is really a good place for solar applications. The annual sunshine here is over 2,200 hours. That's prime solar real estate. Plus, energy demand is skyrocketing. So, we're doubling down here.

Our strategy? It centers on a dual-drive model called "products + service" working hand in hand. On the product side, we're pushing our heterojunction (HJT) modules hard—specifically the 740Wp Hyper-ion HJT series. Why? Because Pakistan's got that hot, sunny climate, and these modules thrive there. Their

high bifaciality (they soak up reflected light), low temperature coefficient and low degradation mean more power over time, which translates to better returns for our clients.

On the service side, we're tailoring solutions to local needs. Think "solar + storage" bundles for areas with spotty grids, or "residential + commercial" packages for mixed-use projects. We're also building a local tech team and teaming up with Pakistani partners to get projects off the ground faster. At the end of the day, it's all about helping Pakistan shift to cleaner energy—smoothly and sustainably.

Q. What are the unique strengths of Risen Energy's product portfolio that set it apart in the highly competitive solar industry?

Ans: Risen's product competitiveness stems from a dual strength: "technical depth" and "scenario adaptability." First, let's talk about the global leadership of our heterojunction (HJT) technology. We initiated HJT R&D in 2018, ranked first globally in HJT module sales for two consecutive years starting in 2020, and in 2022, we became the world's first company to mass-produce GW-scale HJT modules by integrating HJT with 210 silicon wafers, launching the world-first 700Wp+ modules. More critically, our Hyper-ion HJT modules achieve self-developed and patent soldering of 24 interconnection ribbons via OBB (Zero Busbar) technology, by which reducing the risk of micro-cracks and increasing the efficiencies; TCO 2.0 coatings, minimizing light loss and lowering the risk of potential-induced degradation (PID), and Optical optimization of the encapsulation system.

These innovations have enabled our mass-produced HJT modules to reach an industry-leading efficiency of 23.8% and power output of 740Wp—currently the only ultra-high-power products available in the market at scale.

Second, our full-scenario product matrix. Beyond high-efficiency modules, we leverage 20 years of energy storage technology accumulation (strengthened by our acquisition of SYL) to provide a complete range of energy storage systems—from 5kWh residential units to 5MWh utility-scale solutions—paired with our self-developed inverters. This "solar + inverter+ storage" integrated capability better addresses the distinct needs of Pakistan's Utility, C&I, and residential sectors. Notably, in scenarios requiring high grid stability, combining storage with



solar significantly improves power supply reliability.

Take our Sunease residential energy storage series, tailor-made for Pakistan. It directly tackles local pain points: power outages, high diesel generator costs, and the inability to store solar energy at night. The Sunease system integrates HJT 730Wp+ solar panels, Barq hybrid inverters, and Hifz & Rige series batteries. Its high-efficiency design maximizes power generation, offering a one-stop home energy storage solution that makes clean electricity accessible.

Lastly, let's talk about how well it adapts to local climates. HJT technology has some built-in strengths here: first, it's got a high bifaciality rate—90%—which means it can pull extra power from sunlight bouncing off the ground or nearby surfaces. Second, its temperature coefficient is super low (-0.24% per degree Celsius), so even when it's scorching hot (like in Pakistan's summer!), it doesn't lose much efficiency. Third, it degrades really slowly—only about 1% in the first year—so it keeps producing power reliably for decades.

We've actually seen this play out in real-world tests in Saudi Arabia, where it's super-hot and sunny year-round.

Compared to regular solar panels, our HJT modules generated 5-7% more annual electricity under those harsh conditions. That extra juice isn't just a number—it directly boosts how profitable a solar farm can be over its lifetime.

Q. Pakistan is rapidly moving toward renewable energy adoption. How do you see the opportunities and challenges in this market, and how is Risen Energy addressing them?

Ans: Let's start with the opportunities—they're quite clear. Firstly, the government has set a bold target: 30% renewable energy by 2030. That's a strong policy signal, giving the sector clear direction. Secondly, Pakistan's solar resources are world-class—abundant sunlight (over 2,200 hours of annual sunshine) and low land costs make it a prime location for solar projects. Thirdly, the energy shortage is urgent: the country currently faces a power deficit exceeding 10GW, and its heavy reliance on traditional energy sources (like fossil fuels) means the need for transition is immediate. These factors create a huge window for renewables to step in.

Now, the challenges. They mainly fall into three buckets. First, grid infrastructure in some regions is still weak—transmission lines and substations can't handle large amounts of renewable energy yet, which limits how much solar we can actually connect. Second, financing is tough. Project costs are high, and traditional funding models (like bank loans) can be inflexible, so we need more creative partnerships to make projects viable. Third, the local supply chain isn't fully developed. Right now, Pakistan relies heavily on importing solar equipment (panels, inverters, etc.), which drives up costs and creates logistical bottlenecks.

To tackle these, Risen's strategy boils down to two key moves: "tech-driven cost reduction" and "local collaboration." Let's break that down. On the tech front, we're using high-efficiency solutions like heterojunction (HJT) modules to slash the levelized cost of electricity (LCOE)—the total cost per unit of energy over a project's lifetime. For example, our 740Wp HJT panels use 15-20% less modules than standard modules, which directly cuts down on upfront costs for developers. On the local front, we're partnering with Pakistani businesses to set up service centers that handle everything from project design and installation to long-term maintenance. This way, we're not just selling panels—

we're providing end-to-end support. We're also exploring ways to localize more of our supply chain—for instance, we're looking at building energy storage assembly lines in Pakistan. That would shorten delivery times, reduce shipping costs, and create local jobs.

In short, we believe combining cutting-edge tech with deep local roots is the best way to help Pakistan accelerate its renewable transition—while making sure it's both affordable and sustainable.

Q. Could you elaborate on any landmark projects or partnerships Risen Energy has undertaken in Pakistan or the SCO region?

Ans: Absolutely—let me share a bit more detail on what we're doing on the ground. Right now, we're working on several promising projects in Pakistan, and I'd highlight two key types.

First, large-scale utility projects. We're in talks with local Pakistani companies to launch Pakistan's first "HJT + storage" demonstration project. This will combine our 740Wp Hyper-ion HJT modules with 5MWh liquid-cooled storage systems. The goal is to push the plant's annual utilization hours from the typical 1,800 hours with standard panels up to over 2,000 hours. That extra 200+ hours mean more stable, clean power for communities—something we know is critical for Pakistan's growing energy needs.

Second, C&I distributed projects. With Pakistan's industrial zones expanding fast and electricity demand spiking, we've rolled out a "solar + storage + smart micro-grid" solution. We've already had preliminary talks with major textile and food processing plants in Lahore and Karachi. "Self-consume first, feed the grid later." This setup lets factories cut their power bills by over 30%—a big win for businesses struggling with high energy costs.

Looking ahead, we're eager to build long-term partnerships with Pakistan's government, industry associations (like the Pakistan Solar Association), and leading local businesses. The idea isn't just to sell panels or storage—it's to create an ecosystem where we share knowledge, split benefits, and grow together. Think training local tech teams, co-developing projects, and aligning with Pakistan's broader energy transition goals.

At the end of the day, we want these projects to be more than just "deals"—they're stepping stones to a greener, more resilient energy future for Pakistan.

Q. Innovation is a key driver in

the solar sector. How is Risen Energy investing in R&D to bring advanced, efficient, and reliable products to the market?

Ans: Great question. At Risen, our R&D philosophy is simple: focus on core technologies and solve industry pain points. Over the past three years, our R&D spending has grown over 20% annually—with more than 70% of that going into heterojunction (HJT) tech, energy storage, and new encapsulation solutions.

Let me break that down with examples. In HJT, we didn't just stop at being the first to mass-produce OBB (Zero Busbar) tech, we also developed our own "Hyper-Link Connection" equipment to fix a big headache in traditional soldering: micro-cracks. In energy storage, our self-developed PCS (power conversion system) paired with AI algorithms boosted storage system efficiency to 92%—that's way above the industry average of ~88%. and we're not just resting on our laurels—we're also investing in perovskite tandem tech, which already hits over 30% efficiency in the lab. That's our bet for the next generation of ultra-high-efficiency panels.

These investments are starting to pay off. In 2023 alone, our HJT module shipments jumped 120% globally. Our energy storage systems are winning more bids for large-scale projects—both in China and overseas, from Europe to North America, South America, and Australia. Moving forward, we'll keep listening to the market. Our goal is to turn those lab breakthroughs into products that can be scaled up fast.

Q. As Director Products, what is your long-term vision for contributing to sustainable development and a low-carbon future?

Ans: My vision's pretty straightforward: I want efficient, and reliable clean energy products to become the "infrastructure" of global low-carbon transitions. Here's how we're planning to make that happen:

First, we're not slowing down on tech. By 2026, we aim to push HJT module power output past 780Wp (with 25.1% efficiency) and cut per-watt costs by 10%. Why? Because we want more developing countries to access "affordable, high-efficiency" clean energy without breaking the bank.

Second, we're getting hyper-specific with solutions. Different regions have different needs. Take off-grid areas or places with sky-high electricity prices for businesses—we're developing "customized" product packages for these. For example,

we're designing an all-in-one "residential solar + storage + off-grid inverter" system for rural Pakistan. This isn't just about selling panels—it's about solving real problems, like powering communities that still don't have reliable electricity.

Third, we're taking responsibility for the entire product lifecycle. From day one of design, we're building in recyclability—think materials that can be reused at the end of a panel's life. And when we install a system, we're not walking away. We're committing to 25 years of maintenance to ensure every kilowatt-hour it produces stays green and sustainable.

At the end of the day, I believe that with the right mix of innovation and local collaboration, Risen can offer a "China solution" to Pakistan's low-carbon future—and the world's, too.

Q. What message would you like to share with policymakers, industry stakeholders, and customers in Pakistan?

Ans: First, to policymakers: Risen Energy wants to be Pakistan's "long-term partner" in its energy transition. We're ready to work with the government to refine renewable energy policies—whether that means streamlining approval processes, introducing tax incentives, or supporting subsidies. We also want to contribute to industry standards, like drafting safety regulations for energy storage, to ensure the market grows healthy and orderly.

Second, to industry partners: Collaboration drives progress. We're opening our technical exchange platform—sharing empirical data on our HJT modules (like power generation reports tailored to Pakistan's climate), co-developing training programs for local technicians, and pooling expertise to boost the entire sector's competitiveness. This isn't just about business; it's about lifting Pakistan's solar industry together.

Third, to customers: Choosing Risen means choosing "higher returns, lower risks." Our HJT modules don't just cut your electricity bills—they back it up with a 25-year power performance guarantee to protect your long-term investment. Our energy storage systems are designed for flexibility: modular scalability lets you upgrade as your needs grow, easing upfront cost pressures.

And finally, a personal note: Pakistan's sunshine isn't just a natural gift—it's a treasure trove of future energy. Risen is here to walk alongside the people of Pakistan, chasing the sun and building a zero-carbon future—together. ■