

## **First Solar, Inc.**

**Ticker: FSLR**

### **Business Description**

First Solar (FSLR) is a provider of solar energy solutions in the US and internationally, and is the largest US solar manufacturer. FSLR operates through two segments: Components and systems. The components segment designs, manufactures, and sells solar modules that convert sunlight into electricity. This segment manufactures cadmium telluride and crystalline silicon modules for system integrators and operators (CdTe is known within the industry as a thin-film extremely efficient technology). These cells broke the efficiency record by being able to convert 22.1% of the sunlight captured into usable energy. The Systems segment provides turn-key PV solar power systems or solar solutions, such as project development; engineering, procurement, and construction; and operating and maintenance services to utilities, independent power producers, and commercial and industrial companies. FSLR has been actively using acquisitions to enhance project capabilities and demand pipeline, with the notable purchases of Tuner Renewable Energy (2007), Optisolar (2009), NextLight (2010), and most recently, General Electric's solar technology (August 2013). FSLR was founded in 1999 and is headquartered in Tempe, Arizona with a current market cap of only \$4.9 billion.

### **Thesis**

I am increasingly confident that FSLR will use its \$1.13 billion in cash to invest in developing more cost efficient ways to produce solar products than their lead competitor Suntech Power, a Chinese firm. Reducing costs for FSLR would create major headwinds for Chinese producers and would allow FSLR to re-emerge as the cost leader in solar. I believe with that said, FSLR has the most optimistic future of any company in the sector. The future of their thin-film technology, paired with cost-reduction plans, is enough to ensure that FSLR will remain profitable in the foreseeable future. I remain bullish on FSLR because its proprietary thin-film technology will offer more opportunity to reduce costs versus the low-cost Chinese over the next few years.

## Catalysts

- The average cost of a solar electric system has declined by 50% since the start of 2010. Scientists and analysts project exponential declines in the cost for solar energy over the next two decades.
- Since President Obama took office in 2009, solar power has seen twenty-fold growth.
- The price per barrel of oil has already bottomed and will only rise in the coming years. The demand for solar and other renewable energy resources generally has an inverse relationship with the demand for oil, although we have not seen this over the past 18 months.
- Natural gas prices are hovering near decade lows and many analysts expect prices to rise over the next 3-5 years. The rise in the price of natural gas should increase the demand for solar related products.
- The UN's Paris climate deal should increase the demand of solar energy.

## Valuations

Morningstar has a fair value estimate of FSLR at \$56 per share. They believe that FSLR will continue to be the industry's cost leader in the second half of the decade as well as the industry's most profitable company. FSLR has the most defensible positions of all solar module manufacturers with its competitive cost structure and impressive balance sheet. Several analysts feel strongly that FSLR is the strongest company in the solar industry.

- P/E – 6.26
- P/S – 1.88
- P/B – 1.21
- EV/EBITDA – 4.38

## Financials

### Income Statement

- Revenue – (2015 – \$3.58 Billion) slow growth YOY.
- Net Income – Net income growth exceeding revenue growth YOY which shows margin expansion.

### Balance Sheet

- Cash – \$1.2 billion - Largest cash position of all solar companies.
- Long-Term Debt – \$251.33 Million – Smallest debt load of all solar companies.

### Ratios

- Operating Margin – 13.89% - expected to increase and has already been increasing
- Quick ratio – 2.75 – very liquid
- Return on Assets – 7.78% - increasing YOY
- Return on Equity – 10.33% - increasing YOY
- Return on Invested Capital – 9.94% - increasing YOY

## Recent Events

Recent acquisitions include: Tuner Renewable Energy (2007), Optisolar (2009), NextLight (2010), General Electric's solar technology (August 2013).

## Performance

The chart below shows how First Solar compares to the S&P 500 and top solar ETF, Guggenheim Solar, over the past two years. FSLR peaked in 2008 when it was trading over \$300 per share, levels it has not come close to since. During the widespread financial collapse, solar was

entering the peak of inflated expectations with thoughts of a clean energy future on the back of the federal stimulus package. Following this peak, stock prices collapsed as investors began to realize the reality of a harsh competitive market. China arrived on the global solar scene around 2012 creating competition and saturation within the market. Investors were faced with a commodity market where the lowest cost producer survives. It is evident that volatility has weighed down on the solar industry and will continue to do so for the foreseeable future.



## Risks

First Solar's ability to lower costs faster than its crystalline silicone competitors is not a sure thing and failure to do so would turn the stock into a value trap. The artificial nature of solar demand makes the industry incredibly volatile. Solar is characterized by high demand concentrations; in 2016 analysts are expecting China, Japan, Germany, and the U.S. to make up 70% of global installations. First Solar will continue to face headwinds from competitors, as there are very few barriers to entry in solar and there is a chance that the current period of irrational pricing and overcapacity will be a repeating theme in the future. First Solar's future is still uncertain, and should only be considered by investors that can withstand above average levels of volatility.

## **Closing Summary**

I believe that First Solar is a buy seeing that it is 37% below its 52-week high. The future success of this company will hinge on their ability to maintain low-cost manufacturing. The demand for alternative energy has gained traction over the recent years and will continue to do so. With a debt to cash ratio near zero, FSLR has the ability to continue investing in their technology and create disruptions in the industry. The thin-film technology used by FSLR is their biggest play on cutting costs and should send them in a profitable direction in the coming years. FSLR is a long-term hold for an investor that has the ability and willingness to withstand periods of high volatility. With a fair value price of \$56 per share, I rate FSLR a buy.

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