

IMPACT FACTSHEET

First Solar

Main impact area

WHAT	 <i>Is the outcome important?</i>	The expansion of renewable energy generation is necessary to meet long-term climate goals
WHO	 <i>Does this help people in need?</i>	Fossil-fuels today comprise a major portion of the energy mix and threaten human health and the environment
HOW MUCH	 <i>Scale</i> <i>Depth</i> <i>Duration</i>	First Solar's technology results in up to 98% GHG emission savings compared to traditional forms of energy generation
CONTRIBUTION	 <i>How do the alternatives do?</i>	First Solar contributes to saving 17 million t CO2e emissions per year
RISK	 <i>What if it doesn't go as planned?</i>	Low probability

WHAT

- In 2019, the share of renewables in global electricity generation reached almost 27% (as per the IEA). Solar photovoltaic (PV) technologies accounted for approximately 10% of this.
- The IEA estimates that the renewable power share needs to expand to half of total global power generation by 2030 to meet the Sustainable Development Goals.
- Solar PV is expected to be a significant driver of the growth in renewable power generation, with the IEA estimating a 15% CAGR in Solar Power capacity up to 2030 is required to meet its Sustainable Development Scenario.

WHO

- First Solar's PV technology offers a sustainable and affordable energy source with the potential to substitute fossil-fuel power generation that is harmful both to human health and the environment.
- First Solar strives to help emerging geographic markets develop PV solar power generation and to provide these markets with a cost-competitive alternative to electricity generated by fossil fuels.

HOW MUCH

- First Solar's module technology displaces up to 98% of greenhouse gas emissions and other air pollutants when replacing traditional forms of energy generation.
- Furthermore, due to First Solar's resource-efficient manufacturing process, First Solar modules have a carbon footprint that is up to 6 times lower, a water footprint that is up to 24 times lower and an energy payback time that is up to 4 times faster than competing crystalline silicon solar PV modules manufactured in locations with carbon intensive grids.

CONTRIBUTION

- Assuming average worldwide irradiance and grid electricity emissions, First Solar's products are being used to displace over 17 million metric tons of CO2e per year during their 25+ year product life.
- This is equivalent to powering more than 12 million average homes, planting 290 million trees and saving 45 billion liters of water (or 18,000 Olympic swimming pools) per year based on worldwide averages.

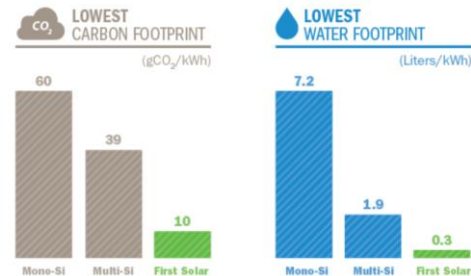
RISK

- First Solar's core businesses of manufacturing PV solar modules make it well positioned to capitalize on the renewable energy transition demand in the long run.
- It is extremely unlikely that First Solar will not live up to its commitment to increase the global percentage of renewable energy given it this is the core of its business model.
- In our view, First Solar's minerals sourcing policies and supply chain due diligence are better than the peer-average. In fact, unlike certain competitors, First Solar is not sourcing module components from the Xinjiang Uyghur Autonomous Region that is exposed to human rights abuses. Finally, First Solar relies on the Responsible Minerals Initiative's (RMI) Conflict Minerals Reporting Template (CMRT) to verify compliance status of smelters.



SDG 7 Affordable and Clean Energy – Target 7.2: Increase global percentage of renewable energy – Indicator 7.2.1: Renewable energy share in the total final energy consumption

FIRST SOLAR'S PRODUCT PERFORMANCE



FASTEST ENERGY PAYBACK TIME (Months)

