

Executive Summary

1. Company Evaluation

First Solar, Inc is a leading global producer of photovoltaic (PV) cells and modules, encompassing 13% share of the PV market. Despite its success in the past, First Solar has been facing recent issues in areas of elevated competition with entries of heavy-subsidized Chinese companies, loss of price leadership and elimination of subsidy markets. First Solar has taken primary measures in overcoming these issues by firstly implementing a turn key solutions system that wins over other manufacturers. First Solar's strong financial position is one of its key strengths. Furthermore, First Solar's incentive to shift to sustainable markets boosts its potential for expansion in the global PV market, propelling them up the ladder of success.

2. External Forces Forecast

Prior to deciding on potential sustainable markets to enter however, it is paramount for First Solar to analyze external forces, which may impede or escalate its inherent growth.

2.1. Soaring demand in photovoltaic module contributed by America and Emerging Countries- Having observed severe climate change and possible energy crisis, the demand of renewable energy all around the globe increases rapidly. Together with a reduction in PV cost and encouraging government policies, a soaring demand in CdTe thin film technology is expected in America and other emerging countries.

2.2. Heavy-subsidized Chinese companies pose as strong competitors- The Chinese Government has been boosting production of solar energy companies through granting them heavy subsidies that they can sell even below costs. The major business of Chinese companies lies on sales of Crystalline silicon. However, as subsidies were scrapped, prices of C-si would stay flat or even go upward. As a substitute of C-si, CdTe would suffer from less pressure to drive down the price, benefiting First Solar.

2.3. Price of solar energy reaches grid parity - There are mainly two factors driving down the price level of solar energy. First of all, the government support in places like Australia, India, the U.S.A. help solar energy companies to reduce production cost as well as operation cost, hence there are various subsidies granted and programs launched to facilitate the popularity of solar energy within the countries. Technological advancement allows the cost of CdTe to go lower through mass production, stimulating attainment of grid parity in the future, where conventional electricity costs aligns with those of solar power sources.

3. Criteria

First Solar has the primary aim of increasing market share and diversify income sources by targeting development in three countries. In order to identify a sustainable market, First Solar should compare market characteristics against a solid criteria base, which includes:

- 3.1 Sizeable potential market demand*
- 3.2 Plentiful government support*
- 3.3 Solar energy should be cheaper than traditional electricity sources*
- 3.4 Abundant solar resources available*
- 3.5 Competitive landscape with an existing market portion that is not fully captured*
- 3.6 Comprehensive infrastructure (wide electrification and grid coverage)*

Countries of which satisfy the vast majority of these criteria include the *United States, India and Chile*- hence would be the top 3 prioritized markets First Solar should enter.

4. Entry into Respective Countries

4.1 The United States

First Solar should aim at targeting the residential and commercial markets in the U.S. of which demand for photovoltaic installations is greatest by developing systems modules in the highly insolated states, financed by U.S. government subsidies. Building a construction PV power plant in New Mexico, California and Arizona can maximize use of its abundant solar resources. Forming strategic partnerships with local firms and implementing a new investment vehicle named yieldco can propel First Solar in a beneficial direction for enlarging its operations in the future.

4.2 India

India has the objective of reaching 20000MW of solar capacity by 2022, as well as aims to reach grid parity before 2019, providing a promising future for the solar energy market. Moreover, 35000km² of the Thar Dessert has been set aside for solar power projects, generating large amounts of cheap solar energy that can cater the needs of a large potential customer base. The low saturated PV market in India provides potential for First Solar to enter. Bangalore, has the highest electrification coverage of 75%, presenting it as a suitable region for First Solar to enter through cDte thin film technology. Joint ventures with existing small local firms can also be considered to establish connections and increase market share.

4.3 Chile

Chile's rapidly rising demand for renewable energy, especially solar energy is one of the predominant elements of which determines First Solar's entry into this market. Upon targeting the Chilean market, First Solar should further develop system businesses in the long term, placing current focus on large solar power projects in neighboring regions in the highest irradiation Atacama Desert. First Solar should also initiate acquisitions with small local solar power businesses such as Solar Chile in order to expand its networks and enlarge its market share on a global scale, making use of the low cost solar energy in Chile .

5. Potential Risks and Hindrance in the 3 Prioritized Markets Respectively

5.1 U.S.A:

Possible reduction in government support towards First Solar may lead to increasing production and operation costs. Investment Tax Credit is going to expire in 2016, implying revenues from new installations of solar panels would diminish. DoE loans may discontinue after the bankruptcy of Solyndra, a seemingly promising solar energy company.

5.2 India

Serious corruption problem may inherently increase the production and operation cost. Limited electrification coverage as well restricted the market size.

5.3 Chile:

Discount rates are relatively high. High cost of borrowing as well brings additional financial burden to the company. Transmission constrains as well exist currently because of geographical reasons.

6. Conclusion

With strategies targeting U.S., India and Chile, Sales is expected to grow at CAGR 13.9% from 2014 to 2020. The 5-year strategy will bring First Solar USD148 million NPV. First Solar will be able to remain market leader position in the world and enjoy benefits from soaring demand in solar energy.