

MARCH 2024

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# Transforming First Solar

Solar for a brighter future

PRESENTED TO  
First Solar Team

PRESENTED BY  
Plato Franco, XXX, XXX, XXX



# Agenda

**Background Information**

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**Financials**

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**Competition**

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**Market**

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**Vertical Integration // Solutions**

19

**Long Term Goals**

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**Final Thoughts**

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# Background Information

First Solar is a solar cell manufacturing firm based in America.

Case Racers has been hired by First Solar to help evaluate and provide guidance amidst internal and systematic challenges.

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Assessment of First Solar's current financial situation

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Investigation into domestic and Chinese competitive entrants

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Evaluation of the current and future solar cell manufacturing market

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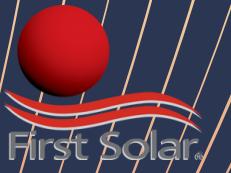
Considerations in regards to downstream business acquisitions

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Evaluation of current systems business and solidifying long term goals

# FINANCIALS

A look into key financial figures for First Solar





# First Solar Financials

Known key areas of interest





# First Solar Financials Cont.

Key areas to watch for in First Solar Financials

<i>*Dollar amounts are in '000</i>	FY '11	FY '10	YOY change
Revenue	\$2,766,207	\$2,563,515	+7.9%



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Free Cash Flow	\$(183,401)	\$413,985	-144.3%



# Financial Ratios

Key ratios to watch for in First Solar

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<b>Current Ratio</b>	2.684
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<b>Debt-Equity Ratio</b>	0.231



# Financial Ratios

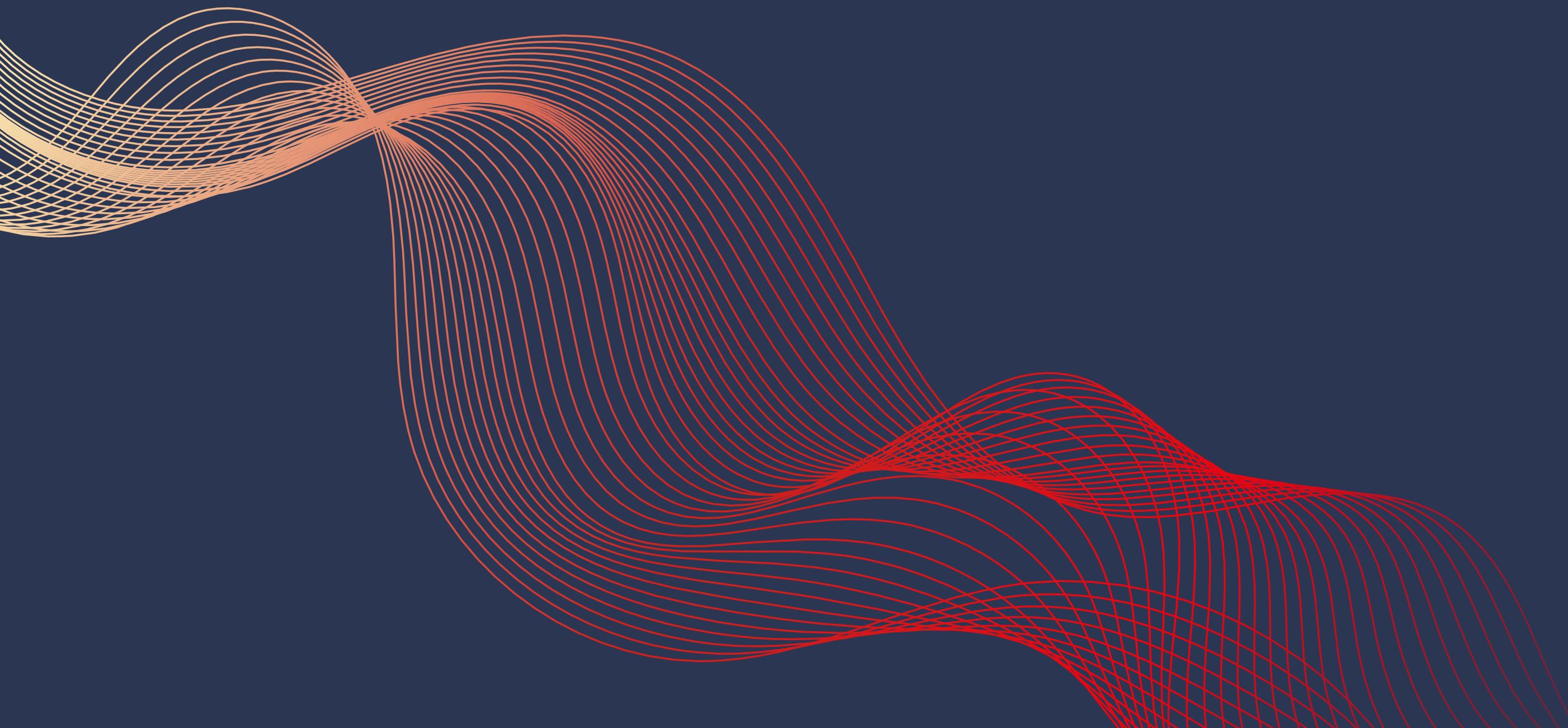
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<b>Cash Coverage Ratio</b>	68.287



# COMPETITION

An evaluation into First Solar's market competitors





# First Solar's Competition

First Solar's domestic and foreign competition

Domestic Competition

Market Segmentation

C-Si technology

Chinese Competition

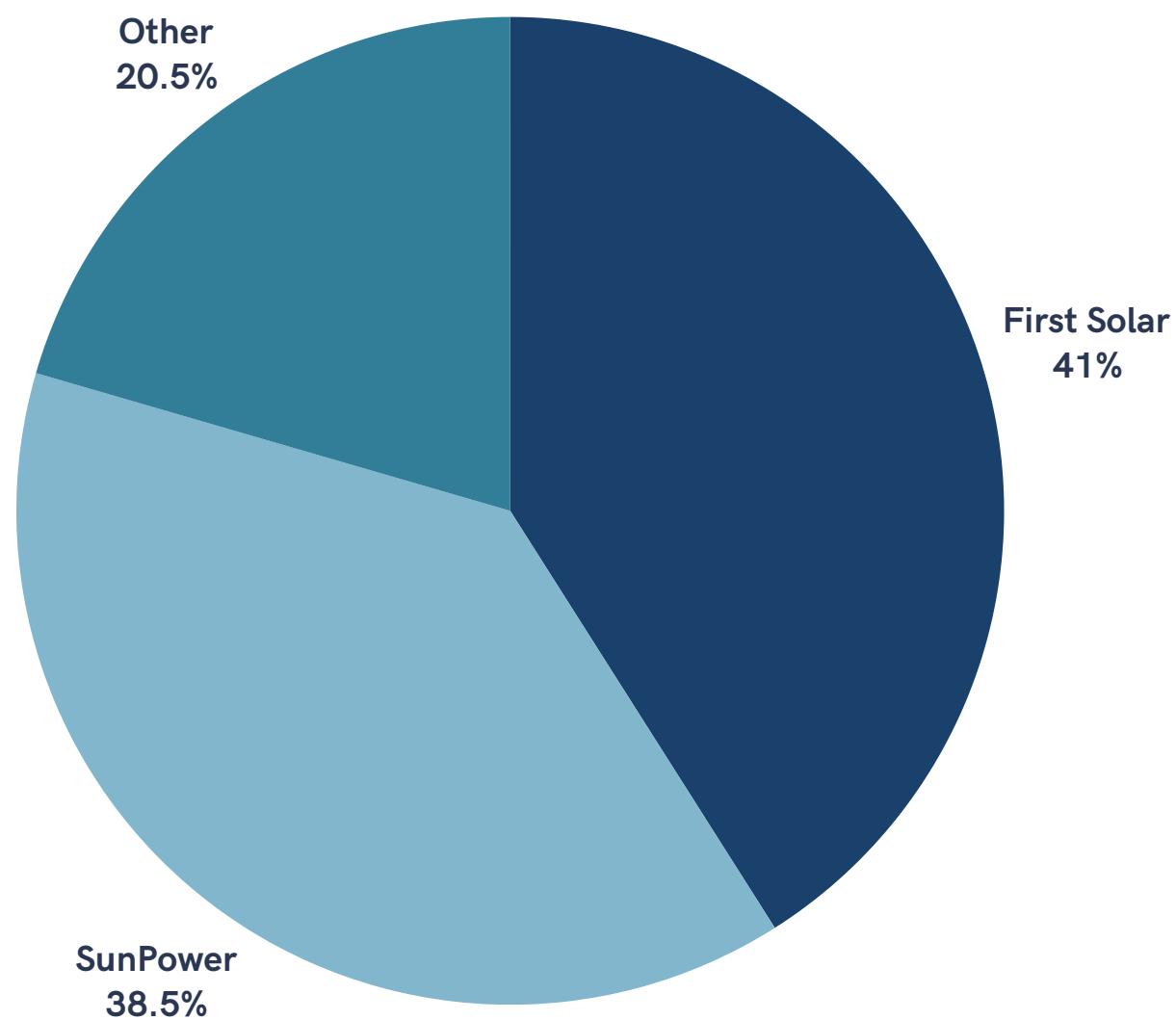
Gov. Subsidies

Anti-dumping

Sustained Loss

# Domestic Competition

First Solar's domestic market

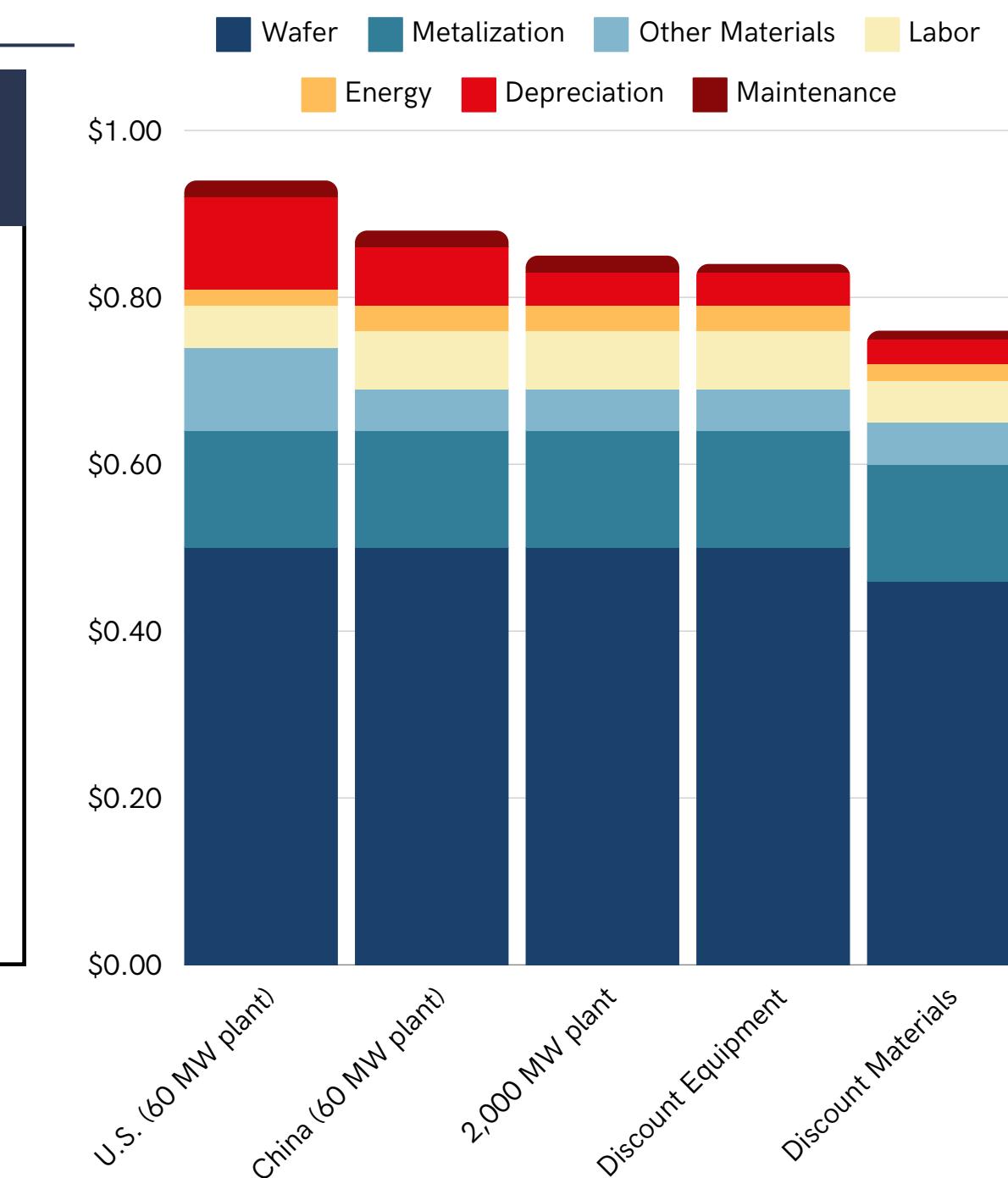
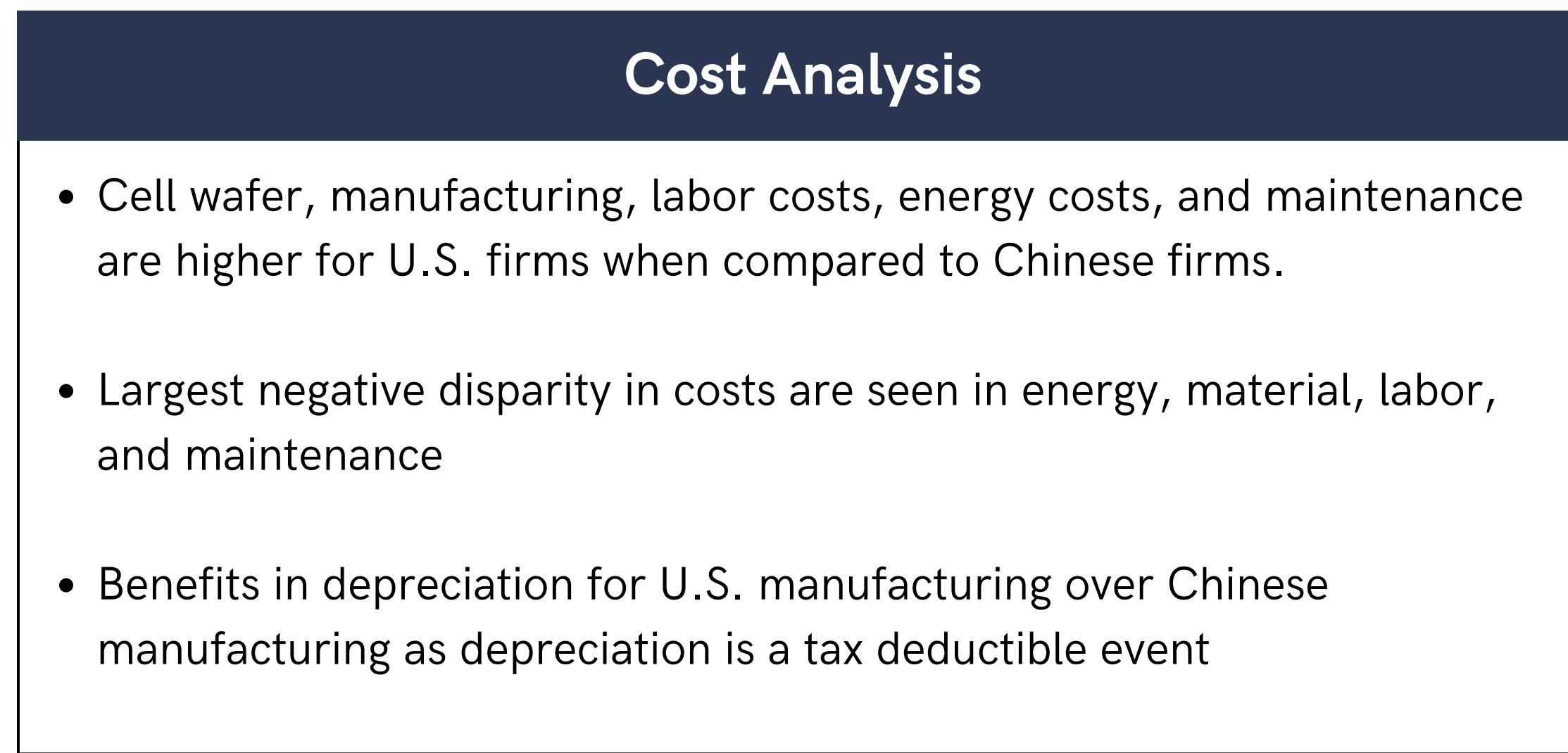


## Current State Domestic Market Shares

- U.S. solar installations experienced significant growth from 2009 to 2011, increasing participation in the global photovoltaic (PV) market
- First Solar and SunPower emerged as major players in the U.S. solar market, together controlling nearly 80% of the market in 2011
- Majority of U.S. competition including Chinese competition use crystalline-silicon technology

# Cost Advantages

First Solar's cost advantages and disadvantages

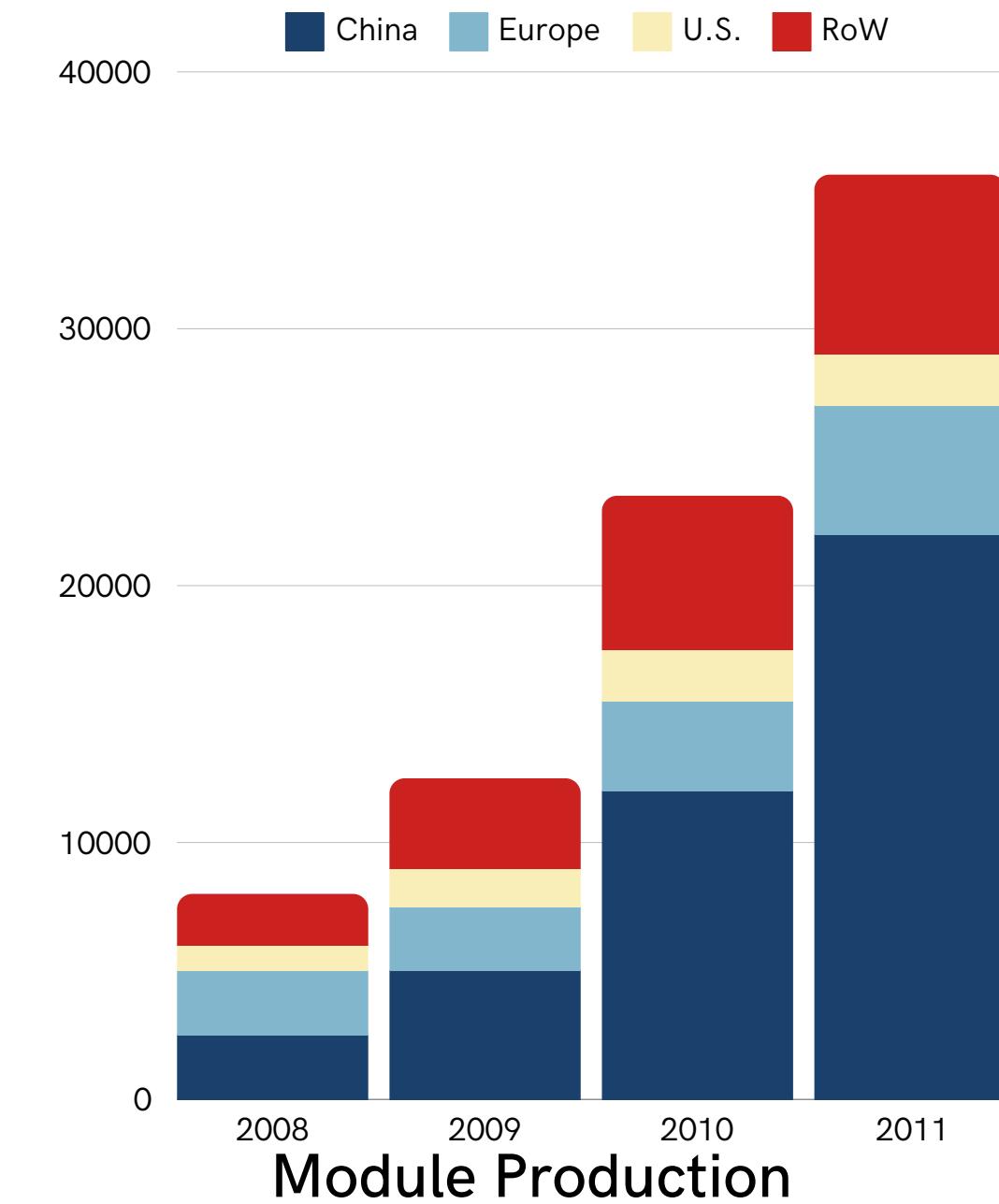


# Chinese Competition

First Solar's foreign competition

## Market Competitor Domination

- Over the years, China's solar market has expanded significantly.
- Chinese solar manufacturers benefit from significant government subsidies.
- The U.S. growth in the global market has been slow.
- Chinese companies have faced anti-dumping lawsuits in the past.
- The Chinese companies are all operating at a sustained loss.





# Competitor Financials

Key areas to watch for in First Solar's Competitors FY 11'

<i>*Dollar amounts are in '000</i>	First Solar	Sunpower	Suntech Power	Yingli Green Energy
Revenue	\$2,766,207	\$2,312,494	\$3,146,600	\$2,332,094



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Capital Expenditures	\$149,938	\$(73,796)	\$204,800	\$331,933
Free Cash Flow	\$(183,401)	\$(47,300)	\$(111,500)	\$(277,779)



# Competitor Financial Ratios

Key ratios to watch for in First Solar's Competitors FY 11'

	First Solar	Sunpower	Suntech Power	Yingli Green Energy
Current Ratio	2.684	1.974	0.800	0.984



# Competitor Financial Ratios

Key ratios to watch for in First Solar's Competitors FY 11'

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Current Ratio	2.684	1.974	0.800	0.984
Quick Ratio	2.621	1.601	0.602	0.777



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Current Ratio	2.684	1.974	0.800	0.984
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Cash Ratio	0.622	0.618	0.189	0.323



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Leverage Ratio	0.369	0.665	0.790	0.743



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Cash Ratio	0.622	0.618	0.189	0.323
Leverage Ratio	0.369	0.665	0.790	0.743
Debt-Equity Ratio	0.231	0.090	2.374	2.473



# Competitor Financial Ratios

## Cont.

Key ratios to watch for in First Solar's Competitors FY 11'

	First Solar	Sunpower	Suntech Power	Yingli Green Energy
NWC Turnover	1.687	2.229	-6.018	-69.459



# Competitor Financial Ratios

## Cont.

Key ratios to watch for in First Solar's Competitors FY 11'

	First Solar	Sunpower	Suntech Power	Yingli Green Energy
NWC Turnover	1.687	2.229	-6.018	-69.459
Profit Margin	-1.428%	-21.113%	-32.352%	-22.250%

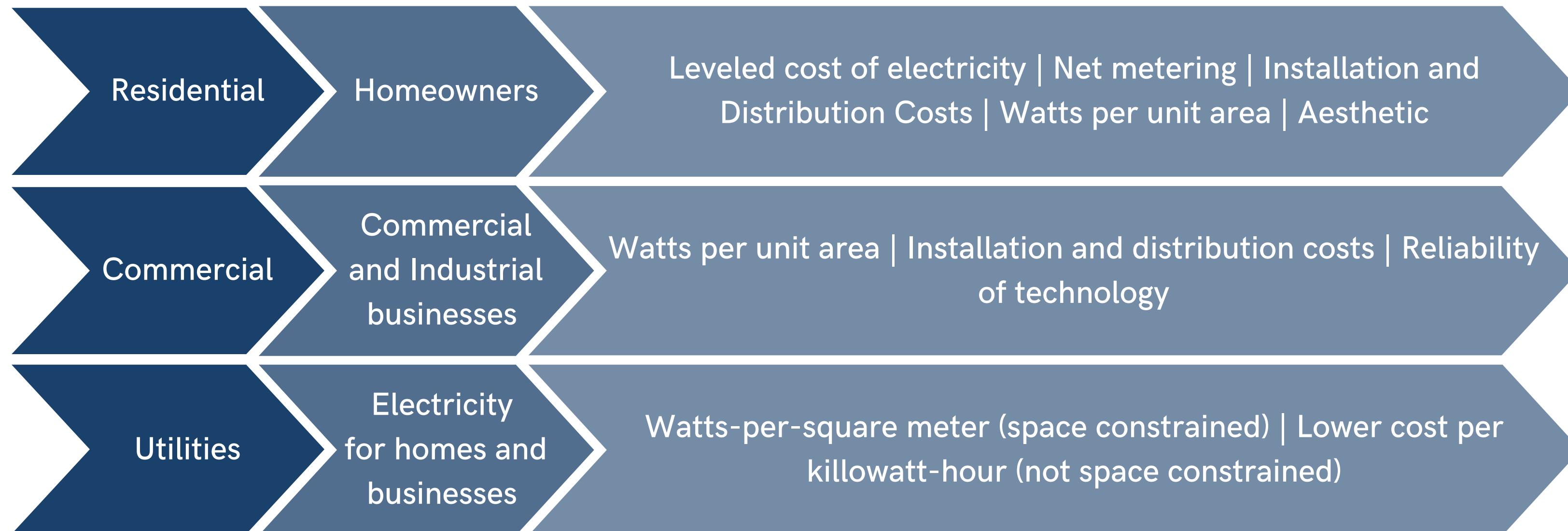


# MARKET

An evaluation into the photovoltaic cell market

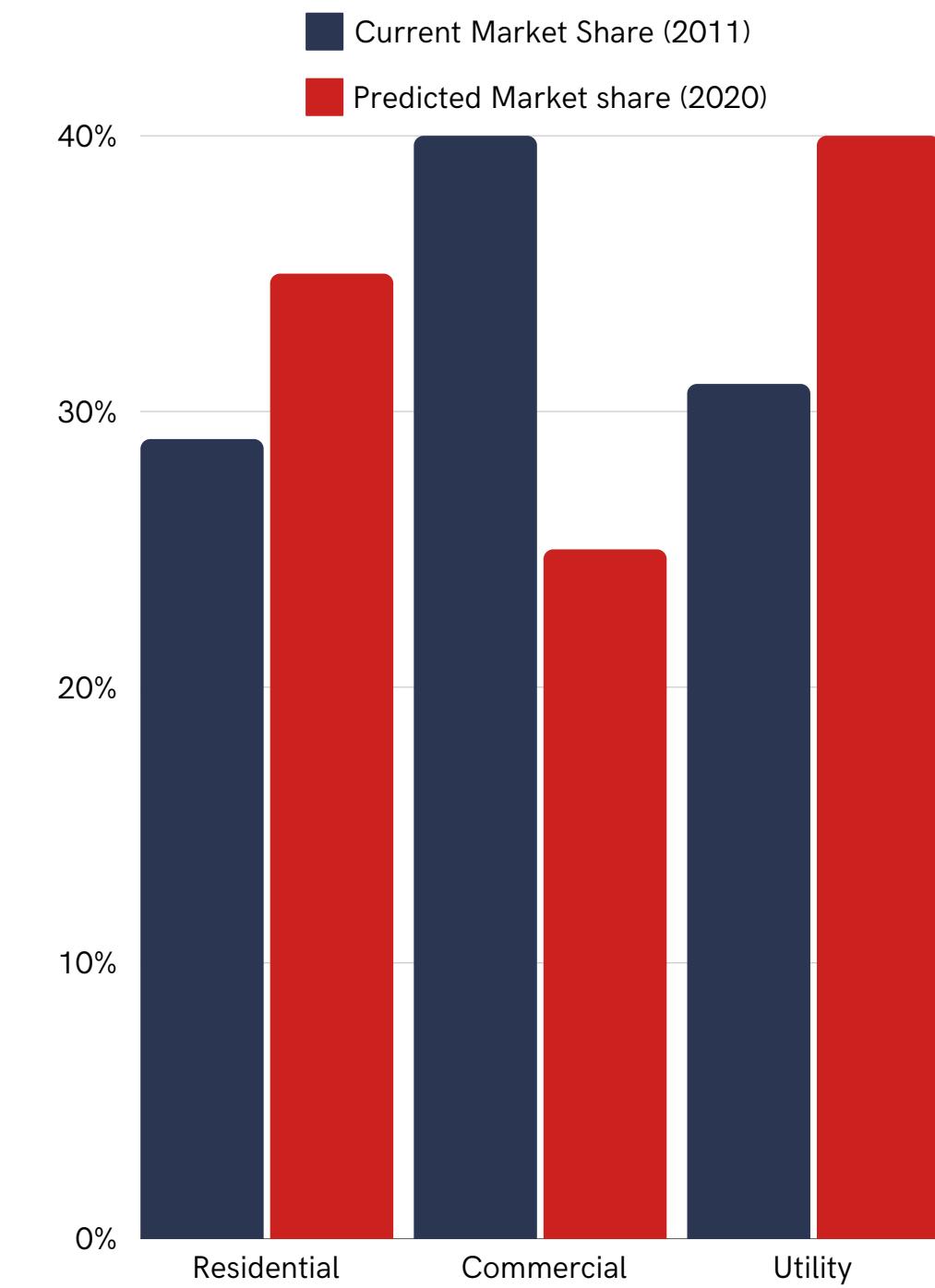
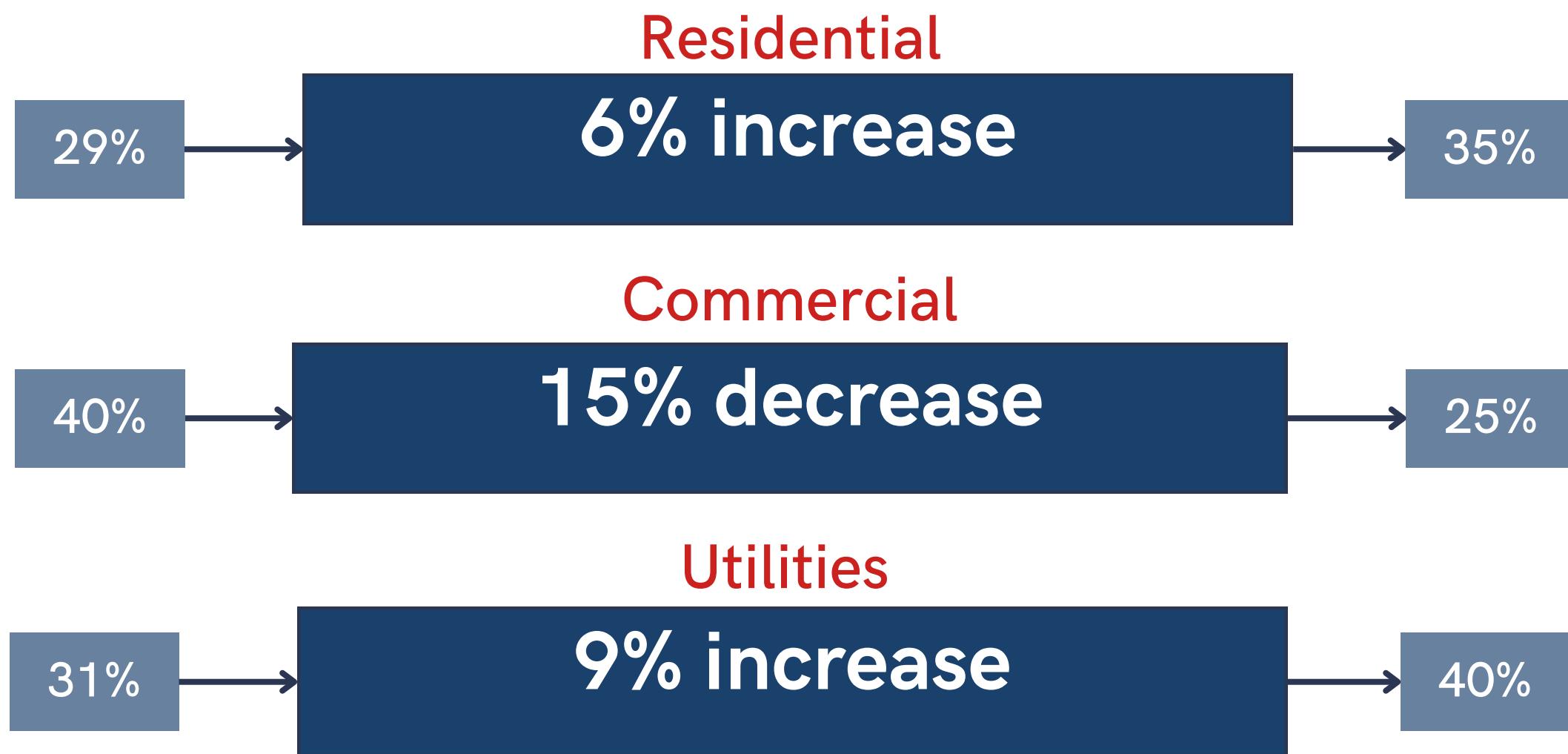
# Current Market

Understanding the market segments



# Market Future Growth

Current Market Shares

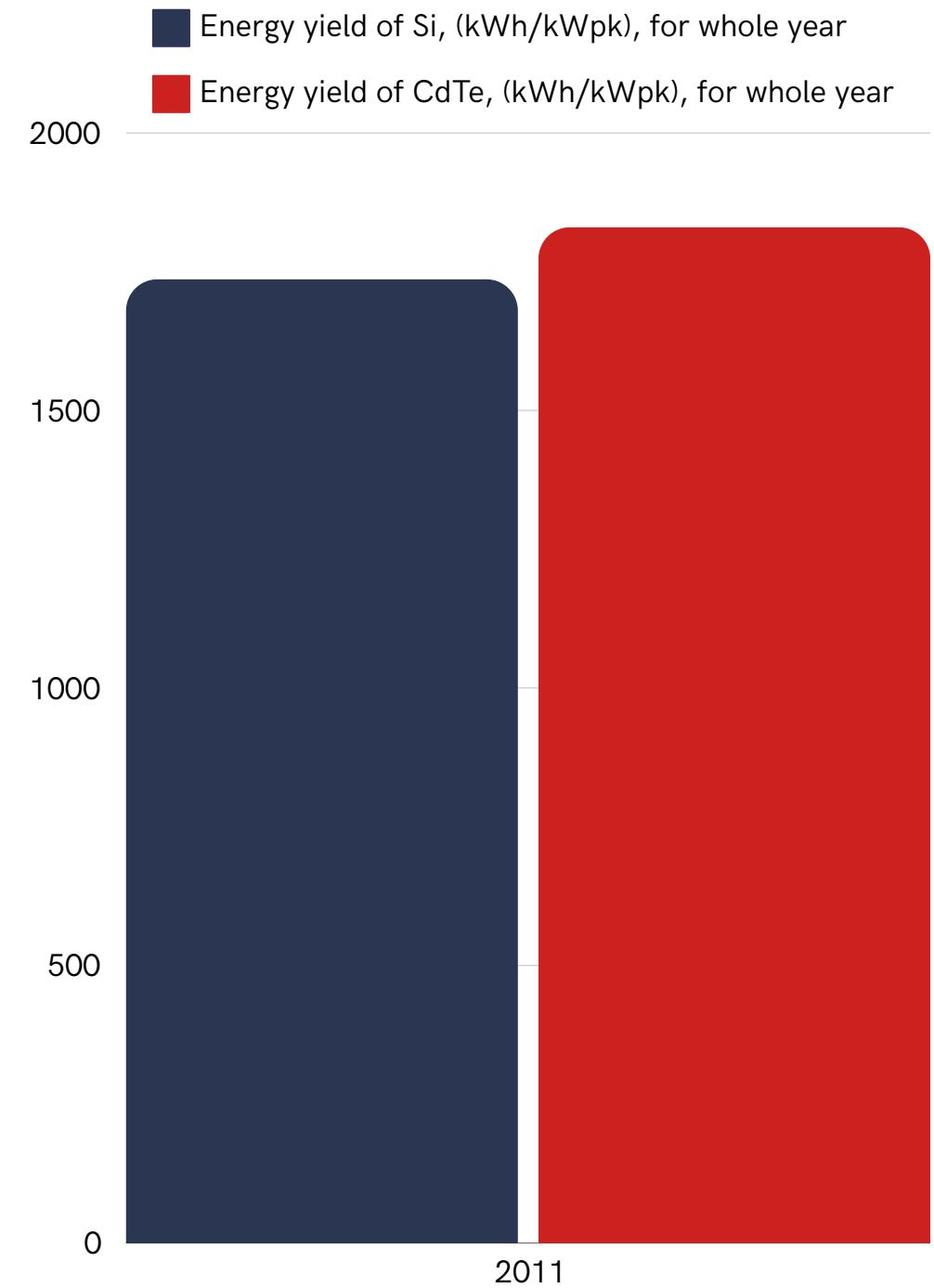


# Net Metering Data

What's our advantage?

## Cadmium Telluride edge vs. Crystalline-silicon

- Data recorded by institution of engineering an tech showed the annual yield of CSi vs cadmium
- This further highlights our competitive advantage compared to Csi which other companies utilizes



# Market Advantages

How First Solar addresses segment concerns

## Residential

- Net metering
- Aesthetics

## Commercial

- Decrease in market share

## Utilities

- Energy yield advantage
- Systems competitive advantage



# VERTICAL INTEGRATION

An look into First Solar's previous and future acquisitions



# SOLUTIONS



# Vertical Integration

Systems, marketing, and downstream strategies

Systems SG&A

Marketing Campaign

Downstream Acquisition

Operations and Maintenance

Excess Inventory Concerns

Third Party Acquisition

Project Finance

Segment Criteria

Budget for Acquisition

Optimize Costs

Monetary Benefits



# Financial Standings

Current financial SG&A and efficiency standings

<i>*Dollar amounts are in millions</i>	First Solar	Sunpower	Suntech Power	Yingli Green Energy
SG&A	\$412,541	\$ 319719	\$411,400	\$221,734



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SG&A-Expense Ratio	14.9%	13.8%	13.1%	9.7%



# Financial Standings

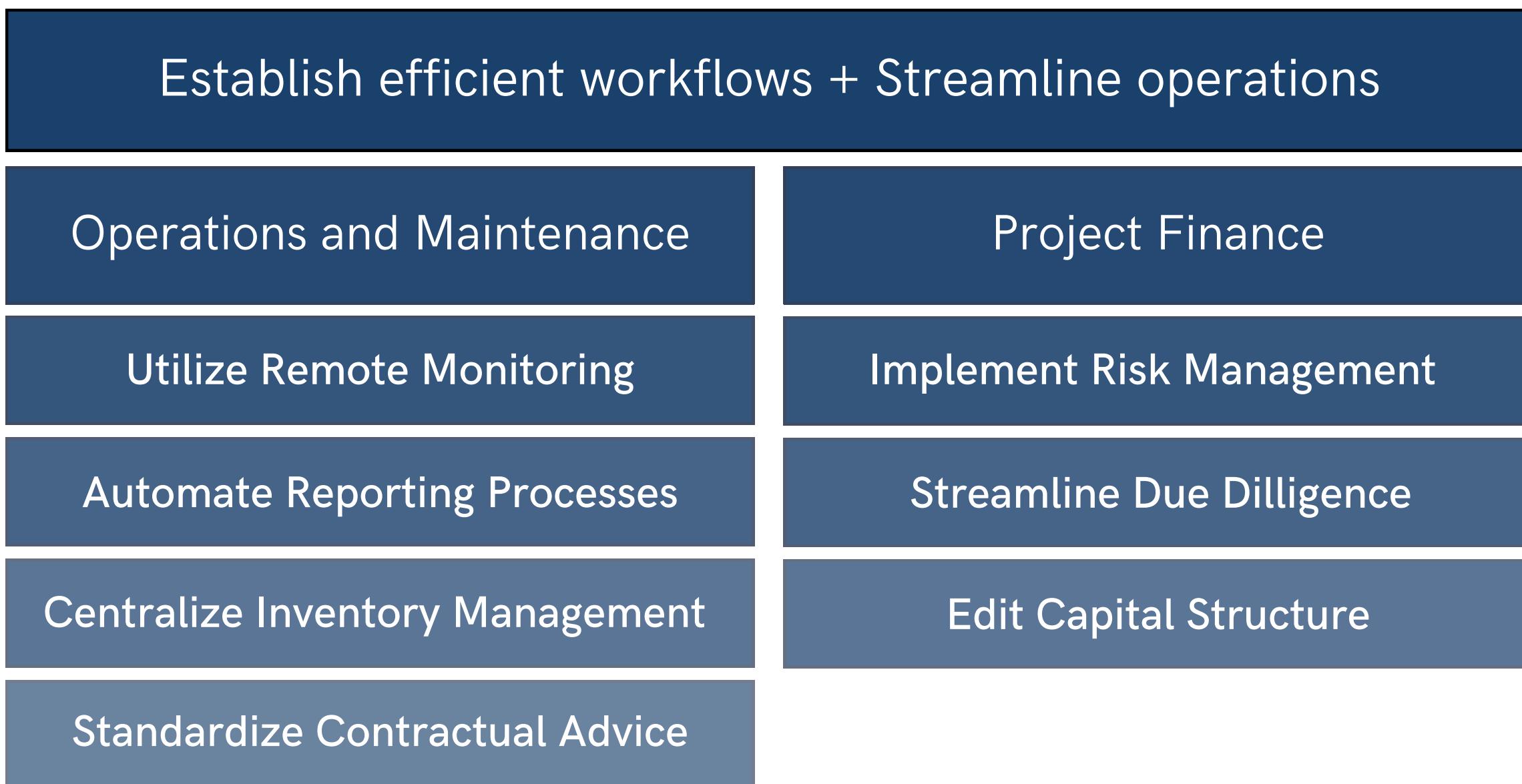
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SG&A-Expense Ratio	14.9%	13.8%	13.1%	9.7%
Days Sales in Inventory	96.793	69.568	68.305	79.724



# SG&A - Solution

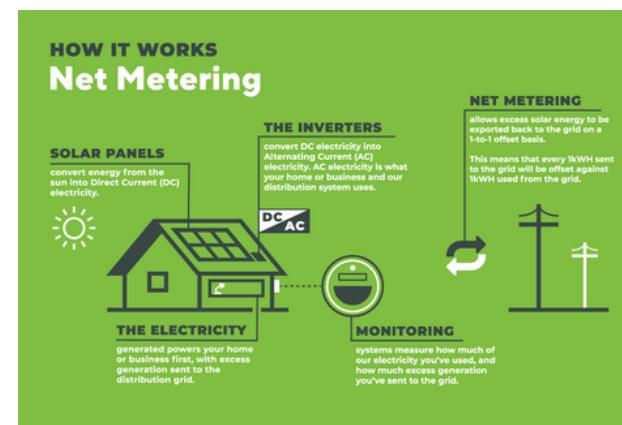
Determining SG&A cost reductions



# Marketing Campaign - Solution

Targeting market segments

## Elements of Solar Ads



## Our Approach

**“SEE YOUR CREDITS”**



# SolarCity Acquisition - Solution

## Acquisition information

- Founded in 2006
- Focused in residential and commercial solar installations
- Utilize PPAs(power purchase agreement)
- Partnered with large companies
- Inventory solution synergies

<b>NI</b>	<b>16M</b>
<b>Approx. Value*</b>	<b>92M</b>
<b>NPV** Break Even</b>	<b>6yr</b>



\*Approximate value derived from market capitalization in 2011

\*\*NPV estimated growth rate at 5% and discount rate at 9%



# Budget For Acquisition

Budgetary slack justifications

<i>*Dollar amounts are in '000</i>	First Solar	Sunpower	Suntech Power	Yingli Green Energy
Total Debt	\$840,096	\$1,391,593	\$2,262,000	\$2,771,336



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Interest Earned Ratio	51.755	0.814	0.803	1.589



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Leverage Ratio	0.369	0.665	0.790	0.743
Interest Earned Ratio	51.755	0.814	0.803	1.589
Cash Coverage Ratio	68.301	2.405	1.698	2.909

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# Budget for Acquisition Cont.

Levered budget and target acquisition price

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**1.2B**

**Budget for par**

Leverage budget to reach par with industry

**92M**

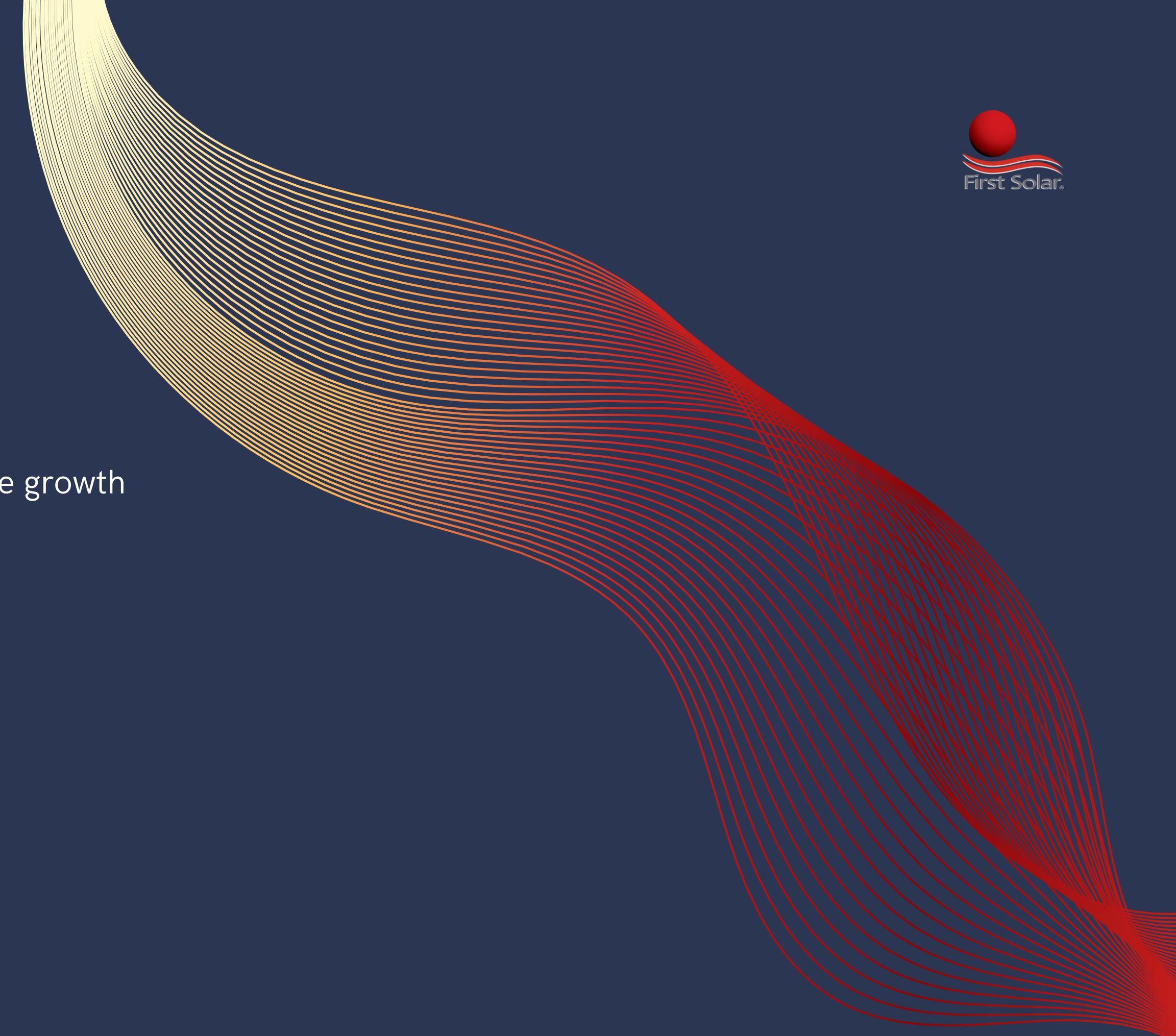
**Target acquisition**

Estimated purchase price of SolarCity\*



# LONG TERM GOALS

Aligning First Solar's long term goals for future growth  
and success





# Long Term Goals

Long term outlook and strategies

Research & Development

Cadmium Telluride

IP Advantage

Government Partnership

China Advantage

Secure domestic Subsidies

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# Research & Development

Par R&D expenses and ratios

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<i>*Dollar amounts are in '000</i>	First Solar	Sunpower	Suntech Power	Yingli Green Energy
R&D Expense	\$140,523	\$57,775	\$38,600	\$45,267

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R&D Expense Ratio	0.051	0.025	0.012	0.019

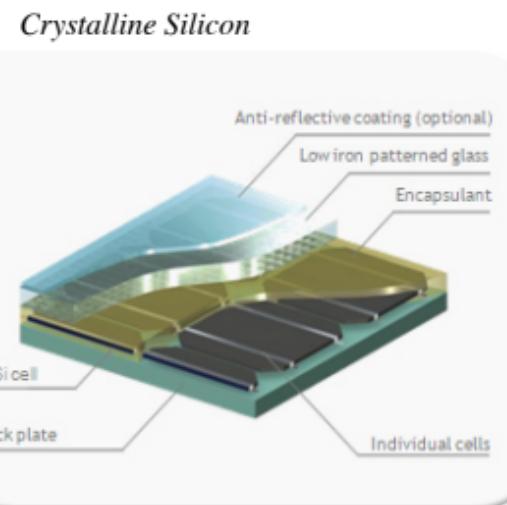
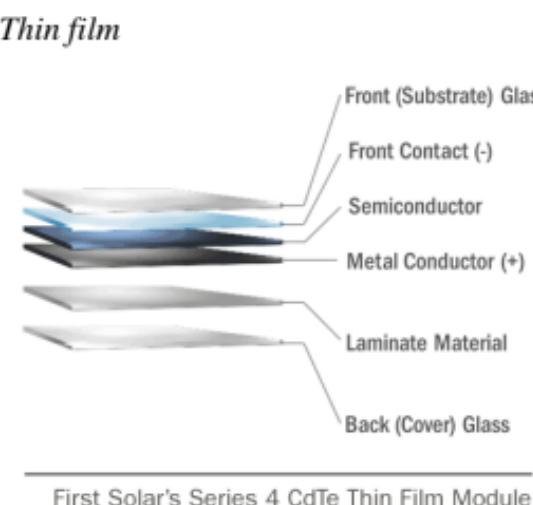
# Research & Development

A look into First Solar's R&D

## IP Advantage

CdTe is an IP of FirstSolar, providing a competitive edge.

Acquiring IP rights in comparable technologies could enhance this benefit.



## Emphasis on CdTe

This technology's utility should be further explored through reallocation of funds under R&D.



# Government Partnership

Leveraging our majority market share

## Competition

The anti-dumping case brought forth by ITC indicates the government's concern about the Chinese competition

## Market Share

Given First Solar's market share in the U.S., the company can secure more funding through government subsidies

## Strategy

The administration has provided aid to other solar companies, First Solar should consider lobbying and working with the administration

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# Case Example

Similar Approach

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Solyndra	
	<ul style="list-style-type: none"><li>• Uses a similar thin solar cell technology</li><li>• Received \$535M in aid from the government in 2009</li><li>• Similar deals could allow First Solar to be more competitive with Chinese manufacturers</li></ul>



# Long Term Goals

Long term outlook and strategies

## Research & Development

Cadmium Telluride

R&D Expenditures

## Market Expansion

Assess Alternative Market Synergies

Set up Investigation and Expansion Into New Markets

## Government Partnership

China Advantage

Secure domestic Subsidies

# Alternative Markets

A look into further markets

## Alternative Markets

Investigate alternative markets for expansion: Africa, Middle East, Americas for potential residential expansions

## First Mover Advantage

Moving into residential early in new markets gives us a first mover advantage, but we also generate synergies with systems business

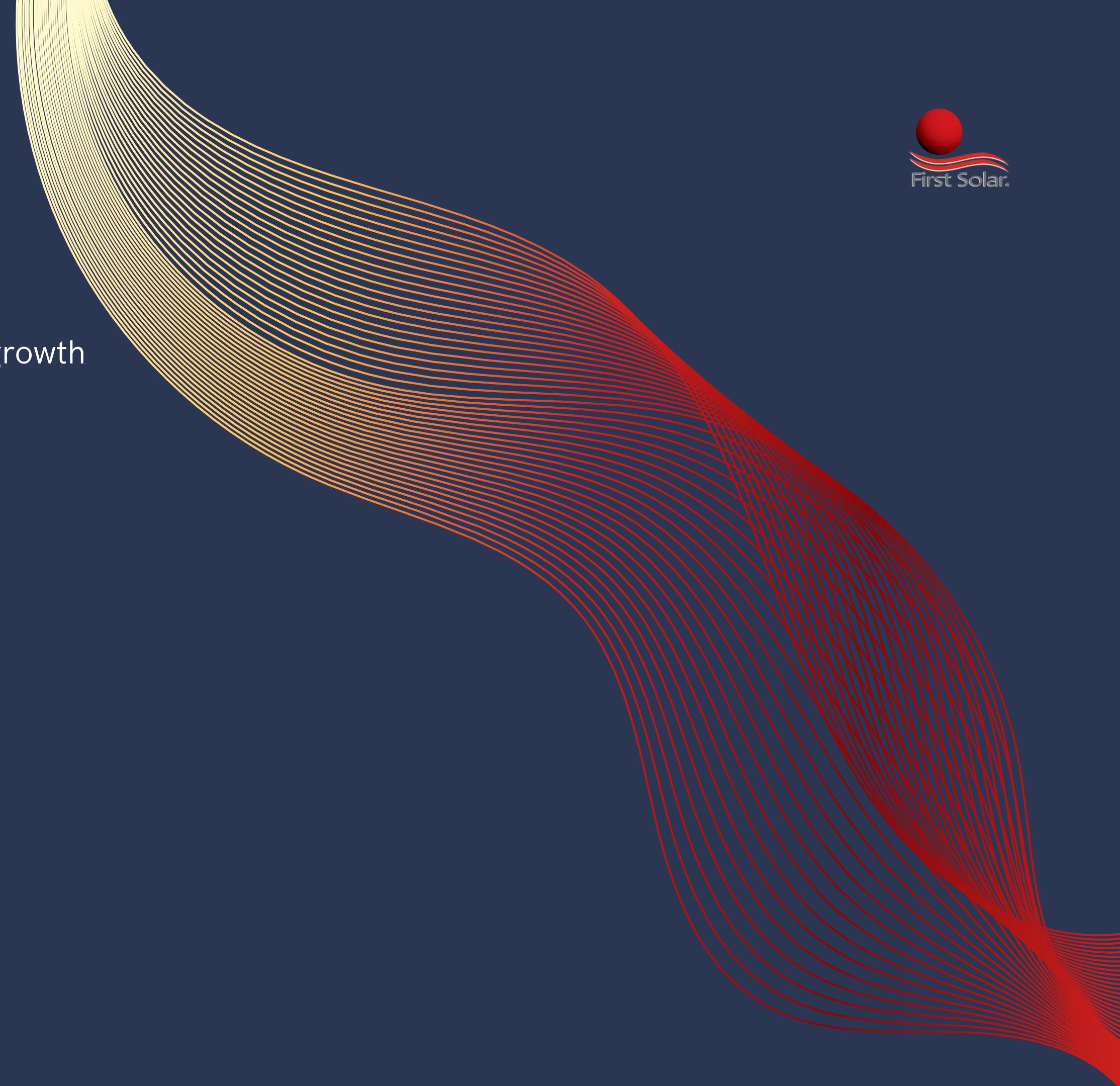
## Expansion

Using Solar City and the marketing campaign, we can support the systems business and residential startup in new markets



# Final Thoughts

Aligning First Solar's long term goals for future growth  
and success





# Summary of Strategies

Aligning internal, external, and market challenges and opportunities.

Systematic and internal issues have slowed First Solar's growth; with our guidance the firm can return to being a market leader

**Focus on Residential and Utility markets**

**Restructure SG&A in Systems Business**

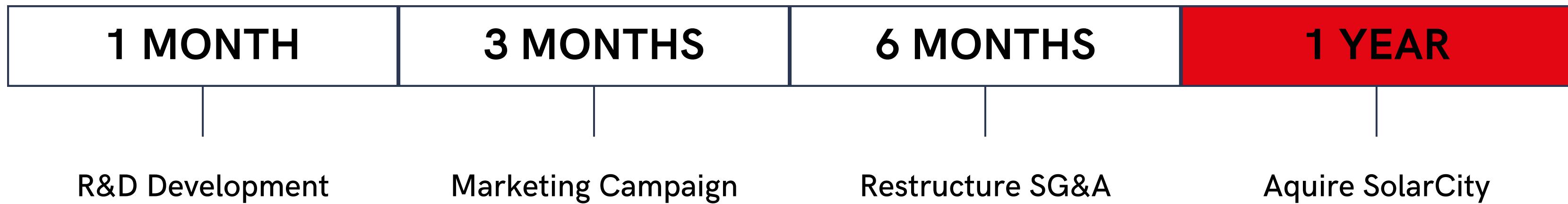
**Launch marketing campaign**

**Purchase SolarCity to develop direct to consumers**

**Invest further into Research & Development**

# Process Timeline

Tracking our solutions





# Q&A