

Comtec Solar

Reward to post-crisis capacity expansion

Comtec Solar is a pure-play monocrystalline solar ingot and wafer manufacturer based in China. The company manufactured semiconductor wafers since 2000 and started to shift focus to solar ingot and wafer since 2004. The company is one of the earliest Chinese manufacturers mastering mass production of 156mmx156mm monocrystalline solar wafers with thickness of ~170µm.

Investment summary

- Comtec Solar avoided losses and outperformed peers in 2009
- Comtec has lower production cost and faster capacity increment since 2009
- Indeed, Germany's tariff cut is no sign of subsidy withdrawal; eyes on China
- Prior faster-than-expected ASP fall was painful, yet essential to raise demand
- A different story of "over-supply" beyond 2010: the aggression of big names

The worst is behind us; margins improved. In late 2008, global recession adversely affected the economy. Over-supply in polysilicon and decreased demand for solar products together pushed ASP down and squeezed profit margin. Aggressive solar companies recorded losses in 2009. In contrast, due to its prudence, Comtec avoided expansion and overstocking prior to 2009. At current stage, costs and ASPs are relatively stable and top wafer players are enjoying 15%+ gross margin. Comtec Solar is one of them.

Comtec has reasonably low cost of production. We believe wafer producers in China would benefit within solar PV value chain onwards. Growing demand and good supply of raw materials provide the sector with good profit margin. Besides, there are entry barriers with respect to technology and technique involve in wafer production that existing Chinese wafers producers begins to master. We compare world leaders in wafer production and find out that Comtec has higher profit margin in the last 3 years.

Government target of higher proportion of power from solar PV is clear. Certain government such as Germany is going to reduce subsidy through feed-in tariff, which is more or less offset by previous ASP reduction, in our view. On the other hand, we notice that US, Canada, China, Japan, France, Italy and UK are showing increasing subsidy support for solar PV industry. Policy-driven demand would still be strong in the foreseeable future.

The bright side of ASPs reduction in 2009. Although most of the solar companies suffered huge losses due to falling ASPs, our analysis show that falling ASP significantly improves IRR on solar projects. With further gradual decline in ASP after the crisis, we believe positive IRR return should encourage demand for solar energy and thus solar products.

Will oversupply hurt everybody again? Cost differentiation matters. We believe "over-supply" scenario beyond 2010 is different from that in 2008. In 2008, industry-wide over-supply in polysilicon together with sharper-than-expected fall in module ASP together hurt solar PV companies at the upper and middle stream. In 2010, however, we believe production cost differentiation becomes increasingly significant partly due to aggressive expansion by leading companies. We believe smaller-scale domestic producers are unable to compete at reasonable margin and lose market share to bigger names.

BUY. We initiate coverage on Comtec Solar with a buy call and target price of HK\$1.82, based on our DCF model, which represents 1.4x and 1.1x P/B for FY12/10F and FY12/11F. As a reference, the target price implies 10.6x and 5.5x P/E for FY12/10F and FY12/11F on a fully diluted basis.

Ticker	0712 HK
Rating	BUY
Price (HK\$)	1.44
Target Price (HK\$)	1.82
12m Price Range (HK\$)	1.22-2.95
Market cap. (US\$m)	190.6
Daily t/o (US\$m)	1.03
Free float (%)	27.9

Financial summary

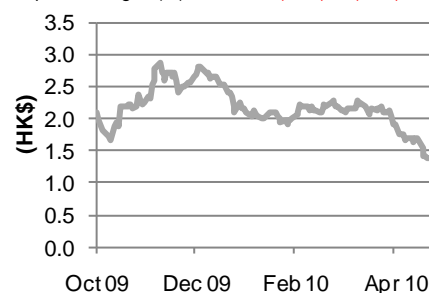
Year to Dec	07A	08A	09A	10F	11F
Turnover (RMBm)	349	762	507	1,460	2,892
Net Profit (RMBm)	147	130	25	155	298
EPS (RMB)	-	-	0.032	0.151	0.289
P/E (x)	-	-	52.4	8.4	4.4
P/B (x)	-	-	1.2	1.1	0.9
EV/EBITDA (x)	-	-	17.3	4.9	3.1
Yield (%)	-	-	0	1.32	2.53
ROE (%)	-	-	2.7	14.7	23.1
ROCE (%)	-	-	2.7	14.7	23.1
N. Gear. (%)	Cash	Cash	Cash	Cash	18%

Source: SBI/Bloomberg

	10F	11F	12F
Consensus EPS (RMB)	0.15	0.39	0.44
Previous earnings (RMBm)	-	-	-
Previous EPS (RMB)	-	-	-

Price performance

Year to Dec	1m	3m	12m
Relative to HSI (%)	(14.6)	(31.3)	n.a.
Actual price changes (%)	(18.6)	(33.9)	n.a.



Source: Bloomberg

Kevin Mak

(852) 2533 3708

kevinmak@sbie2capital.com

Content

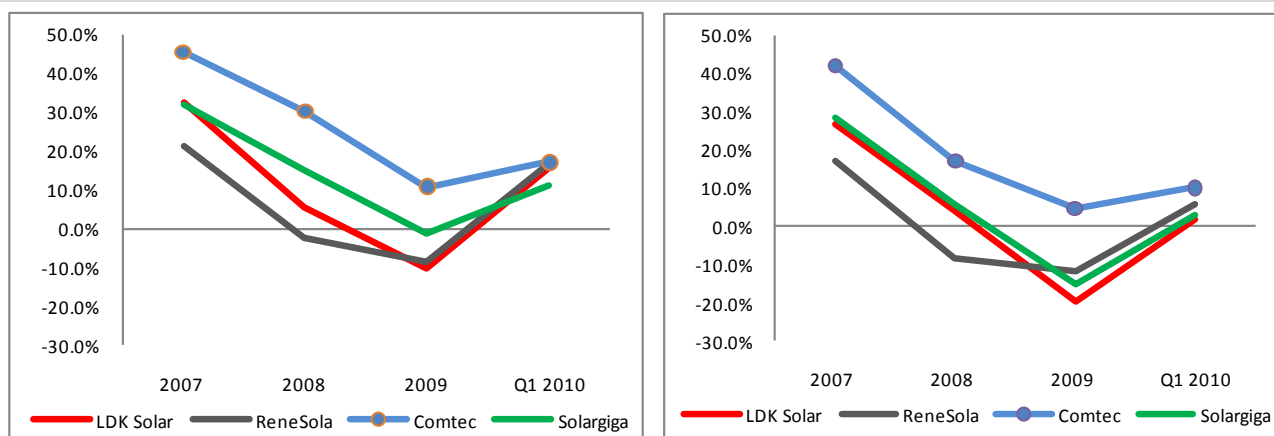
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Investment Thesis

Check it out! Comtec has lower cost of production. Comtec continues to outperform its wafer counterpart Solargiga, backward integrated counterpart LDK as well as forward integrated counterpart ReneSola in terms of profit margins. We attribute Comtec's superior performance to high product quality, improved production techniques and prudent expansion strategy.

- High product quality – Although wafers are more or less commodity-like with standard price, wafers from Comtec has higher conversion level of ~18%, compared to ~17% industry average according to Solarbuzz. At a standard price, wafer buyers from overseas market such as Taiwan and Germany increased purchase of Comtec wafers even in 2009. Quality wafers provides price premium in good times and helps securing sales in difficult times which lowers per unit cost of production.
- Improved production techniques – Major wafer producers are sourcing production machineries such as ingot puller, squarers and wire saws from the same few providers such as Ferro Tec, Applied Material, Shanghai Nissin and Meyer Burger. Overall production mechanism is essentially the same. However, in terms of electricity cost, energy usage and input arrangement, Comtec aims to lower non-silicon production cost to US\$0.27 per W by the end of 2010, compared to average of US\$0.35 per W among other major wafer producers. Lower production cost rewards Comtec with higher margin and better positioning in light of falling ASP.
- Prudent expansion strategy – In 2007 and 2008, solar companies were getting extremely excited to raise their capacity, especially the capacity of polysilicon. Most solar companies recognized net losses or even gross losses with inventory impairment in 2008 and 2009. On the other hand, Comtec shifted its production focus to solar wafer in 2004 and until 2006 its capacity was maintained at ~10MW. In 2007 Comtec carefully raised its capacity to 55-60MW and stayed the same in 2008. In our view, Comtec was less affected by the market crash in 2009 and raised capacity to 200MW upon recovery. For now, after its IPO in late 2009, the company is completing additional 400MW capacity by 3Q 2010. The management is confident to maintain high utilization rate with new capacity ahead.

Chart set 1. Gross profit margin (LHS) and net profit margin (RHS) of selected solar companies in China



Note: Comtec and Solargiga (HKFRS); LDK and ReneSola (US GAAP)

Source: company data, SBI E2-Capital

Growth theory beyond 2010: Comtec's volume expansion at stable margin. We believe Comtec has prudent strategy and excellent execution, and 2010 would mark the year that largely breaches 100MW wafer sales level and reaches 250MW-300MW. At ~15% gross margin going forward, increase in sales volume should be the major growth driver.

Table 1. Capacity and sales volume of Comtec since 2006

	2006A	2007A	2008A	2009A	2010F	2011F
Capacity at year end	9	55	55	200	600	1,000
Effective capacity estimates	9	21	55	103	367	767
Sales volume	8	19	44	82	284	608
Utilization rate	87%	91%	81%	79%	77%	79%

Source: Company data, SBI E2-Capital

Attractive valuation for a top wafer player. Based on our DCF model applying 17.5% discount rate with terminal growth rate of 3% beyond 2020, we valued Comtec Solar at RMB1,874.1m, or HK\$1.82 per share under current tough environment. Implied P/B at end of 2010F would be 1.4x. Please refer to Section "Valuation" for further illustration and peers comparison.

Table 2. Implied multiples of our target price of HK\$1.82

	FY12/10F	FY12/11F	FY12/12F
Implied P/B (x)	1.4	1.1	0.9
Implied P/E (x)	10.6	5.5	3.8
Implied EV/EBITDA (x)	6.2	3.8	2.8

Source: SBI E2-Capital

Strong demand for solar PV driven by government policy. Following worries of oversupply of solar products earlier since 2008, the capital market is also worrying about feed-in-tariff (FIT) reduction of 16% in the rooftop segment in Germany in 3Q or 4Q this year. We believe whether the reduction will be made in 3Q or 4Q does not really matter since it is inevitable. The question is *whether demand has been pushed towards 1Q and 2Q this year, and whether demand will diminish after the reduction.*

REC group, one of the world leading polysilicon producer and wafer manufacturers, expected after-reduction-IRR in Germany remains above threshold to support demand for solar PV. In our view, gradual FIT reduction to €0.39 /kWh from €0.57 /kWh in 2004 is largely an ongoing trend in line with module costs reduction. Indeed, German has maintained solar PV target of 66GW by 2030.

From a global perspective, despite a reduction of FIT in Germany, countries like China, Japan, US, Canada, Italy and France are launching supportive policy towards solar PV industry. Table 1 captures major policy incentives introduced by some major countries.

Table 3. Supportive government policies towards solar PV industry

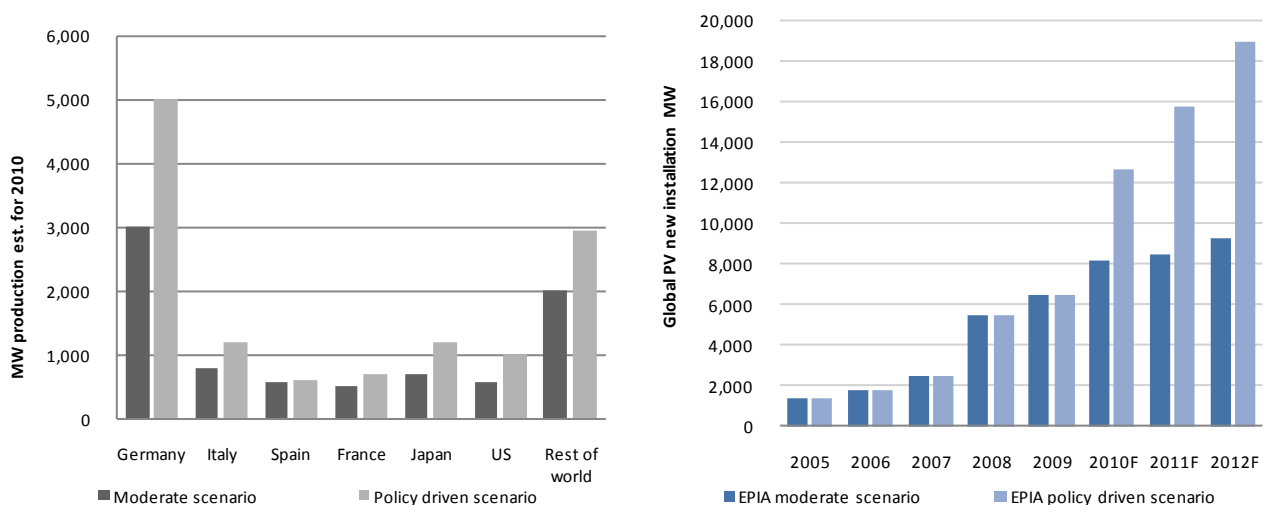
Country	Policy measures
China	Solar-based power to reach 20GW by 2020 from ~0.035GW in 2008 "Golden Sun program" provides 50% subsidies pilot solar projects and 70% to rural projects Provides subsidy RMB20/Wp to demonstration BIPV and RMB15/Wp to rooftop or wall-based projects
Japan	Solar-based power to reach 28GW by 2020 from ~2GW in 2008 JPY9b subsidy program in 2009 FIT started in 2009
US	Fed 30% investment tax credit State initiatives include California, New York, New Jersey, Arizona
Canada	Launch of first FIT in Ontario effective 2010 C\$0.44 - 0.80 /kWh for ground and rooftop projects
Germany	Maintained solar PV target at 66GW by 2030, up from 9GW in 2009 FIT reduction to €0.39 /kWh by 16%, yet no program cap
UK	FIT to start in April 2010 at £0.41/kWh
Italy	FIT €0.35 - 0.48 /kWh capped at 1,200MW
France	FIT €0.50 /kWh, stable until 2012

Source: Country data, PV Crystalox Solar, SBI E2-Capital

According to Photovoltaic Industry Association (EPIA), global solar PV installation in 2010 is expected to be 8,160MW under moderate scenario, which is up 25.5% from its estimation of 6,500MW in 2009. Assuming successful implementation of government policies, EPIA estimated 12,650MW installation under policy driven scenario, up 90%+ from its estimated installation of 6,500MW in 2009. Under EPIA's aggressive estimation, Japan and US are picking up fast with 1,000MW+ installation in 2010.

EPIA also estimates moderate scenario and policy driven scenario for 2010F, 2011F and 2012F. Under moderate scenario, solar PV demand will be 8,200MW, 8,500MW and 9,250MW in the next 3 years. A more bullish case include policy effect will be 12,700MW, 15,800MW and 19,000MW for 2010F, 2011F and 2012F.

Chart set 2. Global solar PV demand estimates



Source: European Photovoltaic Industry Association (EPIA) estimates, 2010

Look at China – expecting major demand incremental. Here, we would like to take a closer look at China subsidy towards solar PV industry. Current solar target for China is 20GW by 2020, up from ~0.035GW in 2008. To achieve the target, there are major sets of subsidy to building integrated photovoltaic (BIPV) and solar PV power plant respectively. Table 2 shows a large-scale basic setup cost as well as subsidy level of 1MW BIPV project and a 20MW solar PV plant.

Table 4. Effect of subsidy for solar PV by China (a basic setup without output smoothing)

Assumption	BIPV project	Solar PV plant
Price of module	US\$2.32 per Wp	US\$2.32per Wp
Inverter	US\$0.715 per Wp	US\$0.715 per Wp
Storage battery	no battery	no battery
Balance of system	US\$0.75 per Wp	US\$0.5 per Wp
Subsidy	RMB20 per Wp	50% cost subsidy
USD/CNY	6.8372	6.8372
Size of project	1MW	20MW
Pre-subsidy initial investment	RMB25.9m	RMB483m
Subsidy	RMB20.0m	RMB242m

Source: US State Energy Conservation Office (Texas), Solarbuzz, National Development and Reform Commission, SBI E2-Capital estimates

What does the above table tell us? Module price fell from US\$4-5 per Wp prior to 1H 2009 to ~US2 per Wp in late 2009. At current subsidy level in China, a large proportion of RMB25.9m investment for 1MW BIPV project will be subsidized. Once getting subsidy approval from Ministry of Construction, 70% of RMB20 per Wp subsidy will be paid to building owners upon project construction while the remaining 30% will be transferred upon completion. Table 3 shows our estimated IRR for BIPV at RMB0.5 per kWh under the said assumptions. For the 20MW solar PV plant, half of the initial investment will be subsidized. However, since electricity price for solar PV plant (i.e. feed-in-tariff) is not officially determined yet, IRR for solar PV plant is largely uncertain. Fixing FIT would clear uncertain and boost demand for solar products in China dramatically.

Table 5. IRR proxy for BIPV projects and solar PV plants in China

Assumption	BIPV project	Solar PV plant
Pre-subsidy initial investment	RMB25.9m	RMB483m
Post-subsidy initial investment	RMB5.9m	RMB242m
System Lifetime (years)	25	25
Number of sunhours	5	5
Price of 1kWh electricity	0.5	n.a.
Pre-subsidy IRR	-1%	n.a.
Post-subsidy IRR	15%	n.a.

Source: Solarbuzz, National Development and Reform Commission, SBI E2-Capital estimates

There are talks of subsidy reduction in China, such as lowering subsidy for BIPV. In our view, China subsidy reduction largely followed market-driven price reduction. For BIPV, Therefore, we believe gradual reduction in subsidy is unlikely to hurt demand for BIPV in China. For instance, if subsidy is adjusted to RMB17.5 per Wp, with all else equal, IRR should be lowered to ~10% without significantly hurting demand yet reducing government burden.

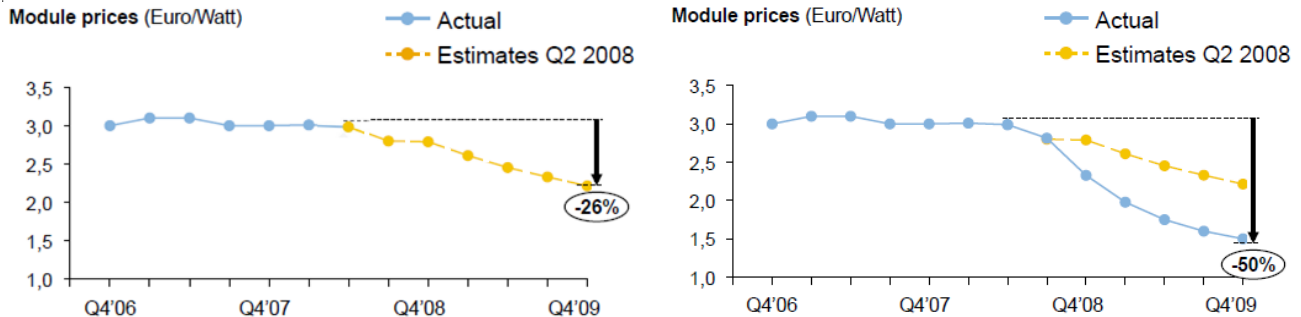
Table 6. Effect of falling module price for BIPV in China

Assumption	BIPV project Jan 2009	BIPV project Dec 2009
Price of module	US\$4.14 per Wp	US\$2.32 per Wp
Inverter	US\$0.720 per Wp	US\$0.715 per Wp
Storage battery	no battery	no battery
Balance of system	US\$0.75 per Wp	US\$0.75 per Wp
Subsidy	RMB20 per Wp	RMB20 per Wp
USD / CNY	6.8533	6.8372
Size of project	1MW	1MW
Pre-subsidy initial investment	RMB38.4m	RMB25.9m
Subsidy	RMB20.0m	RMB20.0m
Difference	RMB18.4m	RMB5.9m

Source: US State Energy Conservation Office (Texas), Solarbuzz, pvXchange, National Development and Reform Commission, SBI E2-Capital estimates

Faster-than-expected cost reduction hurts margin in 2009. Although gradual price reduction should encourage demand in longer-term due to greater feasibility, a faster-than-expected fall in prices in 2009 has indeed damaged corporate profits. Prior to 2009, solar producers enjoyed strong product ASP due to tight supply of polysilicon-based solar products. However, the effect of oversupply and global recession kicked in, inflicting losses for most of solar companies in 2009. Vigorous module price reduction was seen in 2009. For instance, REC group, a leading Norway c-silicon and wafer producer, predicted 26% module price decline to Q4 2009, compared to the actual decline of 50%.

Chart set 3. Faster-than-expected module prices fall in 2009



Source: REC group

Losses in 2009 were recognized and largely beyond us. Looking ahead, the module price adjustment opens opportunities. Chinese module supplies fell 44% to US\$2.32 per Wp in a year, reaching a comparable price level to thin film of lower conversion efficiency. The story of falling prices release demand was told for years, and we believe this time it applies. Of course, with further fall in module prices pointing towards grid-parity, government support would be gradually withdrawn. But we believe it is healthier for solar industry to grow by itself when grid-parity is realized.

Table 7. Prices changes of various modules in 2009

Module type	ASP Dec 2009 US\$/W	ASP Jan 2009 US\$/W	% change since Jan 2009
Thin-film silicon base	2.09	3.10	-32.5
c-silicon (Chinese suppliers)	2.32	4.14	-44.0
Thin-film CdS/CdTe	2.41	2.95	-18.3
c-silicon (Japanese suppliers)	2.94	4.44	-33.8
c-silicon (European suppliers)	2.94	4.48	-34.4

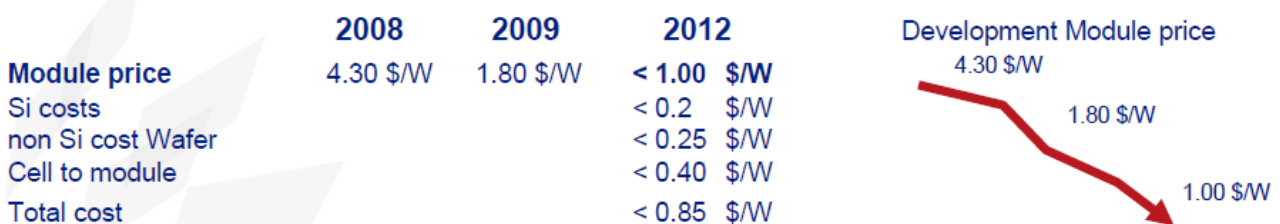
Note: EUR/USD is 1.4333 at 31 Dec 2009 and 1.4043 at 1 Jan 2009

Source: pvXchange, SBI E2-Capital

Can we lower production cost further to fight falling ASP? Although ASP for solar products is still on a down trend, we believe with enlarging scale and improving techniques, marginal cost reduction is also likely. In addition, equipment providers to solar companies may introduce new technology with improved quality and lower cost of production. For instance, leading equipment providers are introducing diamond wire-based wafering technology that simplifies process, reduces cost and raises speed. According to Meyer Burger, a Swiss equipment provider with extensive product range including wafers, cells, modules and solar system production systems, considers further significant drop in production cost feasible.

In our view, Meyer Burger projection of US\$0.85 per Wp production cost is achievable but selling price of US\$1.0 per Wp looks too aggressive. Based on our discussion with some Chinese polysilicon and wafer producers, shorter-term silicon cost target is at US\$32 per kg (~US0.2 per Wp) and non-silicon cost target for wafer is US\$0.27 per Wp. Despite falling ASP of solar products, a good portion of solar companies across the value chain aggressively raised their capacity to position for potentially robust demand in the coming years. We expect to see a number of scaled manufacturers with low cost base and a larger number of higher-cost-base companies to compete in solar industry. And here raise a question: will we see another round of serious overcapacity again?

Chart set 4. Meyer Burger estimation on production cost of c-silicon module



Source: Meyer Burger

Is overcapacity haunting solar PV industry again? Cost differentiation matters. We are tracking the announced capacity expansion plan of major polysilicon producers and wafer producers. They are relatively aggressive since some of them are planning to double their capacity in 2-3 years. We would take a closer look at their expansion plans compared to estimated global demand.

For polysilicon, we believe market consolidation is still in force beyond 2009. We add up the capacity of 8 major polysilicon producers to approximate "competitive supply". On the demand side, we estimated total polysilicon demand by combining demand for semi-conductor based on iSuppli and demand for solar modules based on EPIA. Apparently 8 major polysilicon producers could produce most of the total demand in 2010-2012. We believe smaller producers at higher production cost and lower quality may face keen competition and being driven out of market eventually due to falling polysilicon ASP.

Table 8. Capacity subtotal of 8 major polysilicon supplier versus demand estimates in tons

	Country	2009A	2010F	2011F	2012F
Hemlock Semiconductor	US	19,000	21,000	25,250	28,000
Wacker-Chemie	Germany	15,000	25,000	28,000	28,000
OCI	Korea	11,000	27,000	27,000	27,000
GCL-Poly Energy	China	18,000	21,000	21,000	21,000
REC Group	Norway	7,000	13,500	17,000	17,000
LDK	China	2,000	5,000	8,000	10,000
Tokuyama	Japan	8,200	8,200	8,200	8,200
MEMC	US	8,000	8,000	8,000	8,000
Supply subtotal		88,200	128,700	142,450	147,200
Total demand		72,338	102,639	117,032	134,179
From semi-conductor		25,336	29,489	31,982	35,304
From solar at 7g/W		47,002	73,150	85,050	98,875

Source: company data, iSuppli, EPIA, SBI E2-Capital

For solar wafers, we think the outlook is better in coming years. We identified 8 major wafer producers with capacity plan with 1GW by the end of 2011, of which some companies like GCL-Poly Energy (3800 HK) and Comtec (0712 HK) expects to increase their capacities by several times in 2 years. Noted that the capacity is essential nameplate measure at end of the year instead of output in the year, actual output could be much lower. Therefore, despite fast expansion, actual supply from the 8 is possibly lower than average scenario of "EPIA moderate" and "EPIA policy-driven", and there is room for smaller wafer producers. We believe "competitive wafer suppliers" could benefit from a reasonable demand and strong supply scenario.

Table 9. Capacity subtotal of 8 major wafer suppliers versus demand estimates in MW

	Country	2009A	2010F	2011F	2012F
LDK Solar	China	1,800	2,200	2,600	
REC Group	Norway	1,000	1,760	2,500	
GCL-Poly Energy	China	500	2,000	2,000	
Glory Silicon Zhenjiang	China	1,500	1,500	1,500	3,200
SolarWorld	Germany	900	900	1,250	
ReneSola	China	825	1,000	1,000	
Yingli Green Energy	China	600	1,000	1,000	
Comtec Solar	China	200	600	1,000	
...	
Solargiga	China	210	420	630	
Supply subtotal of top 8		7,325	10,960	12,850	
EPIA moderate		6,500	8,200	8,500	9,250
EPIA average		6,500	10,450	12,150	14,125
EPIA policy driven		6,500	12,700	15,800	19,000

Source: company data, EPIA, SBI E2-Capital

As a matter of fact, in addition to scale, there are other reasons for specific level of production costs. In the following, we present the gross profit margin and net profit margin of LDK Solar (LDK US), ReneSola (SOL US), Comtec (0712 HK) and Solargiga (0757 HK) since 2007.

Business Analysis

Leading mono-wafer producer in terms of conversion efficiency. Comtec engages in mono ingot and mono wafer production.

- ❑ **Supplies** – Comtec sources crystalline silicon from suppliers such as Wacker-Chemie and OCI as input for production of ingots and then wafers. The company is likely to maintain long-term relationship with major suppliers with increasing purchase such that the company could get favourable raw material prices. Certain long-term contracts locking in volume of supplies are applied but pricing will be negotiated from time to time, unlike inflexible contracts in the past.
- ❑ **Customers** – Major customers of Comtec are industry leaders in solar cell and module production. For instance, Comtec establish a 5-year framework with Suntech to supply wafers. Other customers include China Sunergy, Motech, Canadian Solar, JA Solar, etc. However, prior to 2009, almost all of the customers of Comtec sell their modules overseas especially to European market. Domestic demand for module is still minimal by the end of 2009.
- ❑ **Wafer business operations** – Comtec selected competitive production equipments from well-known global vendors. Typical process of wafer production is shown in diagram 1. On top of the equipment purchased, Comtec imposes modification to the equipments, refines ingot pulling process, applies hot zone systems and designs supplementary devices which reduces unit cost and enhances conversion efficiency.
- ❑ **Higher product quality** – According to feedback from Comtec’s customers, the conversion efficiency of modules using the company’s wafer could reach 18%. According to Solarbuzz, on an industry basis, average efficiency is between 16% and 17% for multi- and mono- crystalline wafers.

Chart set 5. Value chain of solar industry

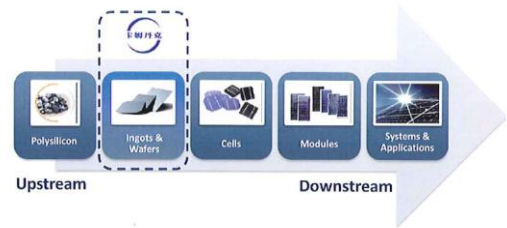
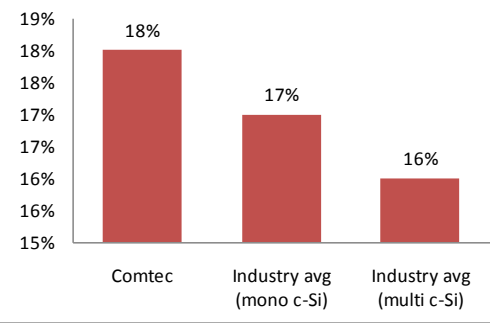
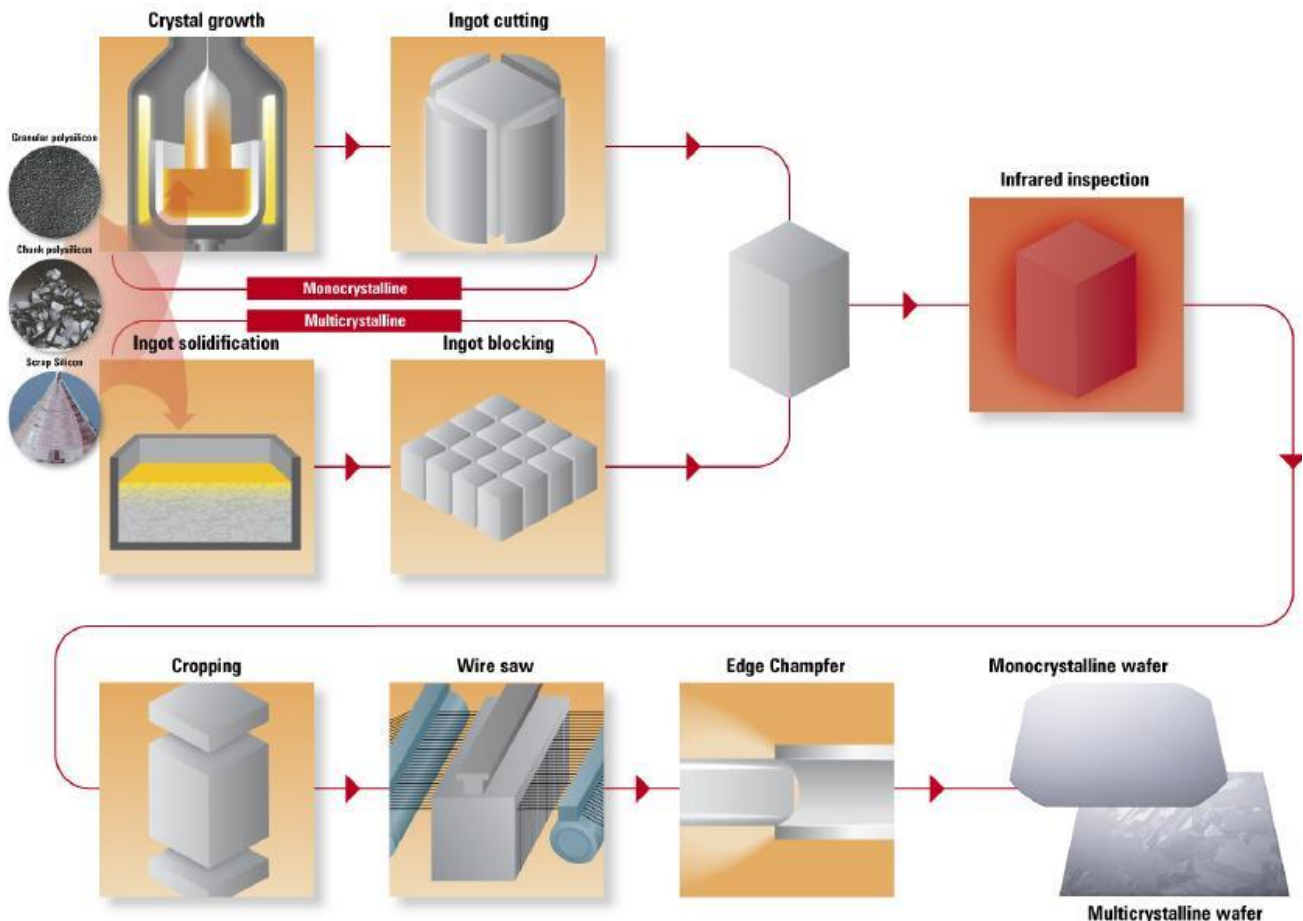


Chart set 6. Higher conversion efficiency



Source: Company data, Solarbuzz

Diagram 1. Typical production process of wafers



Source: MEMC diagram

Production facilities up to end of 2009. Prior to Nov 2009, Comtec operated two manufacturing facilities in Nanhui District in Shanghai, one of which is located in the Nanhui Industrial Zone. Equipments by then include 88 ingot pullers (mainly Ferrotec), 4 cropping saws (Meyer Burger), 8 squarers (Applied Material and Nissin) and 16 wire saws (Meyer Burger), totaling 55MW ingot and wafer capacity. By the end of 2009, another manufacturing facility was added in Nanhui and capacity was raised to 200MW.

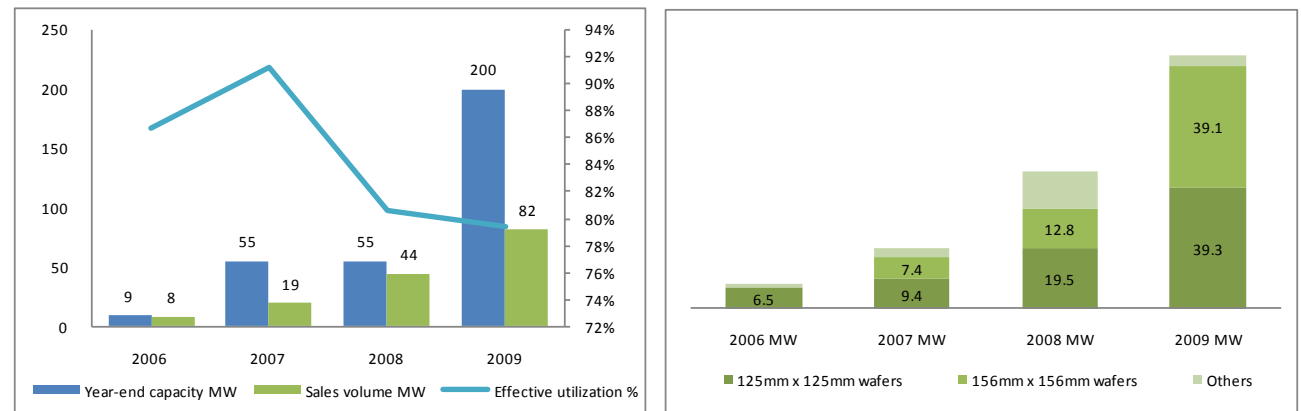
High utilization rate despite recession. Since capacity installation in 2007 and 2009 took place sometime within the year, effective capacity was different from year-end capacity as quoted. Between 2006 and 2009, estimated capacity utilization rate was generally 80% - 90% (See chart set 7, LHS). Utilization rate in 2008 was lowered mainly due to adverse effect of global recession. In 2009, while demand was recovering, utilization rate stayed at ~80% mainly because of a few months of continuous adjustment needed after the installation of ~150MW. We believe that the management can deliver performance either in recovery or recession, and either with stable capacity or expanded capacity.

Strong sales growth in the past 3 years. Despite falling ASP and generally flat utilization rate, the actual shipment volume of Comtec increased dramatically over the past 3 years. Total shipment was 8MW, 19MW, 44MW and 82MW for 2006, 2007, 2008 and 2009. According to framework agreement with some customers as disclosed in Comtec's prospectus, approximately 154.8MW to 248.5MW per year minimum purchase amount was secured. Even if ASP stays at ~US\$0.8 per W in 2010 compared to US\$0.85-0.90 per W in 2009, substantial increase in volume will largely drive top-line growth, not to mention the effect of falling raw material cost in the period.

Technique ready for further product mix improvement. In the track record period, Comtec realized increasing sales from original 125mm x 125mm mono wafers. Yet, increasing portion of sales goes to larger wafers of 156mm x 156mm since 2007. With larger size wafers, silicon loss is reduced while conversion efficiency is raised. In 2009, both 125mm x 125mm and 156mm x 156mm wafers recognized similar shipment volume of ~39MW (see chart set 7, RHS).

In fact Comtec completed the development of 210mm x 210mm monocrystalline solar wafers for commercial production by the end of 2008. However, cell and module producers are generally not ready for the larger size partly due to their equipment constraint. Comtec is not producing 210mm x 210mm mono wafers in large scale yet.

Chart set 7. Capital utilization (LHS) and sales mix (RHS)



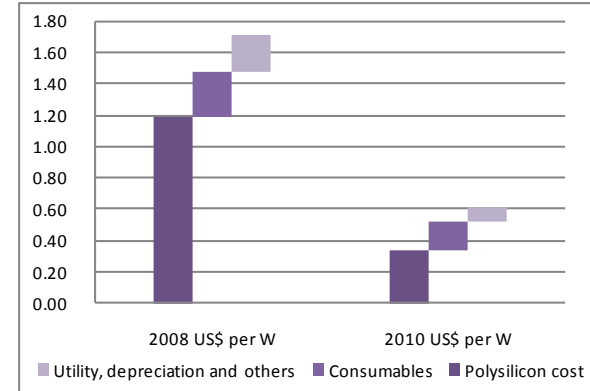
Source: Company data, SBI E2-Capital

Further cost reduction in sight with new capacity in Haian, Jaingsu.

Production of wafer involves costs of silicon itself and all other non-silicon costs, each up them currently making up 50% operating cost (including depreciation). For instance, blended non-silicon for 1Q this year was US\$0.34 per W, of which the non-silicon production cost for existing 55MW facilities was as low as US\$0.31 per W.

Comtec is adding another ~400MW capacity in Haian, Jianguo in 2010. The management expects to complete installation before Q3 this year. With favourable environment in the area, such as lower electricity tariff than that in Shanghai, Comtec targets to lower its average production cost per unit further. Target non-silicon production cost was US\$0.27 per W. As far as we know, the average for European peers is way higher than US\$0.33 per W while average for major Chinese peers would be at similar level ~US\$0.35 per W.

Diagram 2. Reduction of overall cost of production

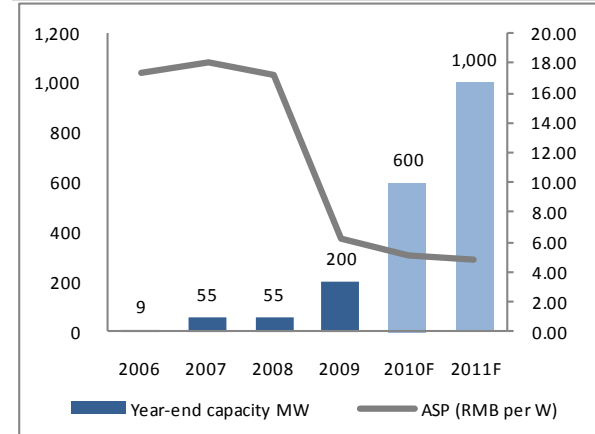


Source: Company data, SBI E2-capital estimates

Expansion Strategy

Carefully planned expansion strategy. We particularly appreciate Comtec's careful expansion strategy. Comtec shifted its production focus to solar wafer in 2004, yet it was adjusting its production technology and stayed at a relative low level of capacity at ~10MW by the end of 2006. In 2007, capacity of Comtec first breached 10MW and raised capacity to 55-60MW. Adjustment to production process was continuously made during the period. Although especially strong demand for solar products drove prices to historical high level in 2008, Comtec did not forcefully expand and concentrated on its 55MW capacity. With its IPO in late 2009, Comtec found itself ready to gain extra capacity during market downturn and planned to expand further to 600MW in 2010 and then 1,000MW in 2011 (see chart set 8 on the right). We believe that Comtec is able to be prudent in hot market while staying aggressive in sight of recovery. We could also see how Comtec manages its cash flow through the up-cycle as well as down-cycle since 2006 (Chart set 9 at the bottom). Thereby, we have a hypothesis for further capacity expansion beyond Comtec's planned 1,000MW in 2011.

Chart set 8. Planned expansion



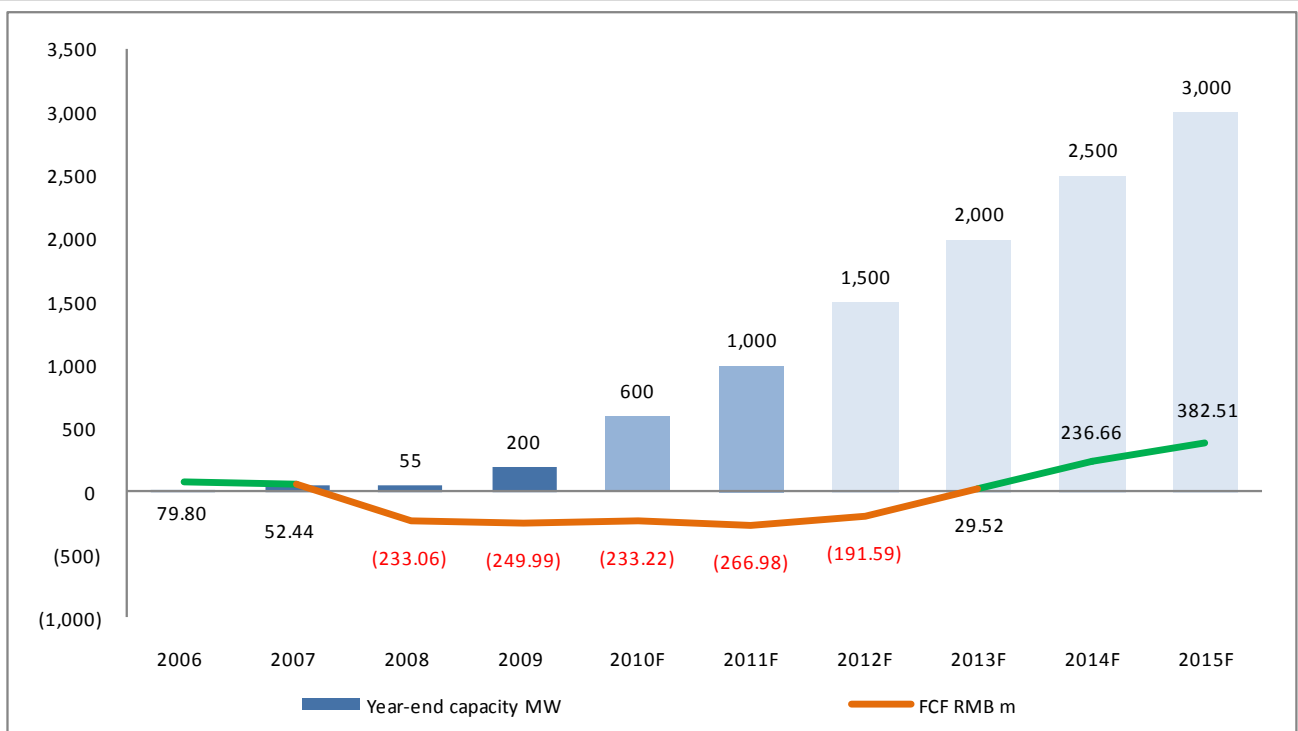
Source: Company data, Solarbuzz

Our hypothesis on further expansion. We reclassify interest expenses as operating cash flow and determine free cash flow (FCF) for the company after deducting CAPEX from operating cash flow. For 2006 and 2007, as we have discussed earlier, Comtec was generally cautious and stayed with relatively strong FCF between RMB 50m to 80m. In 2008, as market conditions eroded, heavy cash pressure was seen for working capital. While between 2009 and 2011, Comtec aimed to invest heavily to expand capacity, partly supported by IPO proceeds in late 2009. These are plans proposed by the management.

In our view, since Comtec was in net-cash position until end of 2009, we believe Comtec is going to raise debt level to finance expansion. We create a model to predict expansion strategy beyond 2011 incorporating: 1) increasing debt ratio in short-term, which peaked at 60% net-to-equity and 28% net-debt-to-equity ratio in 2012; 2) reversion to positive FCF shortly after reaching 1,500MW capacity, reflecting prudence after potentially reaching top 5 wafer capacity; 3) continuously delivery as reflected by 80%+ effective utilization rate; 4) falling ASP together with falling raw material cost which capped gross margin below 20%.

Under our assumptions, Comtec could provide extra 500MW capacity per annum and FCF would return to positive beyond 2012. We believe Comtec can be increasingly competitive in solar wafer business and potentially gain handsomely if government would press harder to promote solar industry.

Chart set 9. Hypothesis on future expansion plan and estimated FCF between 2006 and 2015



Source: Company data, SBI E2-Capital

Financial

Track record and profit forecast. Revenue of Comtec was RMB349m, RMB762m and RMB507m for FY12/07A, FY12/08A and FY12/09A mainly due to increasing shipment despite of falling ASP. With expansion plan described previously, we project strong sales figure in the coming years. For instance, we expect the 200MW existing capacity to run at 80% utilization throughout the year in 2010, while for the additional 400MW ramped up in Jun, we factor 64% utilization rate for 6 months in the second half of the year. Adjusting for 1Q FY12/10A shipment of 36MW instead of 40MW assumption (6MW of 42MW output in Q1 was temporarily arranged for OEM purpose), our shipment estimation for 2010 is 284MW, up from 82MW in 2009. For ASP, average for 2010F is RMB5.14 per W (~US\$0.76 per W), compared to RMB6.18 per W. Beyond 2010, we assume installation to be made every Jun and forecast revenue for FY12/10F, FY12/11F and FY12/12F are RMB1,460m, RMB2,892m and RMB4,256m respectively. Revenue growth will be slower in percentage terms after 2013, however, due to our assumption of reversion to positive FCFE in the year.

Comtec reported profit margin at high level of 45.5% in 2007 while it shrank significantly until 2009 to 10.9%. From 2010 onwards, the management indicates that gross margin for less-competitive wafer producers may stay below 15% while quality players may ~15% with potential upside surprise. Our forecast incorporate gross margin of 17% to 19%, reflecting our confidence in the management's execution.

We assume relatively stable SG&A costs to revenue. For instance, selling and distribution expenses are equivalent to 0.3% revenue while administrative expenses make up 3.4% revenue.

Due to net cash position, interest rate of loans by end of 2009 provided by Agricultural Bank of China is 5.31%. We continue to consider interest rate range between 5%-7%. For tax expenses, we conservatively apply a tax rate of 25%, while in fact Comtec is defined as a high-technology company by the government and certain subsidiary enjoys a lower tax rate at 17.5%.

As for bottom line, we expect Comtec to earn record profit this year at RMB155m and further increase to RMB298m and RMB436m for FY12/11F and FY12/12F respectively.

Table 10. Pro-forma Profit and Loss

	FY12/08 A	FY12/09A	FY12/10F	FY12/11F	FY12/12F
Revenue	762.10	506.88	1,460.01	2,891.75	4,256.21
Cost of sales	(530.80)	(451.76)	(1,204.56)	(2,377.72)	(3,481.73)
Gross profit / loss	231.30	55.12	255.45	514.02	774.47
Other income	47.13	6.70	0.00	0.00	0.00
Other expenses	(80.29)	(3.41)	(0.00)	(0.00)	(0.00)
Selling and distribution expenses	(1.40)	(2.22)	(4.37)	(8.65)	(12.73)
Administrative expenses	(23.89)	(18.19)	(50.17)	(99.36)	(146.25)
EBIT	172.86	38.00	200.92	406.00	615.49
Finance Costs	(6.30)	(6.67)	(6.59)	(8.71)	(34.10)
EBT	166.57	31.33	194.33	397.30	581.39
Income tax expenses	(36.09)	(6.39)	(38.87)	(99.32)	(145.35)
Profit for the year	130.48	24.94	155.46	297.97	436.04

Table 11. Selected key operational data

	FY12/08A	FY12/09A	FY12/10F	FY12/11F	FY12/12F
Ingot and Wafer Capacity at year end (MW)	55	200	600	1,000	1,500
Sales volume (MW)	44	82	284	608	960
Overall ASP (RMB per W)	17.32	6.18	5.14	4.76	4.43
Gross Margin (%)	30.4%	10.9%	17.5%	17.8%	18.2%

Source: Company data, SBI E2-Capital

Valuation

Valuation assumption. We propose a target price of HK\$1.82 by 1) applying a discount rate of 17.5% to reflect high risk premium; 2) making FCFE forecasts for FY12/10F to FY12/15F based on our hypothesis on capacity expansion; 3) assuming FCFE to compound 25% between 2015 and 2020, which is equivalent to half of the 50% CAGR of China market demand growth prior to 2020; 4) assuming terminal FCFE growth rate of 3% beyond 2020. The summary of assumption is listed below in table 12. Price implication is listed next page.

Table 12. Our valuation assumption

Rationale / Measures	Implication
High risk premium for high market volatility	17.5% discount rate
Continuous horizontal expansion	Quick to raise to 1GW capacity and maintain 500MW increment per annum
Stable growth between 2015 and 2020	25% FCFE GAGR (China market demand GAGR of 50% to 20GW in 2020)
Conservative view beyond 2020	Terminal growth beyond 2020 stays at 3%

Source: Company data, SBI E2-Capital

Target price. Our target price sets at HK\$1.82 which represents a market capitalization of HK\$1,874.1m. We believe the market is still over-concern about the impact of over-supply problems and tariff cuts on Comtec. To reflect high volatility partly due to poor sentiment, we apply a high discount rate of 17.5%, which is similar to credit risk premium of 17% in Hong Kong. At HK\$1.82, implied P/B and P/E for FY12/10F will be 1.4x and 10.6x respectively.

Table 13. Our target price

Discount Rate	15.0%	17.5%	20.0%
Market cap (RMB)	2,146.7m	1,647.7m	1,309.5m
CNY / HKD	1.1374	1.1374	1.1374
Market cap (HK\$)	2,441.6m	1,874.1m	1,489.5m
number of shares	1,031.7m	1,031.7m	1,031.7m
Target price	HK\$2.37	HK\$1.82	HK\$1.44

Table 14. Implied multiples of our target price HK\$1.82

	FY12/10F	FY12/11F	FY12/12F
Implied P/B (x)	1.4	1.1	0.9
Implied P/E (x)	10.6	5.5	3.8
Implied EV/EBITDA (x)	6.2	3.8	2.8

Source: Bloomberg, SBI E2-Capital

Peers comparison. There are listed comparables to Comtec in the marketplace. We do not include vertically integrated ones such as REC group and lower-stream players such as Singyes (0750 HK) here. For instance, Solargiga (0757 HK) is a good comparable listed in HK with similar wafer capacity of ~200MW at the end of 2009. While Solargiga utilizes a less aggressive expansion plan in the coming 2 years, P/B for FY12/09A is higher at 1.3x. For P/E comparison, market valuation for Solargiga is 14.5x and 8.2x for FY12/10F and FY12/11F, much higher than 7.6x and 2.9x for Comtec, based on market consensus.

In our view, profitability of Comtec in the coming 2 years may not be as high as market consensus based on our forecast (see table 14). We are cautious towards falling ASP, pressure on profit margin as well as utilization after ramp-up. However, despite our more-conservative forecast, Comtec is still a good buy with upside potential of 40%.

Table 15. Peers comparison based on market consensus

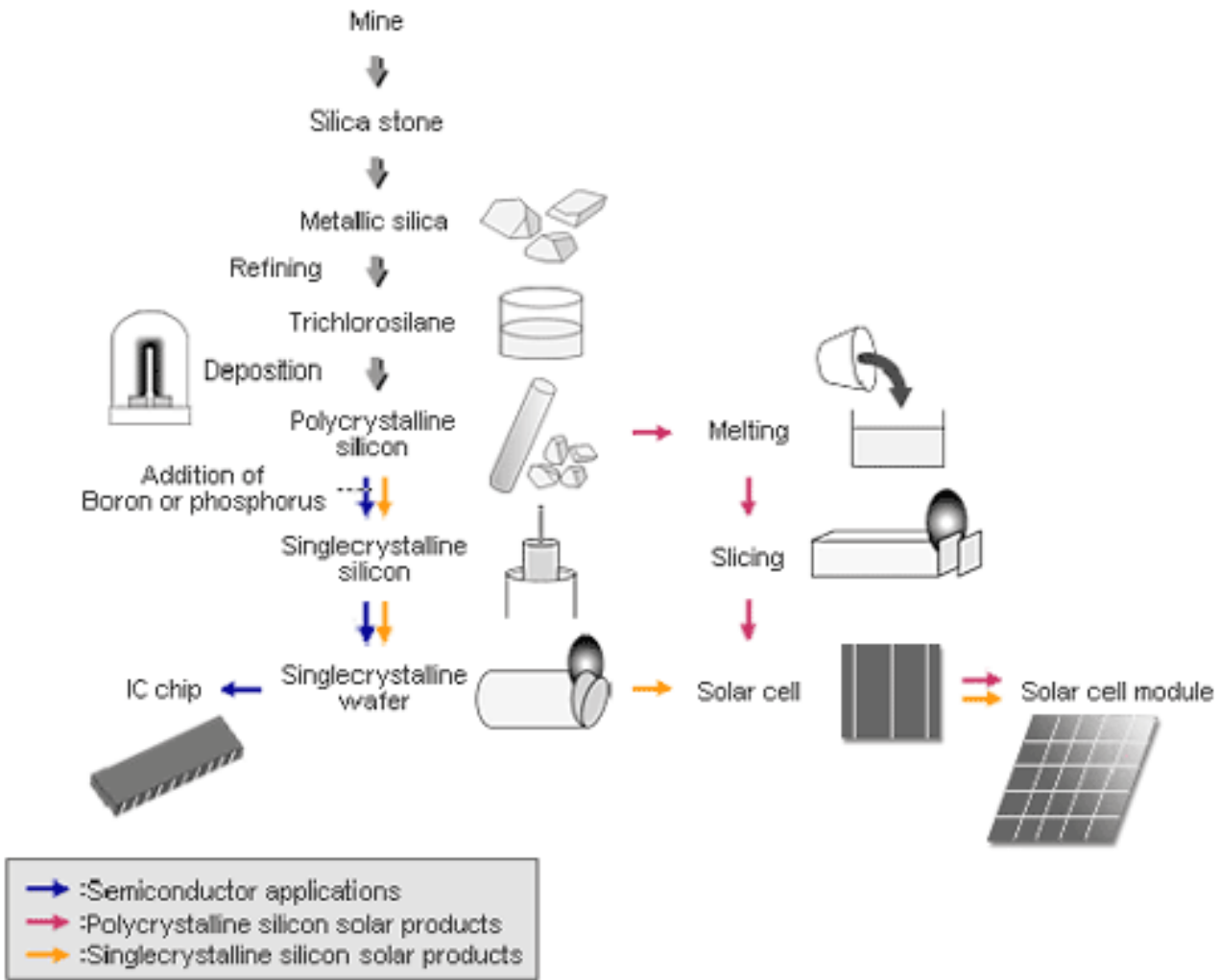
Company	Ticker	Fiscal Year End	Mkt Cap (US\$m)	P/E (x)			
				P/B (x)	ROE (%)	FY12/10F	FY12/11F
SINO-AMERICAN	5483 TT	12/2009	2,606.1	2.1	5.5	14.4	11.7
WAFER WORKS CORP	6182 TT	12/2009	1,466.8	1.6	(3.6)	14.0	8.7
GREEN ENERGY TEC	3519 TT	12/2009	1,372.4	1.4	1.8	13.6	11.0
SOLARGIGA ENERGY	757 HK	12/2009	308.3	1.5	(7.4)	16.9	9.6
COMTEC SOLAR	712 HK	12/2009	190.6	1.2	3.1	8.4	3.2
LDK SOLAR CO-ADR	LDK US	12/2009	99.1	0.9	(26.0)	10.9	8.0
RENESOLA LTD	SOLA LN	12/2009	44.8	1.3	(16.3)	7.7	5.8
PV CRYSTALOX SOL	PVCS LN	12/2009	28.5	1.0	11.7	14.9	11.0
			Average	1.4	(3.9)	12.6	8.6

Source: Bloomberg

Appendix

Appendix 1 – Production of crystalline silicon module from quartz

Diagram 3. From quartz to module



Source: Tokuyama diagram

Appendix 2 – Simple illustration of a grid-tied solar PV system

Diagram 4. Simple illustration of a grid-tied solar PV system (BIPV format)

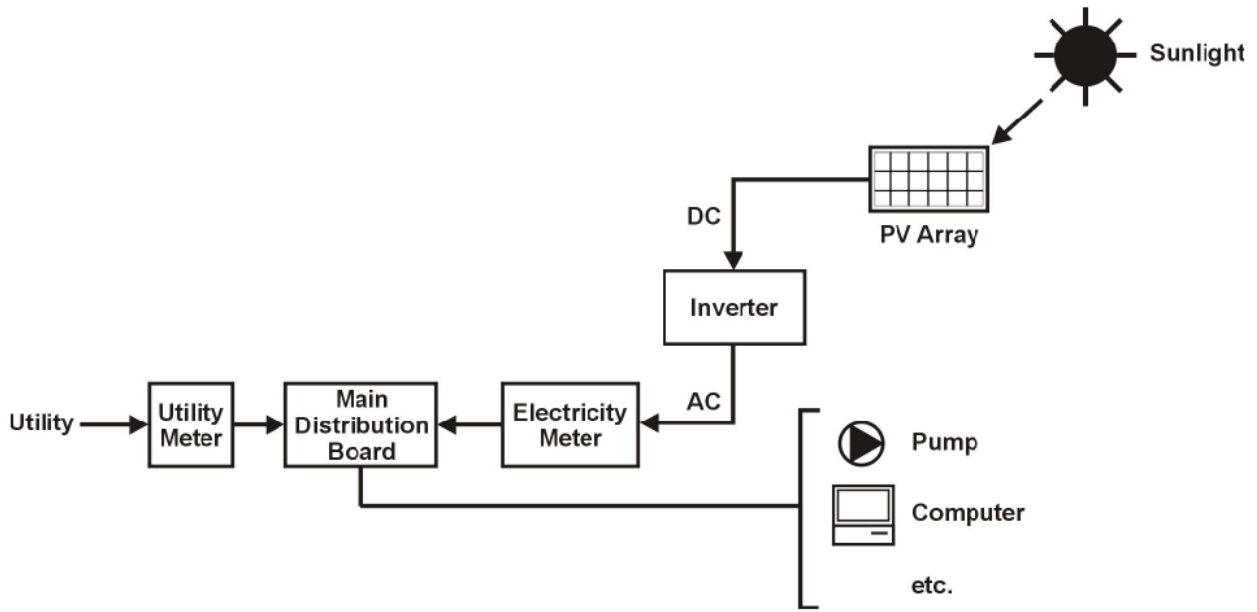
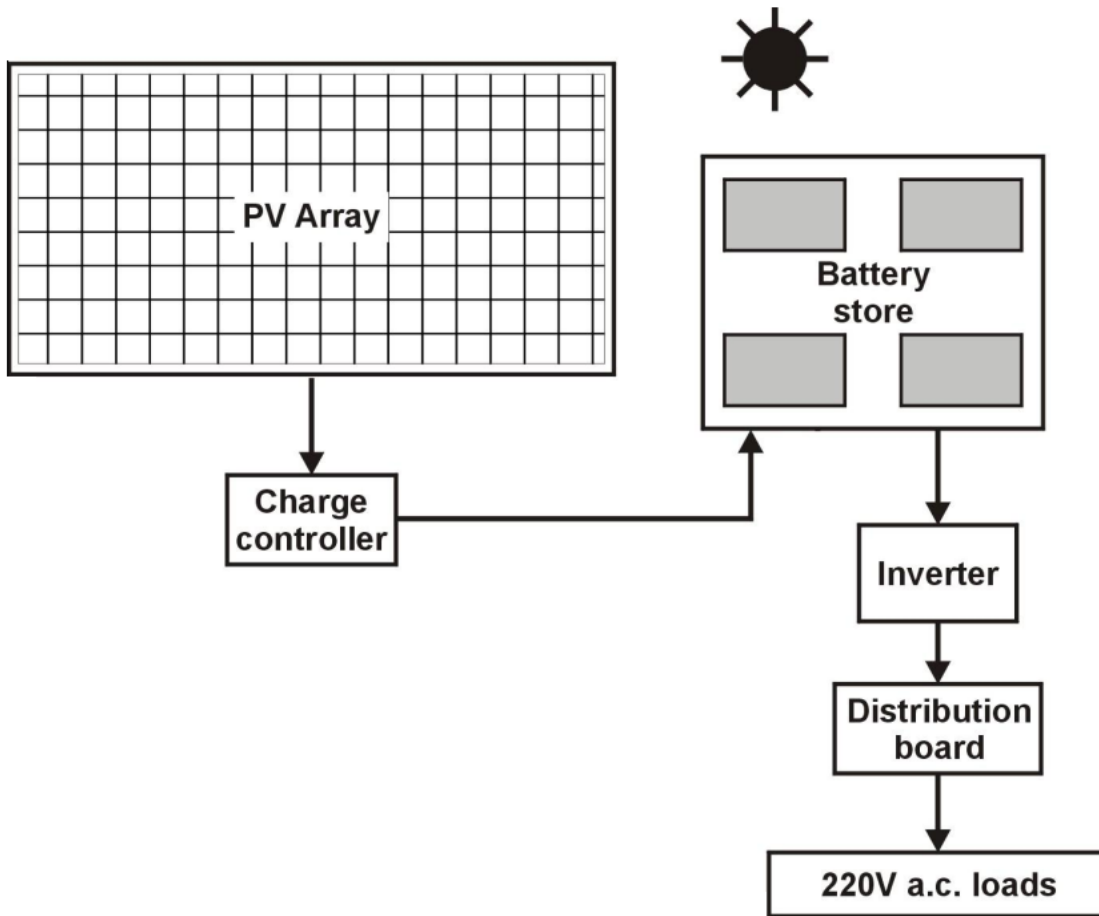


Diagram 4. Simple illustration of a grid-tied solar PV system (solar PV plant format)



Source: HK Electrical and Mechanical Services Department

Appendix 3 – Infopage

P&L (RMBm)	07A	08A	09F	10F	11F	Cash Flow (RMBm)	07A	08A	09F	10F	11F
Year to Dec						Year to Dec					
Turnover	349.1	762.1	506.9	1,460.0	2,891.7	EBIT	163.0	172.9	38.0	200.9	406.0
% chg	157.8	118.3	(33.5)	188.0	98.1	Depre./amort.	8.3	20.8	22.9	59.7	104.0
Gross profit	158.9	231.3	55.1	255.5	514.0	Net int. paid	(1.1)	(9.3)	(9.3)	(11.1)	(10.8)
EBITDA	171.3	193.7	60.9	260.6	510.0	Tax paid	(0.8)	(71.4)	1.3	(38.0)	(105.4)
Depre./amort.	(8.3)	(20.8)	(22.9)	(59.7)	(104.0)	Dividends received	0.0	0.0	0.0	0.0	0.0
EBIT	163.0	172.9	38.0	200.9	406.0	Gross cashflow	2.0	90.2	0.4	0.0	0.0
Net int. income/(exp.)	(0.8)	(6.3)	(6.7)	(6.6)	(8.7)	Chgs. in working cap.	(0.4)	(363.5)	(130.7)	(27.4)	(157.5)
Exceptionals	0.0	0.0	0.0	0.0	0.0	Operating cashflow	170.9	(160.4)	(77.4)	184.2	236.3
Associates	0.0	0.0	0.0	0.0	0.0	Capex	(118.5)	(72.6)	(172.6)	(417.4)	(503.3)
Jointly-controlled entit.	0.0	0.0	0.0	0.0	0.0	Free cashflow	52.4	(233.1)	(250.0)	(233.2)	(267.0)
Pre-tax profit	162.1	166.6	31.3	194.3	397.3	Dividends paid	(2.4)	0.0	0.0	(15.5)	(29.8)
Tax	(14.8)	(36.1)	(6.4)	(38.9)	(99.3)	Net distribution to MI	-	-	-	-	-
Minority interests	0.0	0.0	0.0	0.0	0.0	Investments	0.3	3.0	1.1	4.5	2.1
Net profit	147.4	130.5	24.9	155.5	298.0	Disposals	0.1	0.3	0.3	0.0	0.0
% chg	130.8	(11.5)	(80.9)	523.3	91.7	New shares	0.0	0.0	514.5	0.0	0.0
Dividends	(2.4)	0.0	0.0	(15.5)	(29.8)	Change in bank loans	18.0	120.0	6.0	20.3	482.8
Retained earnings	144.9	130.5	24.9	139.9	268.2	Others	5.9	124.8	(37.8)	15.5	0.0
EPS (RMB) - Basic	-	-	0.032	0.151	0.289	Net cashflow	74.3	15.0	234.1	(208.4)	188.1
EPS (RMB) - F.D.	-	-	0.032	0.151	0.289	Cash reserve - Beg.	150.1	165.1	399.2	190.8	379.0
DPS (RMB)	-	-	0.007	0.015	0.029	Cash reserve - End.	(118.5)	(72.6)	(172.6)	(417.4)	(503.3)
No. sh.s o/s (m) - W.A.	-	-	773.7	1,031.7	1,031.7	Interim Results (RMBm)					
No. sh.s o/s (m) - Y.E.	-	-	1,031.7	1,031.7	1,031.7	Six months to Jun					
No. sh.s o/s (m) - F.D.	-	-	1,031.7	1,031.7	1,031.7	Turnover	331.2	430.9	184.3	322.6	
Margins (%)						% chg	n.a	n.a	(44.4)	(25.1)	
Gross	45.5	30.4	10.9	17.5	17.8	Profit from operations	158.8	14.0	10.6	27.4	
EBITDA	49.1	25.4	12.0	17.9	17.6	Interest expenses	(0.8)	(5.5)	(4.2)	(2.4)	
EBIT	46.7	22.7	7.5	13.8	14.0	Associates	0.0	0.0	0.0	0.0	
Pre-tax	46.5	21.9	6.2	13.3	13.7	Jointly-controlled entit.	0.0	0.0	0.0	0.0	
Net	42.2	17.1	4.9	10.6	10.3	Pre-tax profit	158.0	8.5	6.4	25.0	
Balance Sheet (RMBm)						Tax	(29.6)	(6.4)	(2.0)	(4.4)	
Year to Dec						Minority interests	0.0	0.0	0.0	0.0	
Fixed assets	219.7	245.6	427.6	712.7	1,113.5	Net profit	128.4	2.1	4.4	20.5	
Intangible assets	0.0	0.0	0.0	0.0	0.0	% chg	n.a	n.a	(96.6)	890.4	
Other LT assets	89.9	228.3	240.1	155.4	130.4	EPS (RMB) - Basic	n.a	n.a	0.006	0.027	
Cash	150.1	165.1	399.2	190.8	379.0	DPS (RMB)	n.a	n.a	-	0.007	
Accounts receivable	43.9	92.8	166.1	329.5	564.0	Shareholding Structure					
Other receivables	0.0	0.0	32.0	0.0	0.0	Shares o/s (m)					
Inventories	33.6	33.1	108.4	150.6	297.2	Zhang John	663.9				64.3
Due from related co.s	62.7	0.0	0.0	0.0	0.0	China Merchant Securities	70.5				6.8
Other current assets	15.8	52.3	37.2	60.5	78.2	Public	297.3				28.8
Total assets	615.8	817.3	1,410.7	1,599.6	2,562.3	Total	1,031.7				100.0
Accounts payable	(97.3)	(108.8)	(198.5)	(303.9)	(495.3)	Background					
Other payable	0.0	0.0	0.0	0.0	0.0	Comtec Solar is a pure-play monocrystalline solar ingot and wafer manufacturer based in China. The company manufactured semiconductors wafers since 2000 and started to shift focus to solar ingot and wafer since 2004. The company was one of the earliest Chinese manufacturers mastering mass production of 156mmx156mm monocrystalline solar wafers with thickness of ~170µm.					
Tax payable	(31.7)	(5.1)	(0.7)	(3.9)	(9.9)	Key Ratios					
Due to related co.s	(5.0)	0.0	0.0	0.0	0.0	Net gearing (%)	Cash	Cash	Cash	Cash	18.4
ST debts	(20.0)	(140.0)	(146.0)	(166.3)	(649.1)	Net ROE (%)	114.9	36.9	3.1	13.7	22.3
Other current liab.	(149.0)	(0.2)	(0.0)	0.0	0.0	EBIT ROCE (%)	117.0	39.8	4.0	15.6	23.3
LT debts	0.0	0.0	0.0	0.0	0.0	Dividend payout (%)	1.6	-	-	10.0	10.0
Other LT liabilities	(164.6)	(3.3)	(3.8)	(7.8)	(19.9)	Effective tax rate (%)	9.1	21.7	20.4	20.0	25.0
Total liabilities	(467.6)	(257.3)	(349.1)	(481.9)	(1,174.2)	Net interest coverage (x)	201.7	27.5	5.7	30.5	46.6
Share capital	0.0	0.3	0.9	0.9	0.9	A/R turnover (days)	26	33	93	62	56
Reserves	148.2	559.7	1,060.7	1,200.6	1,468.8	A/P turnover (days)	104	71	124	76	61
Shareholders' funds	148.2	559.9	1,061.6	1,201.5	1,469.7	Stock turnover (days)	68	23	57	39	34
Minority interest	0.0	0.0	0.0	0.0	0.0						
Total	148.2	559.9	1,061.6	1,201.5	1,469.7						
Capital employed	168.2	699.9	1,207.6	1,367.9	2,118.8						
Net (debt)/cash	130.1	25.1	253.2	24.5	(270.2)						

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