Morgan Stanley

MORGAN STANLEY EQUITY RESEARCH
ASIA/PACIFIC

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February 2, 2006

Stock Rating
Equal-weight-V

Industry View
In-Line

Initiation

Suntech Power

Great Expectations

We initiate coverage of Suntech Power with an Equal-weight-V rating and a price target of US$39 per share. This implies a FY06E P/E of 46.8x and a FY06E P/Rev of 9.5x.

High-growth company in a secular high-growth industry: We believe that the solar industry is likely to grow by more than 40% pa for the next two years and by more than 30% pa over the next decade. We see Suntech growing its market share from 5% in FY05 to 14% in FY07. This should result in a six-fold increase in earnings over the next two years, on our estimates.

Improving incentive structure and virtuous cycle: Strong growth in this sector is driven by an improving incentive environment in the US, Italy, France and potentially China. The solar industry is attracting new capital and technology innovation to reduce cost. As a result, we expect solar power to become economically viable without incentives in a few countries before 2020, which is likely to result in very strong growth.

Good supply chain management: Besides traditional sources, Suntech has been able to secure raw material supply from many domestic Chinese suppliers (accounting for more than 55% of its supply). While some of these may be unproven in terms of large-scale supply, we believe that this provides a competitive advantage for Suntech.

Cost competitive on technology: We expect the industry to fragment, particularly beyond 2007. However, in our view, Suntech is globally competitive on its technology, which gives it cost leadership.

High expectations: We believe the recent run in the stock price has factored in high expectations for production ramp-up as well as profitability for FY06 and FY07. While these expectations may be achievable, they are near the optimistic end of the range of potential outcomes, in our view. Hence, at this stage, we see limited upside surprise in terms of execution.

Key Ratios and Statistics

Reuters: STP.N Bloomberg: STP US
China Technology

Price target	US$39.00
Shr price, close (Jan 31, 2006)	US$42.49
52-Week Range	US$45.86-19.03
Sh out, basic, curr (mn)	90
Mkt cap, curr (mn)	US$3,824
EV, curr (mn)	US$3,839
Net debt/cap (06e) (%)	(86.1)
ROE (06e) (%)	35.6
Sh out, basic, per-end (06e) (mn)	145
S'hldr eqty (06e) (mn)	US$476
RNOA (06e) (%)	121.6

Fiscal Year (Dec)	2004	2005e	2006e	2007e
ModelWare EPS (US$)*	0.22	0.22	0.83	1.69
EPS, basic, rpt'd (US$)	0.22	0.30	0.89	1.81
Rev, net (US$mn)	85	224	638	1,213
ModelWare net inc (US$mn)	20	35	129	261
P/E	96.0	190.1	51.1	25.2
P/sales	22.4	17.0	6.0	3.2
EV/EBITDA	87.3	70.8	24.4	12.1
Div yld (%)	0.0	0.0	0.2	0.5

* = Please see explanation of Morgan Stanley ModelWare later in this note.
e = Morgan Stanley Research estimates

Please see analyst certification and other important disclosures starting on page 28.

Financial Summary

Income Statements, 2004-2007E

US$m	2004	2005E	2006E	2007E
Turnover	**85**	**224**	**638**	**1,213**
YoY Growth	*516%*	*163%*	*184%*	*90%*
Less: COGS	(60)	(151)	(449)	(840)
Gross Profit	**25**	**73**	**189**	**374**
% margin	*29%*	*33%*	*30%*	*31%*
YoY Growth	*833%*	*191%*	*159%*	*98%*
Operating Expenses:	**(5)**	**(26)**	**(53)**	**(95)**
R&D	(0)	(3)	(11)	(23)
Sales and Marketing	(2)	(5)	(15)	(29)
General and Admin	(3)	(18)	(26)	(43)
Operating Profit	**20**	**47**	**136**	**279**
% margin	*23%*	*21%*	*21%*	*23%*
YoY Growth	*2558%*	*135%*	*190%*	*105%*
Forex gain	0	0	(0)	(1)
Interest expense	(1)	(7)	(0)	(0)
Interest income	0	0	6	7
Other income (expense)	0	(1)	(2)	(2)
Equity Income from Affiliates	(0)	(0)	0	0
Pretax profit	**19**	**39**	**140**	**283**
% margin	*22%*	*17%*	*22%*	*23%*
Tax	1	(4)	(11)	(22)
Net income	**20**	**35**	**129**	**261**
EPS ($)	**0.22**	**0.22**	**0.83**	**1.69**

Key Ratios, 2004-2007E

	2004	2005E	2006E	2007E
Per Share				
Modelware EPS	0.22	0.22	0.83	1.69
DPS	0.00	0.00	0.00	0.00
BVPS	0.31	2.33	3.07	4.57
Return (%)				
ROA	29%	9%	25%	34%
ROE	72%	10%	27%	37%
Op. ATO	3.0x	0.6x	1.3x	1.7x
Gearing (x)				
Net Eebt/Equity	-0.7x	-0.7x	-0.5x	-0.3x
Current Ratio	1.3x	14.2x	15.6x	15.2x
Margin (%)				
Gross Margin (%)	29.4%	32.5%	29.6%	30.8%
Operating Margin (%)	23.5%	20.9%	21.4%	23.0%
Net Margin (%)	23.2%	15.4%	20.2%	21.5%

E = Morgan Stanley Research estimates
Source: Company data, Morgan Stanley Research

Balance Sheet, 2004-2007E

US$m	2004	2005E	2006E	2007E
Cash & Equivalents	19	271	225	233
Restricted Cash	6	8	16	28
Receivables	5	6	40	96
Inventories	17	48	112	210
Advances to Suppliers	2	24	58	108
Total Current Assets	**52**	**360**	**453**	**677**
Fixed assets	13	31	59	83
Total non-current assets	17	36	64	88
Total assets	**69**	**395**	**517**	**764**
Liabilities and Shareholders' Equity				
Accounts Payable	3	14	18	33
Short Term Debt	34	0	0	0
Government Grants	2	4	4	4
Other payable	0	3	3	3
Total current liabilities	**40**	**25**	**29**	**44**
Long-term debts	0	5	5	1
Acc. Warranty Costs	1	3	6	10
Total non-current liab.	1	8	11	11
Total liabilities	**41**	**33**	**40**	**55**
Minority interest	**0**	**0**	**0**	**0**
Share capital	1	1	1	1
Addnl. Paid in capital	7	325	325	325
Deferrred Stock Comp.	0	(20)	(20)	(20)
Retained income	19	54	168	401
Total Equity	**27**	**362**	**476**	**709**
Total liabilities	**69**	**395**	**517**	**764**

Cash Flow Statements, 2004-2007E

US$m	2004	2005E	2006E	2007E
Pretax	19	39	140	283
Dep and Amort	2	3	11	17
Tax	1	(4)	(11)	(22)
Others	(1)	(30)	(11)	(9)
Chg in Adv to Suppliers	(2)	(22)	(33)	(50)
Stock-based comp	0	10	11	9
Operating Cash flow	**1**	**(16)**	**16**	**93**
Purchase of PP&E	(8)	(21)	(39)	(41)
Change in restricted cash	(6)	(2)	(8)	(12)
Change in Investment in affiliate	(0)	(1)	0	0
Government Grant	2	2	0	0
Net CF from investments	**(12)**	**(22)**	**(48)**	**(52)**
Changes in capital	0	318	0	0
Dividend	0	0	(14)	(29)
Increase/ (repayment) of debt	27	(29)	0	(4)
Net CF from finances	**28**	**290**	**(14)**	**(33)**
Change in Cash	**18**	**252**	**(46)**	**8**
Net Cash/(Debt), b/f	2	19	271	225
Net Cash/(Debt), c/f	**19**	**271**	**225**	**233**

Great Expectations

Investment Summary

We initiate coverage of Suntech Power with an Equal-weight-V rating and a price target of US$39 per share. This implies a FY06E P/E of 46.8x and a FY06E P/Rev of 9.5x. We apply an automatic volatility (V) rating because the stock has been trading for less than a year. We forecast a six-fold increase in earnings over the next two years as the company builds its market share in the high-growth solar industry. Suntech's ability to secure raw materials from domestic Chinese suppliers is a key competitive advantage, in our view, while technology innovations should give it cost leadership. However, we view near-term consensus expectations on production ramp-up and profitability as optimistic, and see limited upside surprise in execution.

Investment Positives

Secular high-growth industry. We believe that the solar cell industry is likely to experience very strong volume growth over the next few years. Demand growth over the next three years could exceed 40% pa, while growth over next decade could exceed 30% pa, in our view.

Improving incentive structure. Strong growth in this sector is driven by an improving incentive environment in the US, Italy, France and potentially China. As a result, of these incentive programs, current solar cell technology is becoming economically viable for customers.

Virtuous cycle. Driven by strong industry growth and profitability, the industry is attracting new capital and technological innovation to reduce cost structures and improve conversion efficiency. As a result, we expect solar power to become economically viable without incentives in a few countries before 2020, which is likely to result in very strong growth.

Technology-led cost reduction. We expect cost reduction to accelerate to 6-7% pa in the PV (photovoltaic) industry. Besides incremental reductions via higher conversion efficiency and thinner wafers, we expect innovations to kick in on multiple fronts. Once the industry succeeds in manufacturing Solar Grade Polysilicon (a key raw material) via a low-cost procedure, we think raw material costs for solar cells could fall 15%. Furthermore, commercialization of thin film technology over the next two to three years could lower the cost of cell manufacturing by a further 30%. Eventually, if nanotechnology is proven commercially viable, we estimate it could reduce the cell cost by 60-70%.

Good supply chain management. A key raw material for the PV industry – Polysilicon Wafers – are in short supply currently. Leading industry players have signed long-term supply contracts to secure polysilicon or wafers. As well as being financially strong, companies need to be able to locate and promote new sources of raw material. Besides traditional sources, Suntech has been able to secure raw material supply from many domestic Chinese suppliers (accounting for more than 55% of its supply). While some of these may be unproven in terms of large-scale supply, we believe that this provides a competitive advantage for Suntech.

Gaining market share. We expect the global PV industry to grow at more than 40% pa over the next two years, thereby doubling its size, and Suntech to grow its output by 5.5x. As a result, we expect Suntech's market share to grow from about 5% in FY05 to about 14% in FY07. This forecast rapid growth in share is driven by its ability to secure raw material and ramp up capacity due to its strong balance sheet.

Technology competitive. We believe that Suntech is globally competitive on its technology. It is able to achieve conversion efficiency of 15.5% to 17% on its cells, which is near the high

Company Description

Suntech Power designs, develops, manufactures and markets a variety of photovoltaic (PV) cells and modules, which are devices that covert sunlight into electricity through a process known as photovoltaic effect. The company also provides PV system integration services in China. The company's products are used to provide reliable and environmentally friendly electric power for residential, commercial, industrial and public utility applications in various markets worldwide.

Industry View: In-Line

China's technology industry benefits from a large potential market but suffers from low technical content, lower entry barriers and potential overcapacity.

MSCI Country: China

Asia Strategist's Recommended Weight: 10.8%
MSCI Asia/Pac All Country Ex Jp Weight: 8.0%

end of industry performance. Furthermore, Suntech is already producing at 240u thick wafers and has plans to have a 200u wafer line in 2H06. Furthermore, by improving the optics at its module line and packaging design, it can save costs compared with its peers.

Cost leader. We believe that Suntech is cost-competitive with other cost leaders in the industry, such as Q-Cells. Based on 3Q05 financials, Q-Cells appears to incur an operating cost of around US$1.9 per Watt. This is similar to Suntech's cost of US$1.9 to US$1.95 for cell manufacturing. This cost structure looks to be very competitive versus other cell and module manufacturers.

China advantage. We believe that Suntech derives two key advantages by being in China. First, it is able to secure raw material from new suppliers to complement its raw material sourcing from traditional international sources. Second, it is able to lower its costs moderately (by 1-2%) due to lower labor costs and use of scrap wafers. However, in future, it is also likely to benefit from China's imminent Renewable Energy Act, which hops to achieve an installed base of 1,000 MW by 2020.

Investment Risks

Low entry barriers. We believe that entry barriers are relatively low in this business. Due to the scarcity of raw material, access to raw material (established long-term contracts) and financial strength (to pay advances) are the key entry barriers currently. However, these barriers may not exist beyond 2007 (due to ramp up of Polysilicon capacity) which we think could lead to rapid industry fragmentation from that point. While there is some differentiation in the implementation of current technology (batch processing of silicon wafers), we think it is insufficient to be a material entry barrier.

Raw material scarcity. Due to the scarcity of raw material in the industry, Suntech is now planning to source up to 60% of its silicon and wafer requirements in FY06 from domestic Chinese suppliers. As some of these are relatively new producers of these key raw materials, we believe that Suntech may be exposed to execution-related risks at these suppliers. In a tight market, Suntech may not be able to replace these suppliers with other suppliers in the short term. Furthermore, we believe that wafer and silicon prices in China are higher than in the international market by up to 10%, hence Suntech may have to incur higher costs.

Margin compression. We believe that the current gross margin of 30%+ and operating margin of 20%+ in the industry is probably too good to last. Over the longer term we think margin compression is likely to be driven by industry fragmentation beyond 2007 and limited cost differentiation (up to 9-10%) by the leading player versus the industry average. In the near term, it is likely to be driven by an inability to increase ASP (due to a reduction in feed-in tariff in Germany and a sales shift towards less attractive markets) despite anticipated increases in raw material prices. While cost reductions from higher conversion efficiency and thinner wafers should partially mitigate the increase in wafer costs, we believe that they may not be sufficient to offset it entirely.

Disruptive technologies. We believe that, over the next few years, the industry may well witness successful commercialization of thin film technologies and nano technologies. This poses two potential risks for Suntech. First, if it is not able to adopt these technologies, it may become uncompetitive on cost and hence lose market share. Second, if the thin film technologies are radically cost-competitive, it may make current manufacturing facilities unviable and, hence, require write-offs.

High expectations. We believe the recent run in the stock price has factored in high expectations for production ramp-up as well as profitability for FY06 and FY07. While these expectations may be achievable, they are near the optimistic end of the range of potential outcomes, in our view. Hence, at this stage, we see the likelihood of a downside surprise in terms of execution outweighing the possibility of a positive surprise.

Oil prices. We find that stock prices for solar stocks are highly correlated with changes in global oil prices. Recently, global oil prices have once again spiked up to close to record levels. While our ability to predict oil prices is limited, we think any correction in the oil price would likely erase some of the valuation premium in Suntech's stock price.

Currency risk. Due to its significant sales in Europe, we believe that Suntech has net currency exposure to the euro. We estimate that every 1% depreciation in the euro is likely to hurt Suntech's revenue by 0.7% and its gross margins by about 0.3%. Since its manufacturing base is in China, Suntech has a large proportion of its costs in domestic currency. We believe that every 1% appreciation in the Rmb is likely to hurt its margins by 0.15%.

Valuation: Rich

We believe we need to make three specific adjustments to our earnings estimates before we attempt to value Suntech or its stock.

Dilution from Options – Suntech issued two tranches of options to senior executives and consultants prior to its IPO. These options have a three-year staggered exercise plan with exercise prices of US$2.31 and US$6.92 per share respectively. As these options are deep in the money, we deem the likelihood of conversion to be very high. Hence, we assume fully diluted outstanding shares of 155mn, and not 144.7mn.

Income Taxation – Suntech enjoys a preferential income tax rate of 7.5% on its business, which will revert to 15% from FY08. Hence, for long term investors it may be worthwhile adjusting the FY2006-07 tax rate to this higher rate to estimate true recurring earnings.

Stock Based Compensation – Management has board approval to issue up to 8m stock options over a year period. Since it has already issued 6.1m options, it has room to issue a further 1.9m options. Hence, besides the charge for already issued options, we estimate that there will be future charges for option issuance. Since these charges are likely to recur until at least 2010, we treat these as recurring and charge them in the income statement as per Exhibit 1.

Exhibit 1

Suntech: Stock-based Compensation

	06e	07e	08e
Charged in G&A	(6.66)	(5.33)	(1.79)
Charged in COGS	(2.03)	(1.63)	(0.55)
Charged in R&D	(2.59)	(2.08)	(0.70)
Total	(11.28)	(9.04)	(3.04)

Source: Company Data, Morgan Stanley Research

Suntech's Valuation Is Rich

We believe that Suntech is executing well and, hence, is likely to produce very strong profit growth. However, the current expectations in the stock price seem high.

We believe that Suntech's current stock price is now about 20% above our intrinsic value estimate. However, from our experience with other high-growth sectors, we believe that the market often pays a 10-20% premium over the intrinsic value in the initial period.

While we understand that valuing stock for a young fast-growing company with limited free float is tricky, we have tried to bracket our stock valuation based on the following:

1. Intrinsic value based on residual income methodology.

2. Relative valuation based on P/E and growth.

Based on our estimates, we set the target price at US$39 per share. This implies 46.8x on fully diluted FY06 EPS, 9.5x (fully diluted) on FY06 revenue.

We believe that part of the premium in Suntech's stock valuation may be due to the firm oil price. While it is difficult to predict the direction of the oil price, we estimate that any correction in the oil price could drive a 15-20% correction in Suntech's stock price.

Exhibit 2

Suntech: Stock Price Target

Methodology		Stock Price
Intrinsic Value	20% prem to RI	US$40.2
P/E (25% prem to Asian Tech)	22x FY07	US$37.2
Average		**US$ 39.0**

Source: Morgan Stanley Research

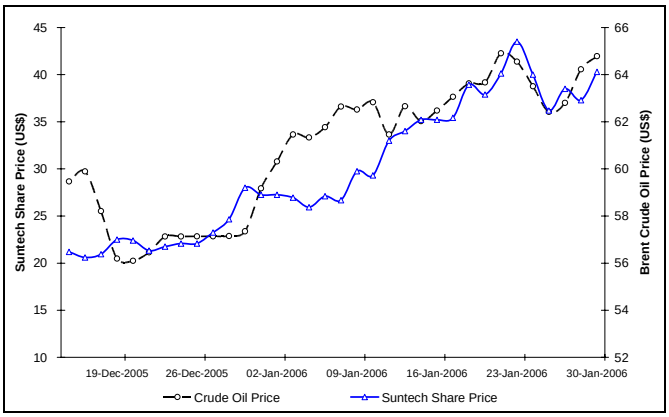
Our intrinsic value estimate is based on a Residual Income valuation. It assumes 33% growth in production over the next 10 years (which implies a steady market share gain based on industry growth of 30%); a 7% p.a. reduction in the average selling price; a 6% p.a. reduction in cash costs; and hence a gradual decline in the operating profit margin from 21% in FY05 to 18% over the next 10 years.

For a young industry, it is hard to estimate a P/E-based valuation as the sustainable growth rates are not well understood. Based on our analysis, we expect average growth of 55% from FY06 to FY08. Due to this strong growth, we believe Suntech warrants a premium P/E valuation on FY07 EPS.

Impact of Oil Price

As is evident in Exhibit 3, Suntech's stock price is closely correlated with the oil price. Hence, if the oil price continues to rise, we would expect Sunech's stock valuation to be further stretched.

Exhibit 3
Suntech Stock Price vs Oil Price



Source: Factset, Morgan Stanley Research

What Is Implied in the Stock Price?
We believe that the current stock price has factored in earnings and revenue expectations, which we think are unrealistically high and, hence, may be difficult to achieve, despite the company's very good execution.

Earnings expectations based on P/E – As we have said, it is difficult to estimate an appropriate P/E valuation for Suntech. However, even if we assume that Suntech trades at a 25% premium to the average FY07 P/E valuation of high quality Asian Technology stocks, the current Suntech stock price seems to be factoring in an EPS of US$0.93 for FY06. Similarly, a benchmarking on the basis of the P/E of global solar companies implies that the stock price has factored in an EPS of US$0.96 for FY06.

Exhibit 4
Suntech: P/E Implied Expectations – Asian Tech

Description	
Avg. Asian Tech P/E (FY 07)	17.8x
Suntech	
Expected P/E (FY 07)	22.0x
FY 07 EPS growth	98%
Expected P/E (FY 06)	43.5x
Implied EPS (FY 06)	0.93

Source: Morgan Stanley Research
Note: Average Asian Tech P/E calculated on the basis of Hon Hai, TSMC, Samsung Electronics and Infosys.

Exhibit 5
Suntech: P/E Implied Expectations – Global Solar

Description	
Avg. Solar Cell P/E (FY 06)	41.8x
Suntech Implied EPS (FY 06)	0.96

Source: Morgan Stanley Research
Note: Average Solar Cell P/E calculated on the basis of Q-Cells, Motech, ErSol.

Revenue expectations based on P/Rev – We find that global solar cell companies are trading at an average P/Rev of 6.6x. This implies a revenue expectation of US$1bn in FY06, which may require a production output of about 285MW (based on 80% modules and 20% cells), which we believe is unlikely.

Growth expectations based on Intrinsic Value – We believe that if Suntech's production volume were to show a CAGR of 38% for the next 10 years, instead of the 25-30% growth expected for the industry, the current stock price would be fully justified.

Risks to Target Price
Execution-related risks, particularly regarding the sourcing of raw material, in our view, is the most material downside risk to earnings and hence price target. Furthermore, the stock price is highly correlated with oil prices. Significant changes in FX rates for Euro (positive) and Rmb (negative) would also have an impact on our target price.

Exhibit 6

Comparative Valuation

Company	Price	Rev Growth 05E	Rev Growth 06E	Rev Growth 07E	P/Rev 05E	P/Rev 06E	P/Rev 07E	EPS Growth 05E	EPS Growth 06E	EPS Growth 07E	P/E 05E	P/E 06E	P/E 07E
Integrated Companies													
SolarWorld*	167	71%	34%	21%	6.2	4.6	3.8	131%	27%	18%	45.9	36.0	30.5
Cell/Module Manufacturers													
Suntech	42	163%	184%	90%	24.8	8.7	4.6	2%	272%	103%	190.2	51.1	25.2
Sunpower*	35	601%	172%	57%	3.6	1.3	0.8	N/M	N/M	93%	N/M	112.2	58.1
Motech*	580	75%	83%	28%	11.3	6.2	4.8	391%	81%	16%	70.6	39.0	33.5
Q-Cells*	85	110%	100%	100%	11.6	5.8	2.9	-22%	54%	33%	83.0	53.8	40.5
Ersol*	62	100%	90%	90%	11.2	5.9	3.1	294%	140%	44%	86.7	36.1	25.1
Kyocera*	9,080	0%	8%	5%	1.5	1.4	1.3	42%	25%	5%	26.1	20.9	19.9
Sharp	2,020	6%	11%	15%	0.8	0.7	0.7	18%	18%	30%	24.4	20.7	15.9
Wafer Manufacturers													
MEMC*	27	10%	17%	14%	5.0	4.2	3.7	1%	38%	12%	25.8	18.7	16.7
SUMCO*	6,110	13%	13%	9%	3.3	3.0	2.7	64%	38%	16%	34.6	25.0	21.5
Silicon Manufacturers													
Tokuyama	1,982	9%	4%	2%	2.1	2.0	2.0	5%	36%	11%	43.8	32.1	29.0
Assemblers & Installers													
Conergy*	106	93%	43%	26%	1.9	1.4	1.1	98%	51%	27%	38.6	25.5	20.1
Sekisui Chemical*	929	3%	3%	5%	0.6	0.6	0.5	-6%	26%	13%	23.9	18.9	16.8
Carmanah*	4	125%	73%	N/A	4.2	2.5	N/A	85%	170%	N/A	101.4	37.5	N/A
Solartron PLC*	8	53%	-43%	N/A	1.5	2.6	N/A	-33%	33%	N/A	14.3	10.8	N/A
Solon*	35	98%	65%	19%	1.6	1.0	0.8	116%	60%	40%	35.7	22.2	15.8
Solar-Fabrik*	12	23%	83%	25%	1.5	0.8	0.7	85%	224%	44%	59.7	18.4	12.7
Internet													
Google	434	106%	61%	41%	21.4	13.3	9.4	228%	47%	35%	78.6	53.3	39.6
Yahoo	35	43%	31%	27%	13.5	10.3	8.1	61%	-19%	81%	61.2	75.3	41.5
Baidu	52	167%	68%	64%	6.7	4.0	2.4	167%	129%	86%	376.4	164.4	88.3
eBay	44	39%	29%	34%	13.5	10.5	7.8	42%	17%	31%	51.0	43.4	33.1
High Growth Asian Tech Companies													
Largan	608	49%	116%	30%	17.0	7.9	6.1	60%	173%	36%	65.5	24.0	17.7
HTC	679	66%	30%	26%	4.0	3.1	2.5	N/M	33%	47%	33.5	25.2	17.1
PPT	82	78%	47%	16%	4.4	3.0	2.6	343%	75%	8%	29.3	16.7	15.4
Catcher	236	97%	42%	26%	6.8	4.8	3.8	174%	44%	23%	21.9	15.2	12.4
FIH	13	88%	71%	24%	1.9	1.1	0.9	49%	90%	26%	33.1	17.4	13.9
High Quality Asian Tech Companies													
Hon Hai	215	62%	42%	25%	1.0	0.7	0.6	30%	61%	33%	31.0	19.3	14.4
TSMC	64	3%	23%	16%	5.9	4.8	4.1	5%	35%	19%	20.7	15.4	12.9
Samsung Electronics	716,000	2%	18%	12%	1.8	1.5	1.4	-26%	16%	15%	15.2	13.2	11.4
Infosys	2,831	34%	31%	25%	8.1	6.2	4.9	32%	28%	19%	31.1	24.4	20.6

E = Morgan Stanley Research estimates, except for companies marked * (for which IBES consensus estimates are shown)
Source: Company data, Morgan Stanley Research, IBES

Exhibit 7

Comparative Valuation

Company	Price	Op. Margin 05E	Op. Margin 06E	Op. Margin 07E	ROE 05E	ROE 06E	ROE 07E	P/B 05E	P/B 06E	P/B 07E	EBITDA Growth 05E	EBITDA Growth 06E	EBITDA Growth 07E
Integrated Companies													
SolarWorld*	167	23%	21%	19%	22%	22%	21%	10.1	8.1	6.5	90%	30%	17%
Cell/Module Manufacturers													
Suntech	42	21%	21%	23%	10%	27%	37%	18.2	13.8	9.3	121%	194%	102%
Sunpower*	35	-11%	11%	16%	-5%	8%	13%	8.0	8.6	7.4	N/M	74%	81%
Motech*	580	-11%	11%	16%	35%	43%	36%	24.5	16.6	12.1	102%	67%	40%
Q-Cells*	85	25%	23%	22%	12%	15%	17%	9.7	8.2	6.9	178%	48%	37%
Evergreen Solar	14	-46%	-10%	12%	-24%	-22%	4%	11.3	15.8	11.4	N/M	N/M	5475%
Sunways	18	N/A	N/A	N/A	6%	31%	33%	10.4	8.3	5.8	28%	191%	39%
Ersol*	62	13%	20%	13%	3%	10%	13%	3.0	3.6	3.3	166%	159%	47%
Kyocera*	9,080	8%	9%	10%	5%	6%	6%	1.4	1.3	1.3	0%	20%	7%
Sharp	2,020	6%	6%	6%	8%	9%	11%	2.1	1.9	1.8	10%	13%	17%
Wafer Manufacturers													
MEMC*	27	26%	29%	33%	32%	31%	25%	8.2	5.7	4.1	35%	49%	7%
SUMCO*	6,110	20%	22%	23%	14%	16%	16%	4.8	4.0	3.4	18%	18%	14%
Silicon Manufacturers													
Tokuyama	1,982	9%	12%	13%	8%	10%	10%	3.5	3.3	3.0	18%	21%	9%
Assemblers & Installers													
Conergy*	106	8%	8%	7%	19%	23%	24%	7.2	5.8	4.8	124%	44%	29%
Sekisui Chemical*	929	5%	5%	6%	6%	8%	8%	1.5	1.4	1.4	8%	14%	10%
Carmanah*	4	4%	10%	N/A	1%	4%	N/A	1.1	1.3	N/A	79%	146%	N/A
Solartron PLC*	8	N/A	N/A	N/A	17%	19%	N/A	2.4	2.1	N/A	37%	-28%	N/A
Solon*	35	5%	7%	N/A	14%	19%	N/A	5.1	4.3	N/A	177%	78%	30%
Solar-Fabrik*	12	N/A	N/A	N/A	4%	12%	14%	2.5	2.1	1.8	96%	184%	34%
Internet													
Google	434	54%	55%	56%	18%	21%	22%	14.4	11.4	8.6	144%	64%	43%
Yahoo	35	30%	21%	32%	5%	4%	6%	2.9	2.7	2.5	52%	3%	65%
Baidu	52	11%	16%	21%	3%	7%	10%	11.8	10.7	9.1	201%	83%	82%
eBay	44	35%	34%	33%	13%	12%	12%	6.7	5.4	4.1	37%	28%	30%
High Growth Asian Tech Companies													
Largan	608	26%	38%	41%	18%	34%	33%	11.7	8.1	5.9	75%	159%	35%
HTC	679	7%	8%	9%	44%	45%	54%	14.9	11.4	9.2	485%	50%	36%
PPT	82	17%	20%	19%	18%	25%	24%	5.1	4.1	3.6	112%	72%	10%
Catcher	236	34%	35%	34%	35%	32%	28%	7.6	4.9	3.5	131%	43%	24%
FIH	13	1%	1%	1%	23%	29%	27%	7.5	5.1	3.7	92%	76%	25%
High Quality Asian Tech Companies													
Hon Hai	215	4%	5%	5%	18%	21%	22%	5.5	4.1	3.2	44%	49%	31%
TSMC	64	29%	32%	32%	17%	21%	22%	3.5	3.2	2.9	7%	23%	13%
Samsung Electronics	716,000	15%	15%	15%	23%	23%	23%	3.6	3.0	2.6	-16%	26%	5%
Infosys	2,831	29%	28%	27%	32%	31%	28%	10.0	7.5	5.7	35%	27%	21%

E = Morgan Stanley Research estimates, except for companies marked * (for which IBES consensus estimates are shown)
Source: FactSet, IBES, Morgan Stanley Research

Exhibit 8

Suntech: Residual Income Valuation

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total Equity	498	730	992	1,323	1,660	1,934	2,219	2,541	2,887
Core Net Profit	132	262	333	447	511	506	531	583	621
Return on Equity (%)	26.5	35.9	33.6	33.8	30.8	26.1	23.9	22.9	21.5
Residual Income	73	159	203	275	310	290	309	329	332
Beginning Equity Capital	380	498							
PV of Forecast Period	1,481	1,550							
PV of Continuing Value	3,256	3,582							
Proceeds from Options	72	72							
Equity Value	5,117	5,629							
No. of Shares (mn)	155	155							
Projected Price (US$)	33.5	36.8							

Source: Morgan Stanley Research estimates

Exhibit 9
Suntech: Quarterly Income Statement

US$m	2004	1Q05	2Q05	3Q05	4Q05E	2005E	1Q06E	2Q06E	3Q06E	4Q06E	2006E	2007E
Turnover	**85**	**38**	**42**	**57**	**87**	**224**	**109**	**152**	**178**	**199**	**638**	**1,213**
YoY Growth (%)	*516*	*610*	*158*	*119*	*132*	*163*	*186*	*260*	*213*	*128*	*184*	*90*
Less: COGS	(60)	(25)	(27)	(40)	(59)	(151)	(76)	(108)	(125)	(140)	(449)	(840)
Gross Profit	**25**	**13**	**15**	**17**	**28**	**73**	**32**	**45**	**53**	**59**	**189**	**374**
% margin (%)	*29*	*35*	*36*	*29*	*32*	*33*	*30*	*29*	*30*	*30*	*30*	*31*
YoY Growth (%)	*833*					*191*	*143*	*196*	*219*	*111*	*159*	*98*
Operating Expenses:	**(5)**	**(2)**	**(6)**	**(7)**	**(11)**	**(26)**	**(10)**	**(13)**	**(14)**	**(16)**	**(53)**	**(95)**
R&D	(0)	(0)	(0)	(1)	(2)	(3)	(2)	(3)	(3)	(3)	(11)	(23)
Sales and Marketing	(2)	(1)	(1)	(1)	(2)	(5)	(3)	(4)	(4)	(5)	(15)	(29)
General and Admin	(3)	(1)	(5)	(5)	(7)	(18)	(5)	(6)	(7)	(8)	(26)	(43)
Operating Profit	**20**	**11**	**9**	**10**	**17**	**47**	**23**	**32**	**39**	**43**	**136**	**279**
% margin (%)	23	30	21	18	19	21	21	21	22	22	21	23
YoY Growth (%)	2558					135					190	105
Forex gain	0	0	0	0	0	0	0	0	(0)	(0)	(0)	(1)
Interest expense	(1)	(0)	(6)	(1)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)
Interest income	0	0	0	0	0	0	1	1	2	2	6	7
Other income (expense)	0	0	(1)	(0)	(0)	(1)	(0)	(0)	(0)	(0)	(2)	(2)
Equity Income from Affiliates	(0)	(0)	(0)	0	0	(0)	0	0	0	0	0	0
Pretax profit	**19**	**11**	**2**	**9**	**17**	**39**	**24**	**33**	**40**	**44**	**140**	**283**
% margin (%)	22	29	5	16	19	17	22	22	22	22	22	23
Tax	1	(1)	(0)	(1)	(2)	(4)	(2)	(3)	(3)	(4)	(11)	(22)
Net income	**20**	**10**	**2**	**8**	**15**	**35**	**22**	**30**	**36**	**41**	**129**	**261**
EPS ($)	**0.22**	**0.11**	**0.01**	**0.07**	**0.09**	**0.22**	**0.14**	**0.20**	**0.23**	**0.26**	**0.83**	**1.69**

E = Morgan Stanley Research estimates
Source: Company data, Morgan Stanley Research

Solar Industry: Growth Drivers

We believe that the solar cell industry could grow by 30% to 35% pa in volume terms until 2020, which should translate to 23-26% growth in industry revenue. Strong growth is being driven essentially by incentive programs provided by various governments around the world. These governments provide incentives for three key reasons, in our view:

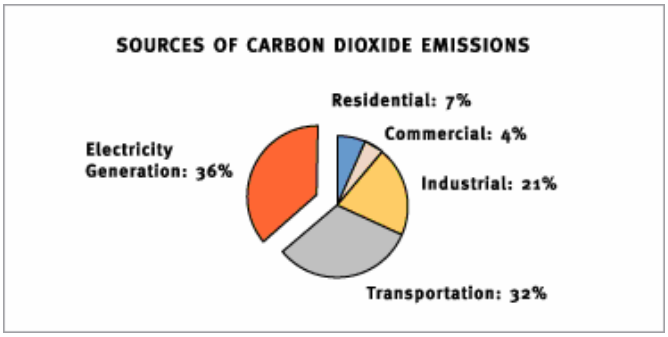
1. Environmental reasons (Kyoto Protocol)
2. Balanced energy policies
3. Incubation of solar technology to make it cost-competitive

Environmental Reasons

It is widely understood that the cost of global warming is being felt directly as well as indirectly. The single largest contributor to global warming is pollution from energy generation. We cannot reverse global warming without a transition to renewable energy.

Exhibit 10

Sources of CO_2 Emissions

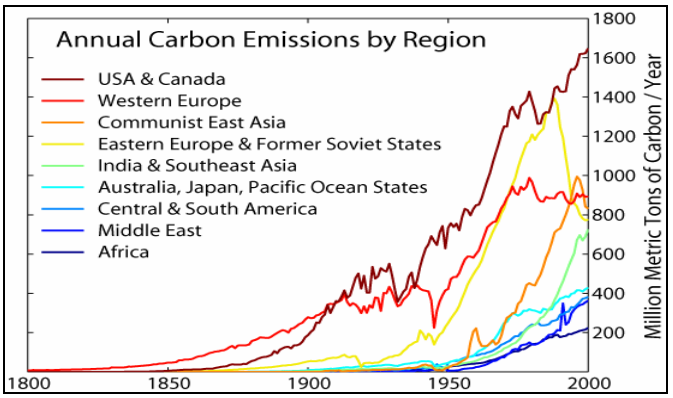


Source: EPA

Kyoto Protocol. The Kyoto Protocol is an agreement under which industrialized countries will reduce their collective emissions of greenhouse gases by 5.2% compared with the level in 1990 (compared with the emissions levels that would be expected by 2010 without the Protocol, this target represents a 29% reduction). The goal is to lower overall emissions from six greenhouse gases – CO_2, methane, nitrous oxide, sulfur hexafluoride, HFCs, and PFCs – calculated as an average over the five-year period 2008-12. National targets range from an 8% reduction for the EU and some others to 7% for the US, 6% for Japan, 0% for Russia, and permitted increases of 8% for Australia and 10% for Iceland.

Exhibit 11

Global Carbon Emissions



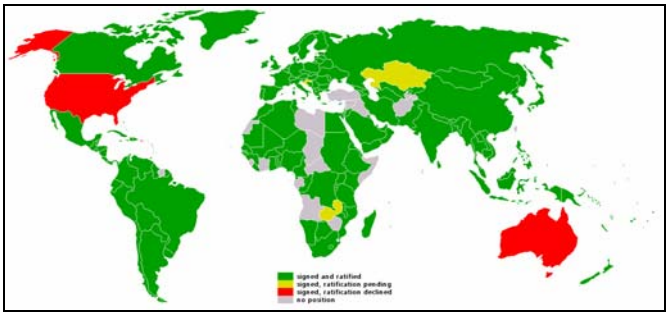
Source: Carbon Dioxide Information Analysis Center

Each country has agreed to limit emissions to the levels described in the protocol, but many countries have limits that are set above their current production. These "extra amounts" can be purchased by other countries on the open market. This rewards countries that meet their targets, and provides financial incentives to others to do so as soon as possible. Countries also receive credits through various shared “clean energy" programs and "carbon dioxide sinks" in the form of forests and other systems that remove carbon dioxide from the atmosphere.

Current status. The treaty was negotiated in Kyoto, Japan in December 1997. The agreement came into force on February 16, 2005 following ratification by Russia on November 18, 2004. As of September 2005, a total of 156 countries have ratified the agreement (representing over 61% of global emissions). Notable exceptions include the US and Australia.

Exhibit 12

Current Status of Kyoto Protocol



Note : Dark green indicates countries that have signed and ratified the treaty and yellow indicates states that have signed and hope to ratify the treaty. Notably, Australia and the US have signed but, currently, decline to ratify it.
Source: Kyoto Protocol

Considerable support from EU. The EU produces around 22% of global greenhouse gas emissions, and has agreed to a cut, on average, by 8% from 1990 emission levels. The EU has consistently been one of the major supporters of the Kyoto Protocol, negotiating hard to get other countries to agree.

In December 2002, the EU created a system of emissions trading in an effort to meet these tough targets. Quotas were introduced in six key industries: energy, steel, cement, glass, brick making, and paper/cardboard. There are also fines for member nations that fail to meet their obligations, starting at €40/ton of carbon dioxide in 2005, and rising to €100/ton in 2008. Current EU projections suggest that by 2008 the EU will be at 4.7% below 1990 levels.

Balanced Energy Policy – Increasing Energy Security
Investing in solar power diversifies sources of energy. Currently such power accounts for less than a tenth of 1% of global electricity consumption.

Incubating Solar Technology to Make It Cost-Competitive
The cost of solar energy has declined by more than 70% since 1980 and should continue to decline with technology advances. Driven by strong industry growth and profitability, the industry is attracting new capital and technology innovation to reduce its cost structure and improve conversion efficiency. Over the past decade, cost declines have been only about 5% pa, but we expect these cost declines to accelerate to 6-7% pa. As a result, we expect solar power to become economically viable without incentives in a few countries before 2020. From the perspective of governments, if the industry is supported until it becomes cost-competitive, it could resolve a major issue.

Global Incentive Structures

While grid electricity costs are still a lot lower than those of solar electricity, demand is being stimulated through various incentive programs provided by governments. Typical incentive programs include feed-in tariffs, tax refunds, subsidies for PV systems and low-interest loans. Of these, the most widely adopted and successful measure is feed-in tariffs. Under this structure, users sell back electricity to the national grid at a preferential price and hence are able to generate reasonable economic returns. As a result, PV system can be considered an attractive investment, with an internal rate of return, or IRR, of as high as 7% in some European countries.

We believe that the global incentive programs for the solar industry will likely improve in the future. We expect countries such as China, US states (other than California) and EU countries such as Greece to join the fray.

Exhibit 13

Major Markets' PV Incentives and Targets

Country	Electricity Consumption		Incentive Program	% from Renewable		PV as % of Renewable	Current PV Installed (MW)	PV Target	Likely Cross Over Year
	2004 TWh	2010 TWh		2004	2010				
Australia	236	288	No feed-in tariffs	8%			52		
Austria	60	62	Feed-in tariff: 0.60 €/kWp < 20 kWp. 0.47 €/kWp > 20 kWp	67%		0.04%	19		2020
Belgium & Lux	90	101	0.45 €/kWh feed-in tariffs in both Belgium & Lux	3%					
Canada	568	573	no feed-in tariffs	59%			14		
China	2,187	3,669		1%			35	1,000 by 2020	
Czech Republic	84	105	0.19 € /kWh feed-in tariff guaranteed for 15 years	4%	8%				
Denmark	40	43	no feed-in tariffs	24%			2		
Finland	86	105	0.0042 €/kWh tax refund and up to 30% investment subsidy	26%		0.01%	3		
France	572	631	Residential PV installations, or €0.225/kWh, Industrial PV installations, or €0.3/kWh.	15%	21%	0.03%	26		2017
Germany	607	660	0.518 €/kWh for roof tops and 0.406 €/kWh for open in 2006. Will reduce by 5% each year	10%		1.16%	794		2022
Greece	60	78	0.078 €/kWh on islands and 0.07 €/kWh on the mainland. Grants for 40-50% of total cost.	8%		0.10%	4		
India	651	882	50% capital subsidy for solar home systems		10% (2012)				
Italy	300	347	Feed-in tariffs is € 0.445/kwh for 2005-06 and reduces by 2% every year from 2007. Will last for 20 years from 2005.	17%		0.07%	31		2013
Japan	1,110	1,207	Grants for domestic PV roofs, and net metering support provided by utilities	10%			1,132	4,800 by 2010	2017
Mexico	210	260		20%			18		
Netherlands	98	112	0.068 €/kWh feed-in tariffs	6%		0.67%	49		
Norway	110	103		99%		0.00%	7		
Poland	154	165		3%					
Portugal	46	58	€ 0.30/kWh feed-in tariff for plants bigger than 5kW and € 0.51/kWh for smaller plants	29%		0.03%	3		
Russia	931	980							
South Africa	245	291							
South Korea	374	559	KRW 716.4 /kWh feed-in tariff, guaranteed for 15 years	2%				1,300 by 2012	
Spain	278	389	€ 0.414/kWh) for <100kW PV systems, will remain in effect for 25 years	22%		0.08%	37		2021
Sweden	148	148	no feed-in tariffs	49%		0.00%	4		
Switzerland	66	67	CHF 0.15/kWh (0.095 €/kWh) feed-in tariff + financial support	55%		0.06%	23		
Taiwan	218	304	no feed-in tariffs						
Turkey	152	222	0.05 €/kWh feed-in tariffs for 7 years	32%					
United Kingdom	400	448	no feed-in tariffs	4%		0.04%	8		
USA	4,150	4,635	Netmetering + grant for $2.80/W (PV) + 15% for owner occupied. Reduce by $0.20 every 6 months from 1 Jan 05	9%			365		
USA - California	4,150	4,635	Netmetering + grant for $2.80/W (PV) + 15% for owner occupied. Reduce gradually over next 10 years.	9%			365		2021

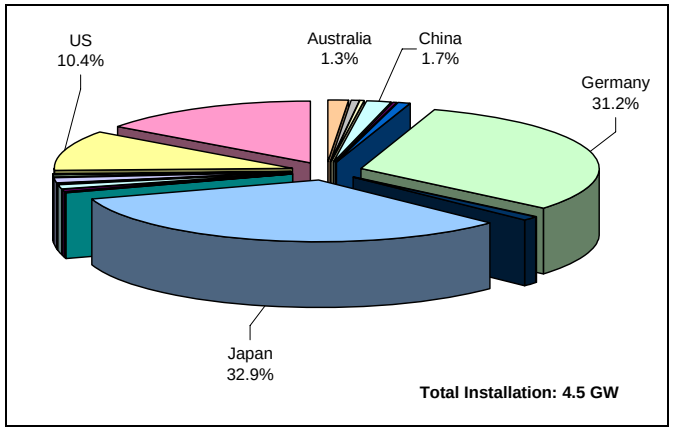
Source: Morgan Stanley Research, EPIA, Greenpeace

Current Global Market

As with many high-growth markets, exact estimates on the current market size are not available. Our rough analysis, which draws on estimates from a number of sources, suggests that there is currently around 4.5 GW of installed capacity globally. Of this amount, we believe that around 1.3 GW was installed last year.

Exhibit 14

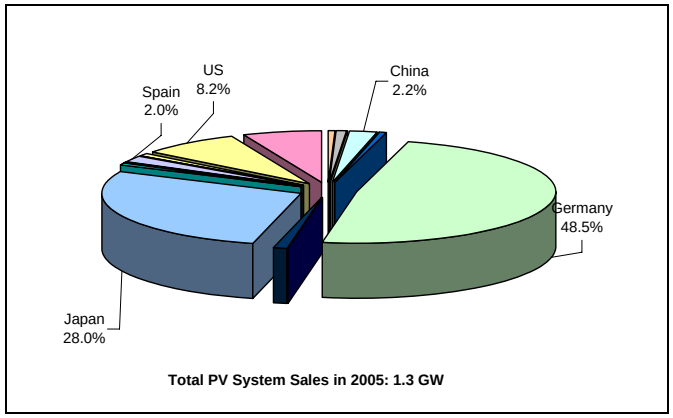
Global PV Installed Base, 2005



Source: Morgan Stanley Research estimates, based on data from IEA-PVPS, World Energy Council, Greenpeace

Exhibit 15

PV Equipment Sales, 2005



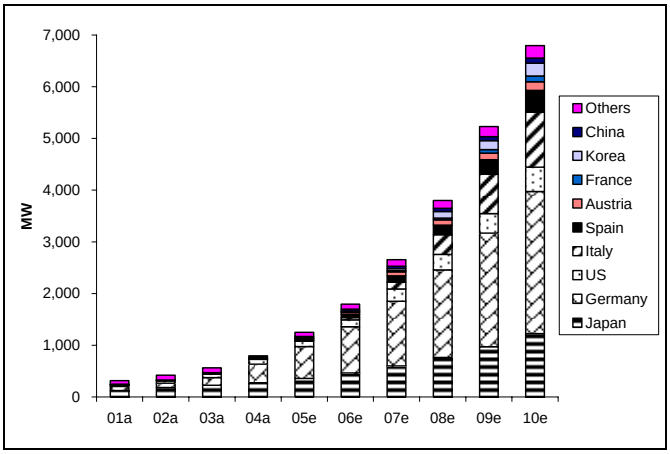
Source: Morgan Stanley Research estimates, based on data from IEA-PVPS, World Energy Council, Greenpeace

We believe that last year Germany was the biggest market for new system installations. We estimate that Germany installed between 550MW and 600 MW last year, followed by Japan with about 35 MW.

Germany has been the largest market for the past few years due to a very attractive incentive program, which ensures high IRR on installed systems, particularly in southern Germany. However, with a 5% reduction in feed-in tariff and increase in system prices, we believe that Germany has become less appealing. We think some of the growth shortfall this year could be filled by Spain, Italy and perhaps California, given attractive or new incentives in these markets.

Exhibit 16

PV Equipment Sales



Source: Morgan Stanley Research estimates, based on data from IEA-PVPS, World Energy Council, Greenpeace

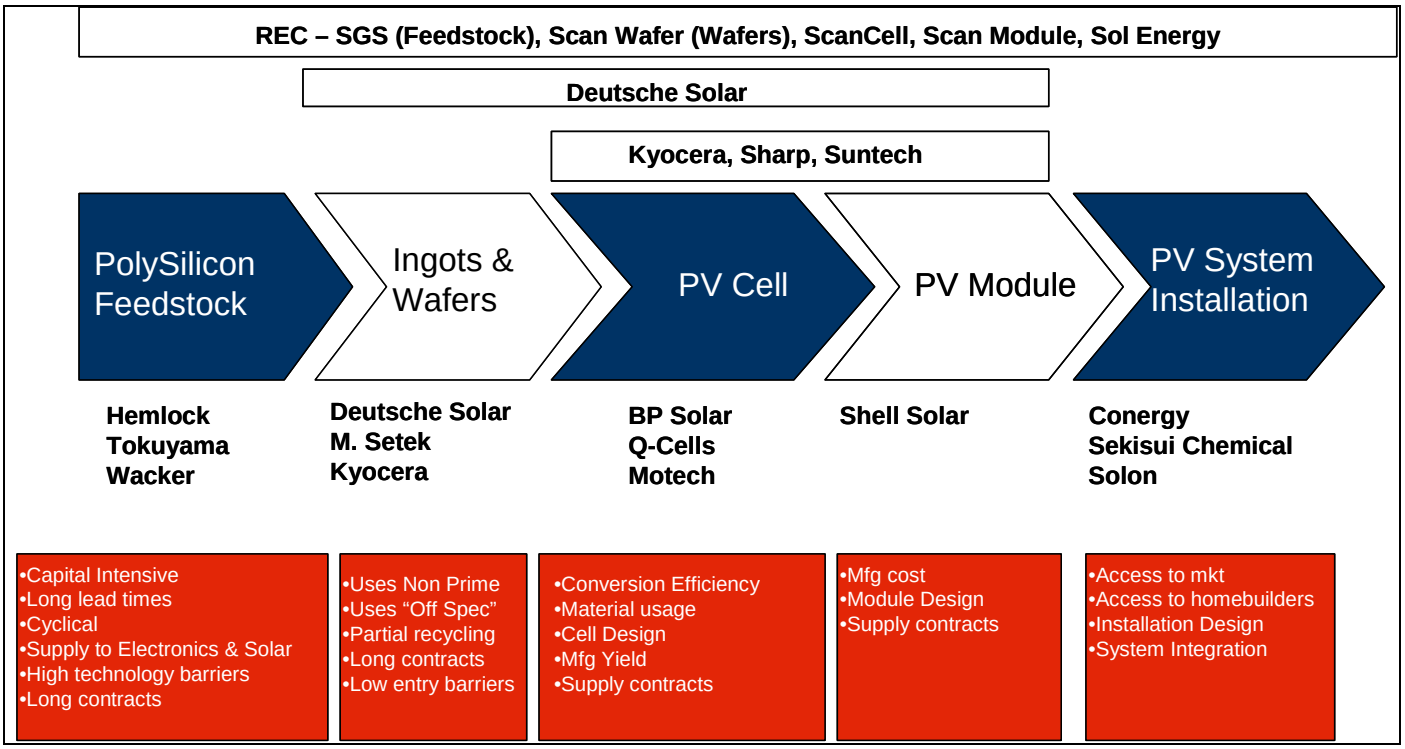
Raw Material: Shortages

Polysilicon is a crucial raw material in the industry. Currently there is severe shortage of polysilicon and we expect this to last until 2008. As a result, the ability to secure polysilicon and solar grade wafers has become a crucial success factor in the industry.

The solar industry shares polysilicon supply with semiconductor industry. Due to significant value add on raw wafer by the semiconductor industry, we believe that the semiconductor industry is in a far better position to pay higher wafer prices.

Until 2005, the solar industry was able to compensate for polysilicon production shortfalls with inventory built over the past lean cycle; we believe 2006 is likely to be the first year that industry demand is not fully met.

Exhibit 17
Solar Food Chain

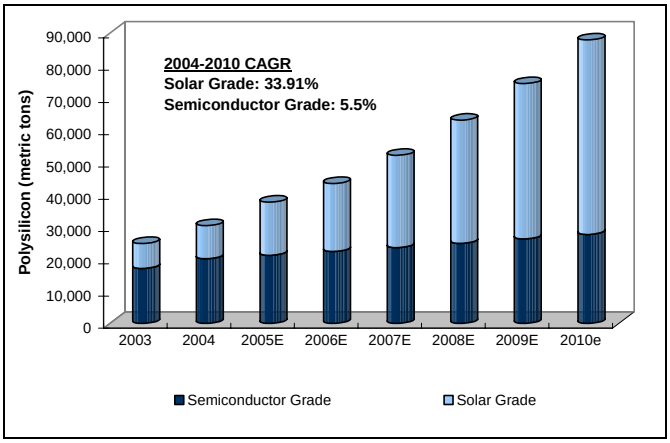


Source: Company data, Morgan Stanley Research

Due to very rapid growth in production of solar cells (30%+ CAGR for next decade and 40%+ for next two years, on our estimates), we expect polysilicon demand to grow very strongly. However, we forecast demand from the electronics industry to grow at just mid single digit levels. As a result, the solar industry should become a bigger consumer in the polysilicon market.

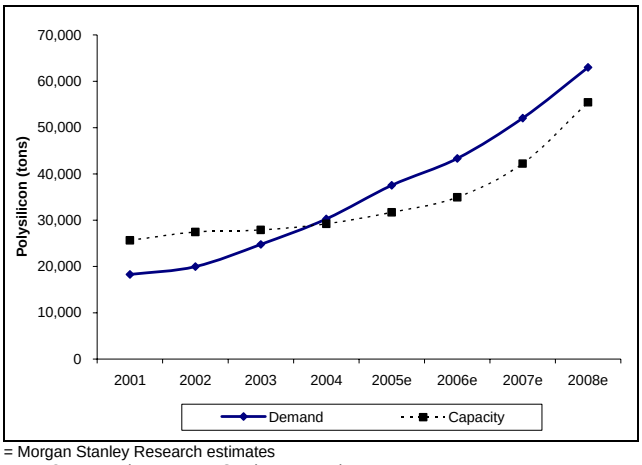
While in the past the solar industry was able to grow at an unrestricted pace despite limited production of polysilicon, we believe that in 2006 and 2007, this could become a real constraint. In 2005 the shortfall was satisfied by inventory from past years. However, inventory now appears to have been depleted, and hence will likely be unable to cover the demand shortfall fully in 2006. We see a risk that this shortage may limit solar industry production growth to low teens (as compared with potential demand growth of 40%+). Hence, unless the industry is able to ramp up its Polysilicon capacity rapidly, our forecasts may require downward revisions.

Exhibit 18
Global Polysilicon Demand



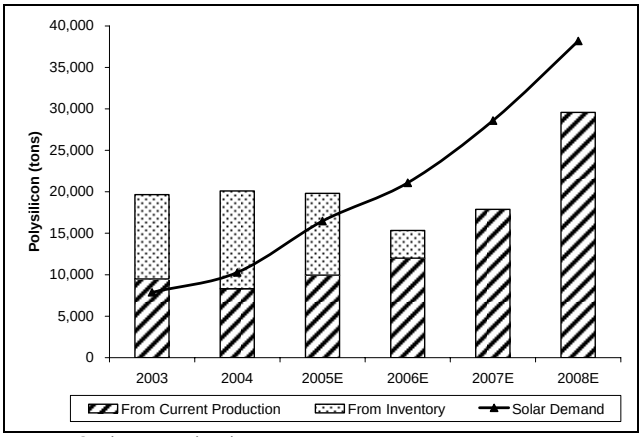
E = Morgan Stanley Research estimates
Source: Company data, Morgan Stanley Research

Exhibit 19
Global Polysilicon: Demand & Supply



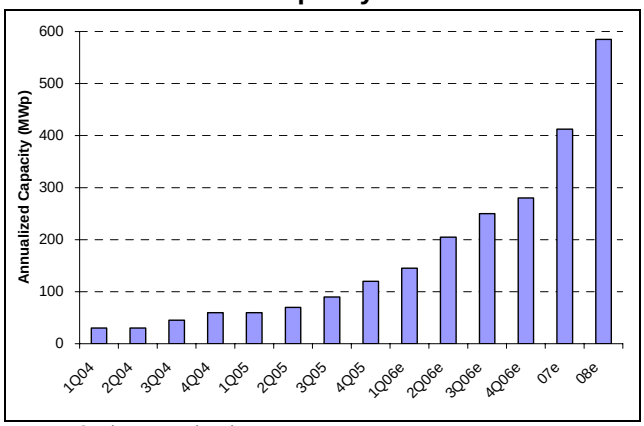
e = Morgan Stanley Research estimates
Source: Company data, Morgan Stanley Research

Exhibit 20
Polysilicon Sufficiency: Solar Industry



E = Morgan Stanley Research estimates
Source: Company data, Morgan Stanley Research

Exhibit 21
Suntech: Annualized Capacity



e = Morgan Stanley Research estimates
Source: Company data, Morgan Stanley Research

Manufacturing Capacity

We expect Suntech's manufacturing capacity to grow about 5x over the next three years. Capacity was 120 MWp in 4Q05, and we expect it to reach 280 MWp by the end of this year, driven by installation of five or more lines.

We understand that Suntech has placed orders for most of the crucial equipment, such as PV CVD and In-line Screen Printing. Hence, equipment delays are unlikely to constrain its capacity ramp. However, if Suntech faces difficulty in securing an adequate amount of raw materials, it may have to slowdown its ramp-up.

Wafer Supply

We believe Suntech has signed large supply contracts (mostly with domestic Chinese suppliers), which should mostly cover its requirements for FY06. We estimate that it is 90%-covered for FY06 and about 75% covered for FY08. About half of these contracts are fixed price, with the rest variable price (to be fixed quarterly or six monthly).

As Exhibit 22 indicates, we estimate that about 55% (plus about 10% via contract business) of wafer supply for 2006 will come from domestic Chinese suppliers. For 2007, we think domestic supply may account for about 65% of its overall wafer requirements. Some of these suppliers (such as Louyang and LDK Solar) are relatively young companies that are trying to ramp up their own production very rapidly – if there are any execution difficulties, Suntech could suffer.

Exhibit 22
Suntech: Silicon Sufficiency

	2004	2005	2006e	2007e	2008e
Capacity (MWp)	41	85	220	413	585
Production (MWp)	29	66	189	372	572
Wafer Supply Contracts	30	70	201	343	441
Solar World			25	30	36
LDK			30	100	100
Baoding Yingli			20	30	30
Louyang			30	42	91
Others			30	30	30
Contract			66	112	154
Current Sufficiency (%)	103	106	106	92	77

e = Morgan Stanley Research estimates
Source: Company data, Morgan Stanley Research

Cost Structure

Wafer and other raw material costs account for about 60% of revenue for Suntech. Due to shortage of polysilicon, we expect contract polysilicon prices to increase and, as a result, we expect wafer costs for Suntech to increase.

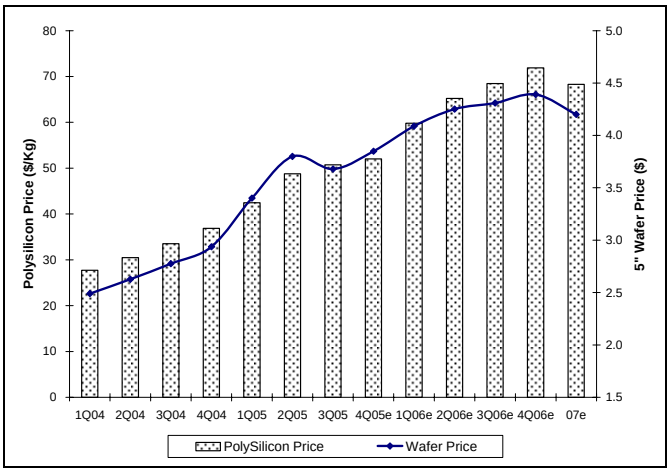
Polysilicon contract prices are currently close to US$60 per kg and could easily rise to more than US$70 per kg over the rest of the year, in our view (implying a 17-20% increase). Hence, we expect ingot and wafer slicing companies to see some margin squeeze such that wafer prices may in turn increase by 11-13% from current levels.

We expect Suntech to respond to an increase in wafer prices by using thinner wafers and improving conversion efficiency. As a result, we expect COGS (per Watt) to increase by only 3% to 4%.

As we discuss later, we believe that Suntech has very limited ability to pass on cost increases to its customers, due to a reduction in feed-in tariffs in its largest market (Germany) and growth from lower-yielding markets in FY06 and FY07.

Exhibit 23

Suntech: Raw Material Prices



e = Morgan Stanley Research estimates
Source: Company data, Morgan Stanley Research

Exhibit 24

Suntech: Cost Management

	2005	2006	2007
Wafer Cost (5")	2.79	3.71	4.28
Wafer Mix (By Thickness)			
270u	43%	33%	5%
240u	58%	53%	50%
210u	0%	15%	45%
180u	0%	0%	0%
Conversion Efficiency			
Mono	16.3%	17.1%	18.0%
Multi	14.6%	15.4%	16.2%
COGS ($/W)	2.28	2.42	2.25

Source: Morgan Stanley Research estimates

Exhibit 25

Suntech: Cost Structure

	2005	2006
Revenue	100%	100%
COGS	67.5%	70.4%
Wafer Cost	48.0%	50.6%
Other Raw Materials	10.1%	10.3%
Labour Cost	1.1%	1.1%
Other Overheads	6.8%	6.5%
Depreciation	1.3%	1.5%
Gross Margin	32.5%	29.6%
Operating Expenses	11.6%	8.2%
R&D	1.5%	1.7%
Sales & Mktg	2.1%	2.4%
General & Admin	8.0%	4.1%
Operating Margin	20.9%	21.4%

Source: Morgan Stanley Research estimates

End Markets

As shown in Exhibit 15, Germany, Japan and the US are the largest end markets for PV equipment. However, for Suntech, Germany is by far the largest market, accounting for more than half of its sales in FY05. This, combined with 7% of sales from Spain and an additional 18% from the rest of the Europe (primarily Italy, France and some distributors) is likely to result in Europe accounting for 79% of its FY05 sales.

Exhibit 26
Suntech: Revenue Mix

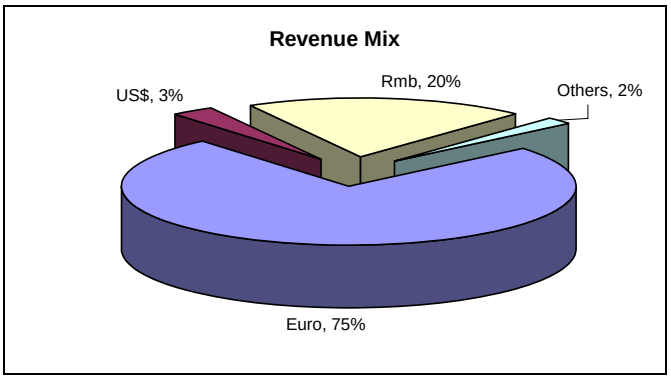
	2003	2004	2005e	2006e	2007e
Europe (%)	25	89	79	79	77
Germany (%)	19	72	54	49	46
Spain (%)	0	2	7	10	9
Others (%)	6	15	18	20	22
China (%)	46	8	17	15	13
South Africa (%)	25	2	0	0	0
US (%)	0	0	1	4	9
Rest of the World (%)	4	1	2	1	0

e = Morgan Stanley Research estimates
Source: Company data, Morgan Stanley Research

We expect this dependence on Europe to be maintained in FY06. However, we expect Spain and Italy to account for a larger share. Furthermore, Suntech's sales into the US should grow strongly over the next two years due to new incentive programs and also appointment of new partners such as Powerlight in California and a distributor in each of New Jersey and the Mid West. We believe that recent UAL qualification will also help Suntech grow its share in the US market. On the other hand, Japan remains a very competitive market to access for Suntech and we do not expect any sales in Japan in the near term.

Due to its significant sales in Europe, we believe that Suntech has net currency exposure to the euro. We estimate that every 1% depreciation in the euro is likely to hurt Suntech's revenue by 0.7% and its gross margins by about 0.3%. Since its manufacturing base is in China, Suntech has a large proportion of its costs in domestic currency. We believe that every 1% appreciation in the Rmb is likely to hurt its margins by 0.15%.

Exhibit 27
Suntech: Revenue Mix by Currency, 2005e



Source: Company data, Morgan Stanley Research

ASP Trends

We believe that, despite the increased costs, Suntech will not be able to increase its selling prices and hence will see a decline in margins in FY06. The key reason for its inability to pass on cost increases, in our view, is the reduction in feed-in tariffs in its largest market (Germany) and growth from lower-yielding markets in FY06 and FY07.

We believe that, due to a reduction in the buyback rate, the IRR on a typical installation in Germany will fall from 6.4% in FY05 to 5.1% in FY06 (even if we assume a modest decrease in the system selling price). In an environment of increasing interest rates, we would not expect this to be compelling to investors, and hence see a likelihood of downward pressure on ASPs in Germany.

Exhibit 28
Germany: PV Economics

	2005e	2006e	2007e
Module Price (per Watt)	3.47	3.47	3.47
Total System Cost (3 KWp)	18.86	18.75	18.53
System ASP ($ per Watt)	6.29	6.25	6.18
FX Rate (Euro)	1.244	1.212	1.212
System Cost (€)	15.15	15.47	15.29
System ASP (€ per Watt)	5.05	5.16	5.10
Blended Buyback rate (€)	0.484	0.451	0.419
IRR	6.4%	5.1%	4.3%

Note: This assumes no change in module pricing.
Source: Morgan Stanley Research estimates

As we show in Exhibits 29 to 31, the IRRs in most of the growth markets, such as Italy and California, are lower, on our estimates. As we expect Suntech to focus more on these markets, its blended ASP is unlikely to increase.

Exhibit 29
Spain: PV Economics

	2005e	2006e	2007e
Module Price (per Watt)	3.70	4.00	4.00
Total System Cost	19.76	20.83	20.59
System ASP ($ per Watt)	6.59	6.94	6.86
FX Rate (Euro)	1.244	1.212	1.212
System Cost (€)	15.88	17.19	16.99
System ASP (€ per Watt)	5.29	5.73	5.66
Buyback rate (€)	0.414	0.414	0.414
IRR	8.8%	7.2%	7.4%

Note: This assumes no change in module pricing.
Source: Morgan Stanley Research estimates

Exhibit 30
Italy: PV Economics

	2005e	2006e	2007e
Module Price (per Watt)	3.47	3.47	3.47
Total System Cost	18.86	18.75	18.53
System ASP ($ per Watt)	6.29	6.25	6.18
FX Rate (Euro)	1.244	1.212	1.212
System Cost (€)	15.15	15.47	15.29
System ASP (€ per Watt)	5.05	5.16	5.10
Buyback rate (€)	0.445	0.445	0.436
IRR	5.7%	5.1%	5.0%

Note: This assumes no change in module pricing.
Source: Morgan Stanley Research estimates

Exhibit 31
California: PV Economics

	2005e	2006e	2007e
Module Price (per Watt) $	3.47	3.47	3.47
Total System Cost	18.86	18.75	18.65
System ASP ($ per Watt)	6.29	6.25	6.22
Government Subsidy	6,000	6,000	6,000
Residential Electricity Rates	0.093	0.154	0.157
IRR	0.1%	0.7%	1.0%

Note: This assumes no change in module pricing.
Source: Morgan Stanley Research estimates

Likely Surprises

We believe Suntech management is executing very well, based on its ability to secure raw material supply and ramp up production capacity, its cost reduction initiatives, its ability to target new end markets, the potential to build an upstream strategy as well as its strategy for inorganic growth. As a result, the stock market expectations have grown over the past few months. From here, we see very limited room for further positive surprises. However, if management is able to secure additional raw materials, it could potentially generate 17% higher earnings for FY06e and 35% higher earnings for FY07e. As discussed in the valuation section, we believe that the FY06 earnings potential is largely factored in the stock price.

Exhibit 32
Suntech: Earnings Scenario

	05e	06e	07e	08e
Base Case				
Revenue	224.4	650.3	1,213.4	1,676.9
Shipment (MW)	66.5	188.9	372.5	572.1
Blended ASP ($/Wp)	3.38	3.44	3.26	2.93
Operating Profit	47.0	139.2	278.9	385.4
Net Profit	34.6	132.0	261.9	333.4
EPS (fully diluted)	28.5	85.2	168.9	215.1
DPS	0.0	10.0	20.0	50.0
Optimistic Case				
Revenue	227.8	741.5	1,560.6	2,138.8
Shipment (MW)	67.4	213.7	469.6	692.1
Blended ASP ($/Wp)	3.38	3.47	3.32	3.09
Operating Profit	47.8	164.7	381.3	577.2
Net Profit	35.0	155.2	354.6	498.1
EPS (fully diluted)	28.9	100.1	228.7	321.3
DPS	0.0	10.0	20.0	50.0

Source: Morgan Stanley Research estimates

Industry Surprises – Positive

We believe that the industry growth forecasts may be somewhat low, particularly looking beyond 2007. However, growth expectations for 2006-07 may be high as we think the market is likely to be constrained by limited polysilicon supply. While we expect potential demand growth of 45% p.a. for the next two years, we believe that limited polysilicon inventory and constrained production may limit 2006 industry growth to the low teens.

While the industry's ability to meet demand may be limited in the near term, we expect the incentive environment to improve, particularly due to impending announcements in the US (other than California) and potentially Greece and China.

We expect growth to shift from Germany to Spain and Italy, where the incentive structure is attractive and ROI is on a par or better than the former.

Suntech Surprises – Neutral
We believe the current stock price has factored in significant growth in revenues and profits for the next two years. While it is executing well, we believe Suntech is unlikely to produce a significant positive surprise from the current level.

We believe that the company is in active discussions with various upstream manufacturers of polysilicon and, if it is able to take an equity stake or acquire a polysilicon manufacturer, it would be positive in the near term.

Exhibit 33
Solar Cell Industry: Likely Surprises

	Consensus	Likely Surprise
Incentive Programs	Good incentives in Germany, California, Italy, France, Spain, Portugal.	**Flat to Positive.** We believe that most of the existing programs are likely to stay intact, and we expect new incentives in the US (states other than California), China and Greece. While incentives in the US may be anticipated, we expect the overall incentive environment to improve.
Industry Demand	Industry forecasts 30% CAGR for next 10 years.	**Flat to Positive.** Due to new incentive programs, we expect industry output to show a 35% pa CAGR over the next 10 years. For next three years, the growth rates may be 40%+.
Industry Structure	Increased fragmentation	**Negative.** We believe the entry barriers are relatively low and cost differentiation is minimal. As a result, we expect more entrants in the market. While silicon supply may constrain the ability of new entrants in FY06 and FY07, we expect the industry to fragment rapidly beyond FY07.
Industry Raw Material Availability	Tight supply until 2007	**Negative.** While it's well understood that polysilicon supply is tight (as evidenced by rising polysilicon prices), so far it has not constrained industry growth. However, in 2006 and 2007, it could crimp industry growth from 45% to about 25-30%, by our estimates.
Raw Material Prices	20% increase in polysilicon prices and 15% increase in wafer price	**Flat to Negative.** As wafer prices are determined by a complex mix of long term contracts, it's difficult to estimate the exact wafer prices; however, the risk is that wafer prices turn out to be higher due to an acute shortage of polysilicon.
Cell / Module Selling Prices	Flat	**Negative.** With a decline in feed-in tariff in Germany and the large proportion of incremental growth from lower IRR countries, we see downside risk to selling prices.
New Technologies		**Flat.** We believe that thin film technologies are still at a very early stage and are unlikely to be commercialized on a large scale until 2008. Furthermore, Nanotechnology remains unproven in mass production.
Supply Chain Margin	Decrease for wafer companies	**Flat to Positive.** We believe that the current margins for wafer companies are more than 20%. As a result, in a tight polysilicon market, we expect these margins to be squeezed – which should be positive for PV cell and module customers. Furthermore, system prices could be reduced by lowering the margins of system integrators and installers.
Cell / Module Supply	No capacity constraints	**Flat.** This is not a capital-intensive business and capacity can be added in small increments. Furthermore, given the relatively easy availability of equipment, we expect supply to be ample.

Source: Morgan Stanley Research

Exhibit 34

Suntech Power: Likely Surprises

	Consensus	Likely Surprise
Suntech Demand	Suntech to grow output by 3x in FY06 and 1.8x in FY07	**Flat.** While it's difficult to ascertain expectations for Suntech, we believe the current stock price is factoring in very high expectations. While Suntech should be able to add capacity, we believe raw material availability could constrain its ability to exceed expectations.
Suntech Market Share	Doubling of market share by FY07	**Flat.** Due to constrained raw material availability, Suntech may find it difficult to grow market share (from 5% in FY05) by more than 2x over the next two years.
Suntech Raw Material Availability	Fully secure for FY06 and FY07	**Flat to Negative.** While we believe Suntech has tied up its raw material requirements (largely from domestic suppliers), we believe that any execution risk at its relatively new suppliers could limit its ability to secure enough raw materials.
Raw Material Prices	15% increase in wafer price in FY06	**Flat to Negative.** As wafer prices are determined by a complex mix of long term contracts, it's difficult to estimate the exact wafer prices, however the risk is that wafer prices turn out to be higher due to an acute shortage of polysilicon.
Cost Reduction	Increase in cost in FY06	**Flat to Negative.** Due to 15% higher wafer prices, cash cost per Watt may increase by 5% to 6% in FY06. However, if the migration to 210u or the improvement in conversion efficiency is delayed, there could be a negative surprise.
New Technologies	Start thin film production in FY07	**Positive.** We expect the company to start pilot production of amorphous thin film based cells shortly. As this technology and its capex are still not proven, it may remain at very small scale in FY06.
New Market Penetration	Expect US qualification soon	**Positive.** We believe Suntech is likely to secure qualification (UAL qualification) to sell in the US market soon. Furthermore, it is likely to widen its geographical footprint to other EU countries such as France, Italy and Austria.
Pricing	Flat ASP for next 3-4 quarters	**Negative.** We believe that as Suntech diversifies itself from high-return markets such as Germany to the USA, Spain and other EU countries, ASP is likely to come under pressure.
Margins	Modest decline in OPM	**Negative.** We believe that with rising wafer costs and potentially falling ASPs, Suntech's margins are likely to come under pressure despite its cost management initiatives.
Consensus Estimates	EPS of $0.70 in 2006	**Positive.** We believe that the current published expectations may be low. However, the stock market has clearly priced in a much higher earnings estimate (probably close to $0.95 per share for FY06).
Cash Calls	Limited risk	**Flat.** The company has significant cash ($290m) and is likely to be FCF neutral for the next two years. Hence, unless it pursues an aggressive upstream strategy or an acquisition to grow market share, it should not raise any further cash in the near term.
Capital Return	No expectations	**Flat.** The company is unlikely to pay a cash dividend or do any buybacks in the near future. However, a cash dividend for FY06 is very likely, in our view.
Stock Overhang	Lockup until May 2006	**Flat to Negative.** While there is unlikely to be any stock overhang until May 2006 due to the 180-day lock-up provision, we suspect that there could be some stock overhang after May 2006.
Upstream Strategy	Likely to invest in a domestic polysilicon manufacturer	**Flat to Negative.** We believe that, given Suntech's aggressive expansion plans, it will be difficult to secure ample polysilicon. While, there may be risk in acquiring an EG polysilicon manufacturer, we believe Suntech is likely to increase its upstream investments.
M&A	Nothing expected	**Flat to Positive.** We believe Suntech is likely to pursue non-organic growth in the area of module assembly and lamination, and probably cell manufacturing too.

Source: Morgan Stanley Research

Solar Industry Primer

How Does It Work?

By using a semiconductor material that can be adapted to release electrons, sunlight can be used to generate electricity through photovoltaic (PV) systems. The solar energy knocks electrons loose from their atoms, allowing the electrons to flow through to produce electricity. The greater the intensity of the light, the greater the flow of electricity.

The most common semiconductor material used in photovoltaic cells is silicon, an element most commonly found in sand and wildly used in microelectronics.

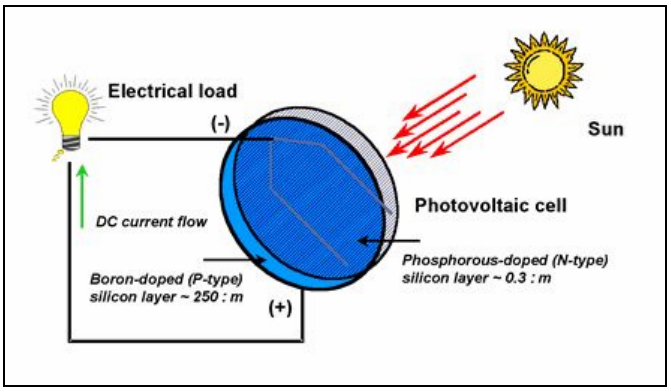
A typical PV module holds about 40-80 cells. About 10-20 of these modules are mounted in PV arrays. PV arrays can be then assembled with inverters as a PV system to generate electricity.

Industry Food Chain

The typical manufacture procedure for solar systems starts with the purification of raw silicon materials and ends with the solar system assembly and installation, as shown on the next page.

Exhibit 35

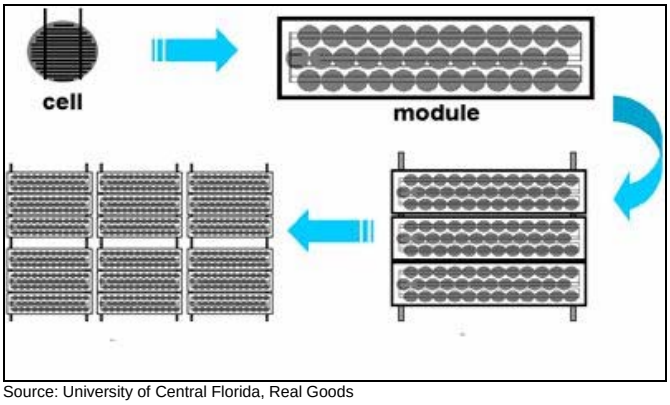
Basic Operation of a PV Cell



Source: Florida Solar Energy Centre

Exhibit 36

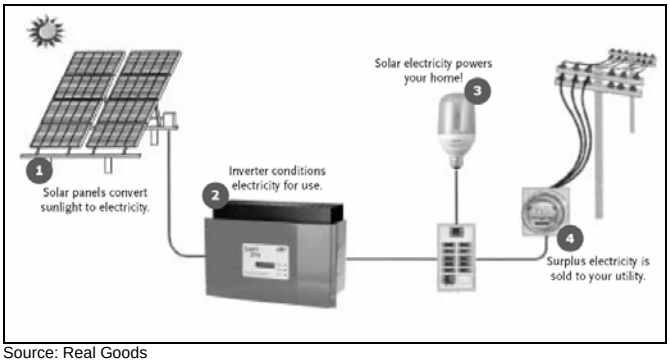
Schematic PV Cells and Modules



Source: University of Central Florida, Real Goods

Exhibit 37

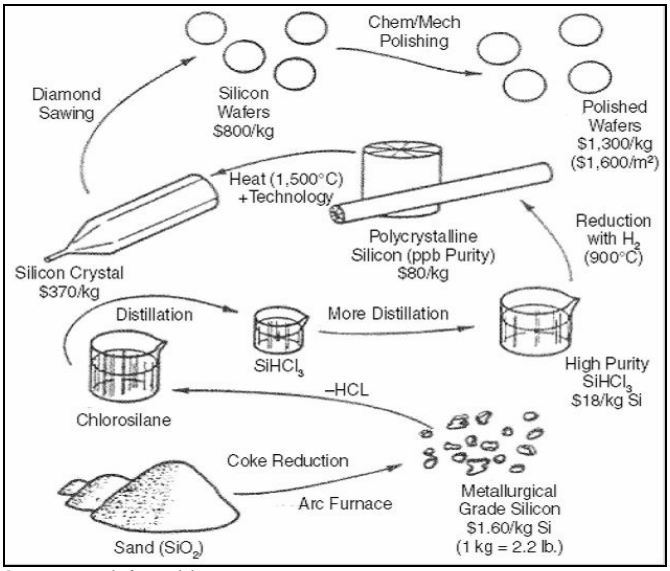
A Typical On-Grid PV System



Source: Real Goods

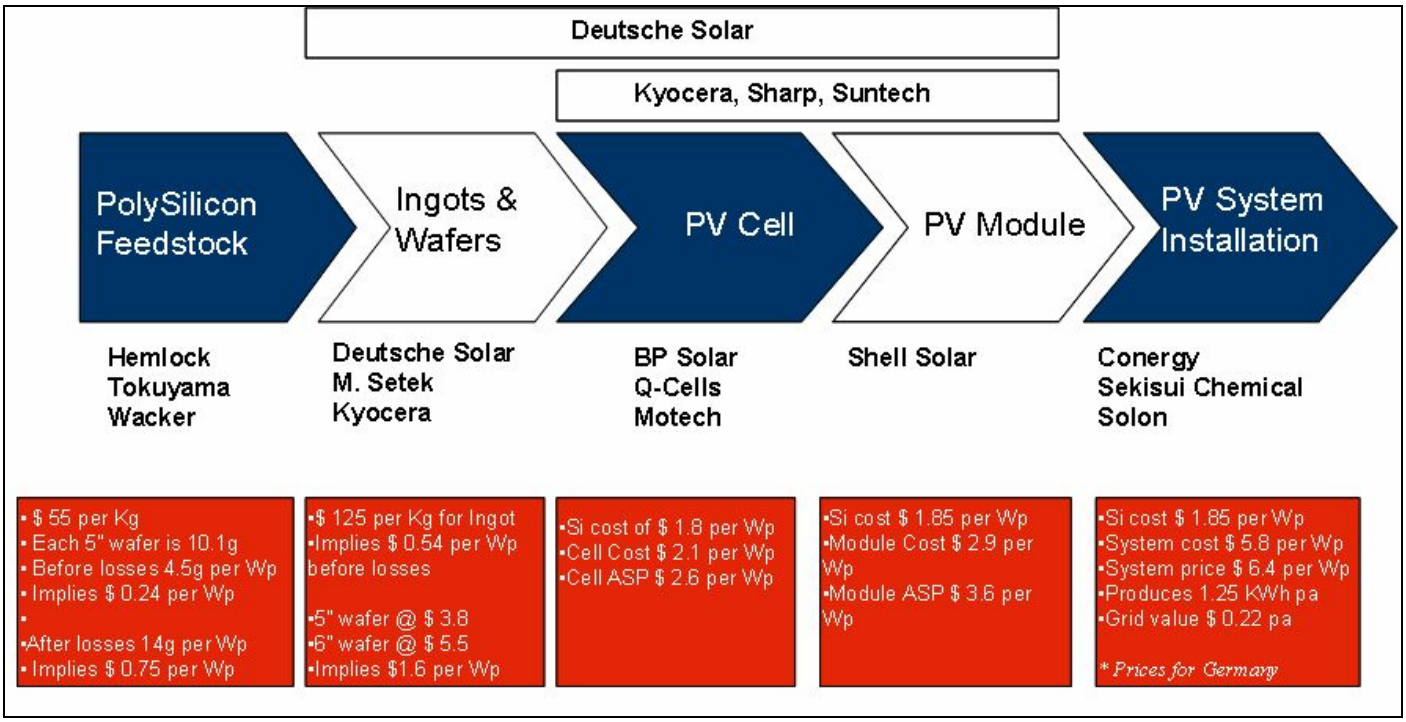
Exhibit 38

Silicon Transformation



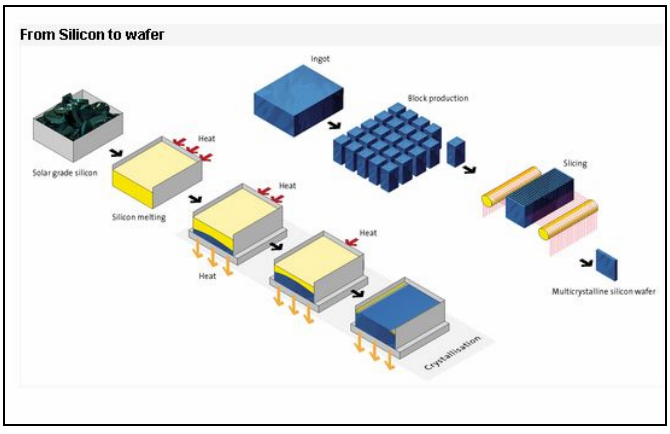
Source: Journal of Materials

Exhibit 39
The Value Chain of Solar System



Source: Morgan Stanley Research

Exhibit 40
Solar Wafer Production



Source: ScanWafer

Polysilicon and Solar Grade Silicon Wafers

One third of the global polysilicon supply, nearly 10,000 metric tons, was dedicated to solar grade silicon wafers in 2004. We expect this to further expand to 12,000 metric tons in 2005, or 36% of global supply. Major polysilicon suppliers include Hemlock, Tokuyama, Wacker-Chemie, REC, and Mitsubishi polysilicon. Leading wafer producers are Deutsche Solar, M. Setek, Kyocera and ScanWafer.

Exhibit 41
2004 Market Share of Solar Wafer Production

Company	Market Share
Deutsche Solar (SolarWorld)	14%
M. Setek	14%
Kyocera	10%
ScanWafer (REC Group)	10%
BP Solar	9%
PV Crystalox	8%
Shell Solar	7%
JFE	4%
Sanyo	4%
Sumco	4%
RWE Schott Solar	3%
Sharp	3%
Others	10%

Source: SolarWorld, Morgan Stanley Research

PV Cell/Module Production

In 2004, 78% of the PV cells were manufactured in Europe and Japan. Major cell makers are largely conglomerates, such as Sharp and Mitsubishi, or energy giants, such as BP and Shell. Among them, Sharp, occupying 26% of the global market in 2004, has been the industry leader for more than a decade. On the other hand, dedicated cell makers, such as Q-Cells in Germany, Suntech in China and Motech in Taiwan, have grown exponentially during these years.

Exhibit 42
2004 Market Share of Solar Cell Production

Company	Production (MW)	Market share
Sharp	324.0	25.8%
Kyocera	105.0	8.3%
BP Solar	84.9	6.8%
Mitsubishi Electric	75.0	6.0%
Q-Cells	75.0	6.0%
Shell Solar	72.0	5.7%
Sanyo	65.0	5.4%
RWE Schott	63.0	5.0%
Isofoton	53.3	4.2%
Motech	35.0	2.8%
Suntech	35.0	2.8%

Source: Photon, Morgan Stanley Research

Exhibit 43
2004 Market Share of Solar Module Production

Company	Market Share
Sharp	23%
Kyocera	10%
Shell Solar	7%
Mitsubishi Electric	6%
Sanyo Electric	5%
Isofoton	5%
MSK	4%
BP Solar	4%
Solon	3%
S.M.D.	2%
Photowatt International	2%
Other 50 companies	29%

Source: IEA-PVPS, Morgan Stanley Research

Exhibit 44
Solar Cell/Module Production Capacity Worldwide

MW	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Europe	20.1	18.8	30.4	33.5	40.0	60.7	86.4	135.1	193.4	308.0
Japan	16.4	21.2	35.0	49.0	80.0	128.6	171.2	251.1	363.9	618.0
US	34.8	38.9	51.0	53.7	60.8	75.0	100.3	120.6	103.0	139.0
Others	6.4	9.8	9.4	18.7	20.5	23.4	32.6	55.1	83.8	129.0
Total	**77.6**	**88.6**	**125.8**	**154.9**	**201.3**	**287.7**	**390.5**	**561.8**	**744.1**	**1,194.0**

Source: PV News, Morgan Stanley Research

Solar Technologies

PV cells can be made either from crystalline silicon or thin film. The former is widely used (89% in 2003) by far, and can be made from ingots, casting or grown ribbons. On the flip side, thin films are expected to be a key focus in the future, with advantages such as low material consumption and light weight.

Exhibit 45
2003 Market Share of Different Cell Technologies

Type	Market Share
Crystalline Silicon	
Polycrystalline	56%
Monocrystaline	33%
Thin Film	
Amorphous	5%
Ribbon-/sheet	4%
CdTe	1%
CIS	1%

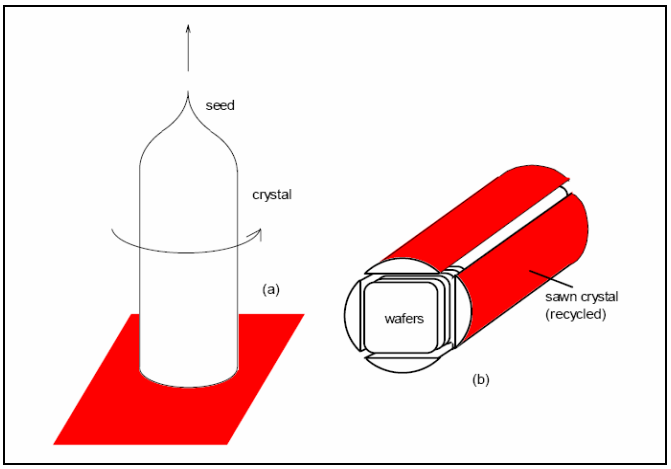
Source: EPIA, Morgan Stanley Research

In our view there are three key generations of solar cell technology, namely bulk silicon, thin film and nanotechnology.

1. **Bulk silicon** – Monocrystalline and Multicrystalline. Crystalline silicon processes benefit from ample availability, broad understanding and compatibility of material technology developed from microelectronics, despite not being the best performer for solar cells. Typical efficiency for mass production ranges from 13% to 17%, while the physical limit sits at 30%, and laboratory results can be as high as mid 20%.

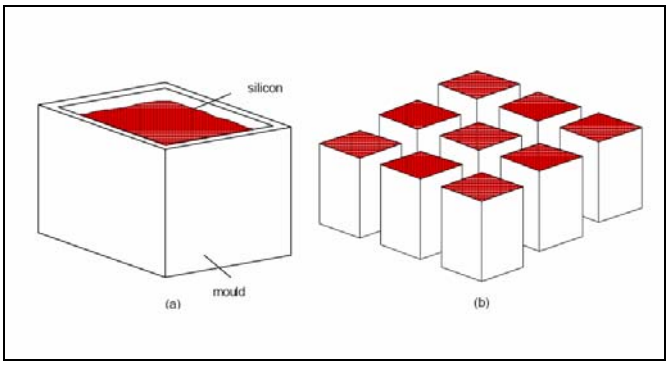
   There are two basic types of crystalline silicon: mono-crystalline and multi-crystalline (polycrystalline). Typical mono-crystalline silicon is produced by ingot growth, as shown in Exhibit 48. Solar cells made from monocrystalline silicon can normally achieve higher conversion efficiency than multicrystalline ones. However, the productivity is significant lower and hence the material cost is higher. SunPower and Shell Solar are among the main manufacturers of this type of cell.

Exhibit 46
Manufacturing Process for Monocrystalline Silicon Wafers



Source: University of New South Wales, Morgan Stanley Research

Exhibit 47
Manufacturing Process for Multicrystalline Silicon Wafers



Source: University of New South Wales, Morgan Stanley Research

On the other hand, multicrystalline (polycrystalline) is made from casting. Although the productivity is higher and material cost is lower, the conversion efficiency is not as good as that of monocrystalline.

1. **Thin film technology** - Solar cells can be also made from the deposition of thin layers (less than a few microns) of photo sensitive material, such as a-Si (amorphous silicon), CIS (Copper Indium di Selenide) and CdTe (Cadmium Telluride). Thin film processes consume significantly less silicon and enjoy a lower production cost compared with bulk silicon. However, the conversion efficiency of 5-10% is also much lower. At approximately 10% in 2003, the market share of thin film technology is still fairly low, but it is expected to increase dramatically in the future.

2. **Nanotechnology -** The application of nanotechnology helps create components via molecular self-assembly as well as nano templates with structural order extending through all three dimensions. The molecule level arrangement allows the absorption of a substantial fraction of the incoming sunlight despite the ultra-thin layers, since the charges need to be transported only several nanometers, leaving little opportunity for a loss. The laboratory result of conversion efficiency is 12%. The nanosolar SPV cell cost is estimated to be $0.36 per Wp. However, at the present stage, the process technology is still far from maturity for mass production.

Energy conversion efficiency

A solar module's energy conversion efficiency is defined as the maximum electricity output divided by the input sunlight energy. Nowadays, typical conversion efficiencies for solar cells and modules are 15-17% and 11-15%, respectively.

Exhibit 48
Module Efficiencies

Type	Typical module efficiency
Crystalline Silicon	
Polycrystalline	11-14%
Monocrystaline	12-15%
Thin Film	
Amorphous	5-7%
CdTe	6-7.5%
CIS	9-9.5%
a-Si/μ-Si	10%

Source: EPIA, Morgan Stanley Research

Key Technology Challenges

The key technology challenges for the PV industry primarily cover the need for breakthrough improvements that can dramatically reduce the solar system's costs and improve its efficiency and reliability. In order to achieve the goal, it is believed that the industry is focused on the following areas:

1. **Increase Conversion Efficiencies.** Develop new technologies and design more advanced equipment to manufacture, on a large scale and cost-effectively, PV cells with higher conversion efficiencies.

2. **Reduced Silicon Usage by Using Thinner Silicon Wafers.** Developing process technologies to address manufacturing challenges associated with reducing the thickness of silicon wafers, including cell warpage and the breakage rate of thinner silicon wafers.

Exhibit 49
Technological Targets Toward 2030

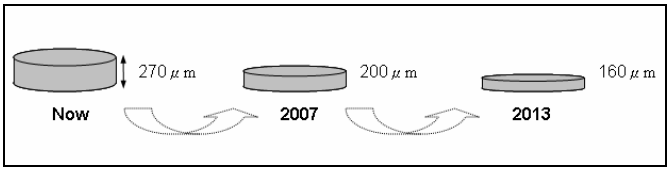
	2010	2020	2030
Crystalline silicon solar cell	20%	25%	25%
Thin film silicon solar cell	15%	18%	20%
"CuInSe" solar cell	19%	25%	25%
"III-V" solar cell	40%	45%	50%
Dye-sensitized solar cell	10%	15%	18%

Source: NEDO Japan, Morgan Stanley Research

3. **Utilize Low Cost Solar Grade Silicon.** Develop innovative silicon purification technologies to produce solar grade polysilicon (rather than high purity electronics grade polysilicon). If successful this development will substantially reduce silicon cost while maintaining and enhancing the conversion efficiencies.

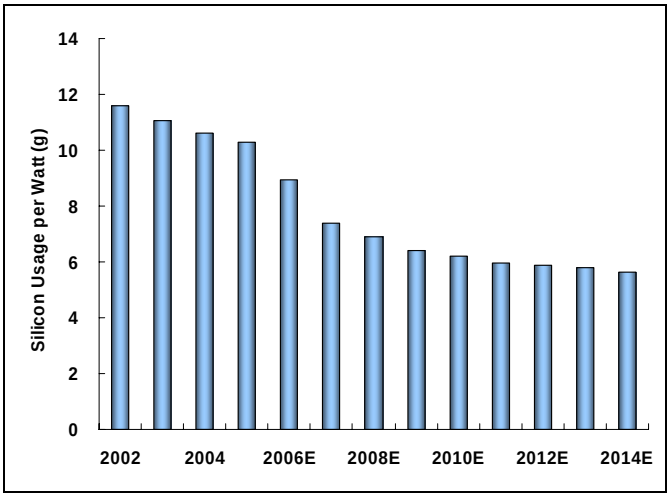
4. **Develop Thin Film Silicon PV Cell Technologies.** Develop manufacturing technologies for the next-generation thin film silicon PV cells, which would significantly reduce the consumption of silicon materials and manufacturing costs.

Exhibit 50
Reduced Silicon Usage



Source: Morgan Stanley Research

Exhibit 51
Trend of Silicon Usage per Watt



Source: Morgan Stanley Research

In addition, we believe there are some more untested PV technologies that might be dominant in the future despite uncertain viability at this point, including:

1. **Nanotechnologies:** Various start-up companies are trying to commercialize nanoscale technologies for multiple applications, including grid-connected and building-integrated markets. From inorganic semiconductor nanocrystals to self-assembling nanostructures to dye-sensitized nanometer-scale crystals, all are attempting to produce lightweight, flexible, and low-cost cells in high volume; some plan to use roll-to-roll manufacturing processes, which directly cut costs.

2. **Sputtering:** Borrowing technology used to place a magnetic coating on computer disk drives, a couple of early-stage companies are adapting this process for manufacturing solar cells. These techniques use automated, continuous-flow processes for placing a thin coating of solar-collecting material, like CIGS thin-film cells, on cheap, thin, lightweight substrates. The goal is to produce cells with the efficiencies of silicon but at a quarter of the cost.

3. **New silicon-based technologies:** A few companies are building on silicon's proven track record for high durability and efficiency with new manufacturing approaches that require significantly less of this high-cost material. One company is using tiny silicon balls attached to aluminum foil substrates to make its low cost, flexible sheets of cells. Another startup has a process that leverages advanced deposition of low-cost silicon feedstock in a continuous flow process.

4. **Organic semiconductor thin-film:** One start-up is working on depositing conductive polymers over inexpensive Mylar film. They are hoping to make a thin-film organic semiconductor device that uses the principles of polarization to organize incoming photonic energy and then change it into electricity.

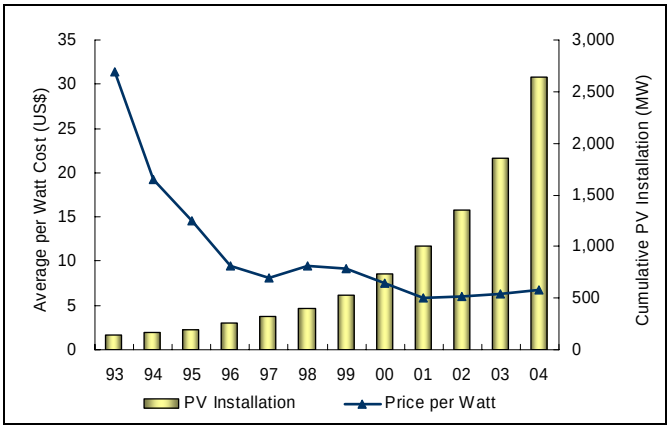
5. **Concentrator cells and collectors:** Other companies are using optics to magnify solar energy onto cells – and one company claims to be using mirrors to concentrate solar energy to a stirling engine, which then generates electricity.

Cost of a Solar System?

The most expensive components for typical on-grid solar systems are the solar module and the inverter, which account for 80-85% of the total cost. The solar module, consisting of arrays of solar cells, converts the sunlight into electricity. The electricity generated from the solar module is then conditioned by the inverter from DC (Direct Current) to AC (Alternating Current), a form suitable for everyday use, and then fed into the circuits to power the electrical appliances.

Thanks to the rapid growth of global PV demand, the per watt cost of the solar system fell dramatically from $31 in 1993 to $6 in 2001. Nonetheless, due to the supply tightness in the industry, the solar system price has essentially stabilized in the past four years, followed by a gradual increase to nearly $6.5-7, recently.

Exhibit 52
Solar System Cost per watt



Source: Photon, NEDO, Morgan Stanley Research

The actual cost of an installed system may vary widely depending on installation complexity, location, component availability, and the size of the installed system. The US Department of Energy (DOE) estimates that a 2kW system costs $8-10 per watt to install, while a 5kW system can cost $6-8 per watt installed. Based on our latest surveys, we believe the retail price per watt for a 2-3kW home solar system (including tax and labor cost) should be in the range of $6.5-7.0.

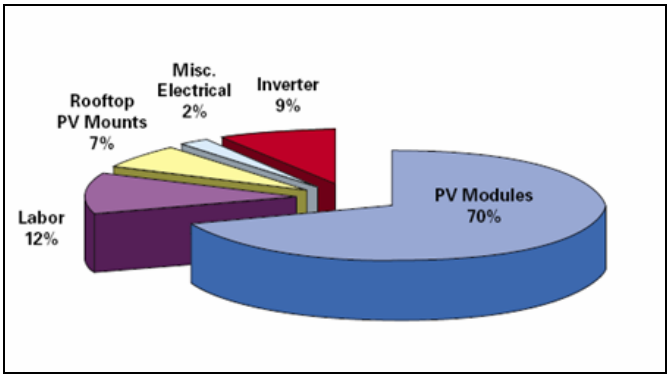
Exhibit 53
Retail Prices for Home Solar Systems

Product	A	B	C	D	E	F
Capacity (kW)	1.90	2.66	2.28	2.85	3.04	3.42
Inverter (kW)	1.80	2.50	2.50	2.50	2.50	4.00
Price (US$)	**12,893**	**17,258**	**15,218**	**18,686**	**19,992**	**23,011**
Per watt Cost (US$)	6.79	6.49	6.67	6.56	6.58	6.73

Source: Affordable Solar, Morgan Stanley Research

Among all the constituents, we believe the PV module, accounting for 70-75% of the total cost, will be the only one to witness a price hike in the next couple of quarters, due to the production constraint of solar wafers. Consequently, the cost-down benefits from other components (we believe mostly from inverters and passive components) appear less effective given the relatively small contribution. Hence, we believe the solar system cost is unlikely to decline much in next 1-2 years.

Exhibit 54
Typical Cost Structure of Grid-Tied PV System



Source: Home Power, Morgan Stanley Research

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Industry Coverage: China Technology

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Suntech Power (STP.N)	Equal-weight--V (02/02/2006)	US$42.49
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