



Leading the World's Sustainable Energy Future.



FACTS & FIGURES

- /// **20GW+**
2025 Global Annual Capacity
- /// **Largest**
US-Based Solar PV Manufacturer
- /// **\$2.9B USD**
2021 Net Sales
- /// **\$1.5B+ USD**
Cumulative R&D Spend
- /// **45+**
Countries Shipped to
- /// **100%**
Renewably Energy Powered by 2028
- /// **Thin Film CadTel**
Semiconductor
- /// **AA**
PV Tech Bankability Rating
- /// **100%**
QA/QC Traceability & Supply Chain Continuity
- /// **90%+**
Recycling Recovery Rate
- /// **2.5X**
Lower Carbon Footprint

Founded in 1999, First Solar is a leading American solar technology company and global provider of responsibly produced eco-efficient solar modules advancing the fight against climate change. We are unique among the world's ten largest solar manufacturers for being the only US-headquartered company and not manufacturing in China. First Solar's advanced thin film photovoltaic (PV) modules represent the next generation of solar technologies, providing a competitive, high performance, lower-carbon alternative to conventional c-Si PV panels.

Manufacturing Leadership

First Solar has the Western Hemisphere's largest solar manufacturing footprint in Ohio, USA, with a third factory set to come online in the state in the first half of 2023 and a new factory, the company's fourth American manufacturing facility, expected to be commissioned in the US Southeast in 2025. We will have a global annual manufacturing capacity of over 20 gigawatts (GW) by 2025.

First Solar thin film PV modules are produced using a fully integrated, continuous process under one roof that does not rely on Chinese crystalline silicon (c-Si) supply chains. Our proprietary, vertically integrated process transforms sheets of glass into fully functioning solar panels in approximately four hours with a combination of highly skilled workers, Industry 4.0 architecture, machine-to-machine communication, artificial intelligence, and Internet of Things connectivity.

First Solar Locations



Technology Advantage

Designed and developed at its research and development centers in California and Ohio, First Solar's advanced thin film PV modules set industry benchmarks for quality, durability, reliability, design, and sustainability. Each module features a layer of Cadmium Telluride (CadTel) semiconductor, derived from byproducts of copper and zinc mining, which boasts a number of qualities over conventional c-Si, including lower cost, superior scalability and a higher theoretical efficiency limit.

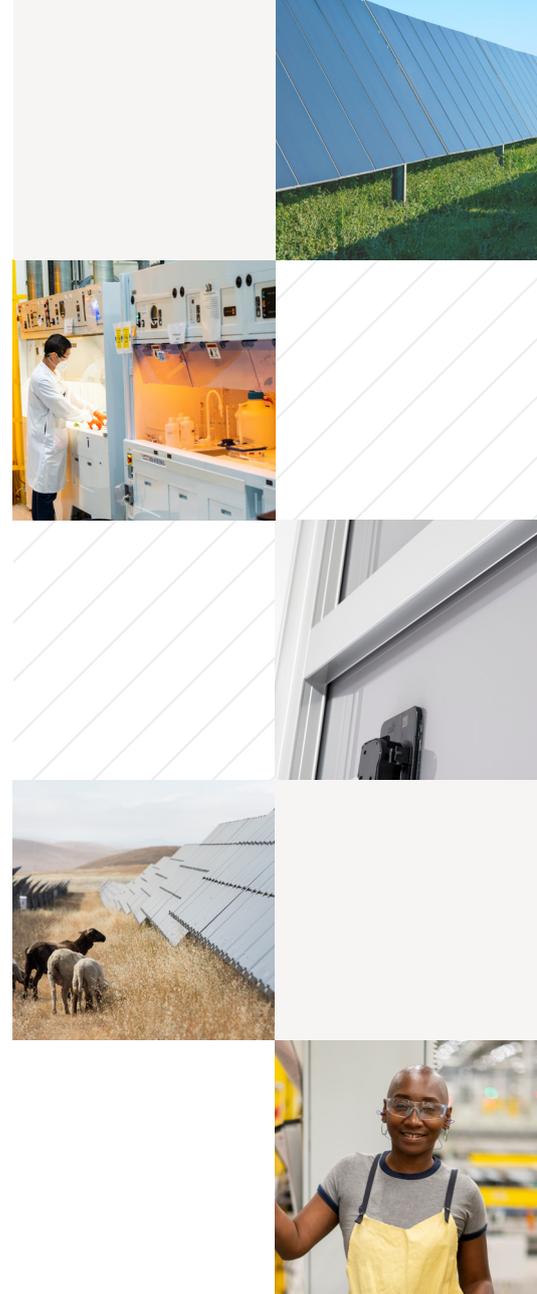
First Solar's thin film PV technology produces energy-efficient modules with a superior degradation rate, temperature coefficient, spectral and shading response, and the smallest environmental footprint in the industry. First Solar's thin film modules require only 1-2% of the semiconductor material needed by traditional c-Si modules to produce a comparable amount of power. Our vertically integrated manufacturing technology results in fewer process steps and faster production times with superior traceability and transparency.

Responsible Solar

From raw material sourcing and manufacturing through end-of-life module recycling, First Solar's approach to technology embodies sustainability and a responsibility towards people and the planet. This is why First Solar has a long history of establishing benchmarks in recycling, responsible supply chain management, transparency, and the carbon and water footprint of its technology.

Our thin film PV modules have the best environmental profile and are manufactured using less energy, less water and less semiconductor material, resulting in up to 2.5x lower carbon footprint and up to 3x lower water footprint than c-Si solar panels on a life cycle basis.

First Solar is a member of the Responsible Business Alliance (RBA) and in May 2022, we completed our first RBA Validated Assessment Program audit at our manufacturing facilities in Ohio and achieved platinum status, the highest possible rating. Additionally, First Solar has committed to powering 100% of its global manufacturing operations with renewable energy by 2028 and achieving Net Zero by 2050.



World-Class Recycling

First Solar has a long-standing leadership position in PV recycling having voluntarily established the industry's first global program over 15 years. It currently operates high-value PV recycling facilities in the United States, Germany, Malaysia, and Vietnam that recover more than 90 percent of the materials in each recycled First Solar module. This powers a circular economy by translating recycled materials into commonly-used glass, rubber, and aluminum products, and creating a regenerative source of CadTel.



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SUSTAINABLE ENERGY FUTURE



Learn more about
First Solar at [firstsolar.com](https://www.firstsolar.com)