

**Nicholas Wan™ Solar Photovoltaic Weekly Report**  
**Nicholas Wan™ 太阳能光伏周报**

This Weekly report offers a snapshot of solar photovoltaic industry trends and news  
本周报提供太阳能光伏行业趋势和新闻纵览

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## 1. Germany's solar capacity increased by 3GW in first half of 2010: more FiT cuts to come

德国太阳能发电量 2010年上半年增长3GW: FIT将进一步削减

Source: Photovoltaic International来源: 光伏国际

The German Federal network Agency has revealed that solar capacity increased by approximately 3GW in the first half of 2010 as solar panel operators rushed to register their installations before the feed-in tariff cuts.

Newly installed solar capacity reportedly rose by 1.7GW between January and May 2010, based on the analysis of the 85,000 applications received for solar installations during that period. The agency then received a further 50,000 applications in June alone, which should bring the total newly installed solar capacity over 3GW for the first six months.

"Applications were flooding in during the last weeks of June as many operators wanted to secure higher feed-in tariffs, which were reduced considerably from July 1 2010," said Matthias Kurth, president of the Agency.

Further subsidy cuts, to take effect in 2011, will be linked to annual capacity growth with a target rate of 3,500MW, and are expected to be announced in October 2010. Experts estimate that subsidies paid to solar-power producers may still add up to €100 billion (US\$125 billion) over the coming 20 years.

In 2009, solar capacity increased by 3.8GW to a total of 9.8GW. Overall approximately 160,000 data reports have been filed with the Federal Network Agency in the past year.

Details of the PV system numbers are published on the website of the Federal Network Agency.

德国联邦网络管理局披露由于太阳能电池组件经销商纷纷抢在FIT削减前注册其安装, 德国太阳能发电量2010年上半年增长3GW。

今年1月到5月, 根据对收到的85000份系统安装申请进行分析, 新安装的太阳能发电量增长了1.7GW。仅仅在6月份, 该机构接到的申请就达50000份, 因此上半年新安装的发电量就超过3GW。

该机构主席Matthias Kurth表示“许多经销商为了保证高比例的FIT补贴, 纷纷于6月最后几周进行项目的申请。而德国的FIT补贴将于2010年7月1日显著减少。”

将于2011年生效的更大规模的补贴削减政策将限制年度增长为3500MW作为目标。具体政策将于2010年10月公布。专家估计, 未来20年支付给制造商的补贴将达到1000亿欧元(1250亿美元)。

2009年, 德国太阳能发电量增长3.8GW, 总量达到9.8GW。联邦网络局去年对约160000份数据报告进行备案。

详细数据公布于联邦网络局网站<http://www.bundesnetzagentur.de>

## 2. Change in Ontario's FIT Program: New Price for Ground-mounted Solar Panels

安大略FIT计划更改: 地面安装光伏组件的新价格

Source: Renewable Energy World来源: 可再生能源世界

Since passing the Green Energy Act last year, Ontario has tried to position itself as the leader for clean energy in Canada, North America, and around the world. One of the highlights of the Green Energy Act is the feed-in-tariff (FIT) program, which allows clean energy developers to create renewable energy projects and sell the electricity back to the grid. Ontario's current FIT prices are the highest in Canada and among the highest in the world, providing anywhere between 44.3 and 80.2 cents per kWh for solar PV projects, depending on the size. All FIT prices are available online.

The FIT program has been relatively successful in boosting Canada's green energy market. Solar PV projects are particularly popular with 700 solar rooftop projects approved in all areas of Ontario, including in Windsor, Toronto, and Thunder Bay. Ground-mounted projects are even more popular. More than 16,000 applications have been submitted for

solar PV projects, with the lion's share going to ground-mounted solar systems.

#### New FIT Prices Better Reflection of Solar PV Project Costs in Canada?

Currently all projects (either ground-mounted or solar roof) under 10kW (categorized as microFIT projects) receive a FIT price of 80.2 cents per kWh. In early July, the Ontario Power Authority (OPA) announced that due to the popularity of ground-mounted solar projects, it would propose a new pricing category, disaggregating smaller projects (less than 10 kW) into rooftop and ground-mounted categories. Rooftop projects will continue to receive the 80.2 cent rate while ground-mounted projects less than 10kW could eventually receive the proposed FIT price of 58.8 cents per kWh.

Colin Anderson, CEO of the Authority, states that, "The OPA believes that the new price category.. more accurately reflects costs associated with ground-mounted projects,... enables the [FIT] program to meet its original goals, and provides proper value to generators and taxpayers. The proposed rate of 58.8 cents will only apply to developers who do not already have a contract. Approved ground-mounted projects will receive the original FIT price rate of 80.2 cents as outlined in the original contract. Interested applicants and developers have 30 days to comment on the newly proposed price.

The proposed changes to the pricing schedule make proper design and installation more critical, thus, highlighting the importance of proper solar training. Programs like Ontario Solar Academy provide courses in the technical design aspects, safety considerations, and regulations required to properly install and maintain solar PV projects. With deeper segmentation in the photovoltaic market due to the revised pricing table, it is possible that new target groups will find opportunities and incentives to join the green movement. This added demand could help spark even greater interest in the requisite training and courses necessary to enter the growing PV industry.

自从去年通过绿色能源法案，安大略试图将自己定位为加拿大，北美甚至全世界清洁能源的领袖。绿色能源法案的一大亮点就是FIT计划，该计划允许清洁能源开发商建立可再生能源项目，并将电力卖给电网。安大略目前的FIT价格是加拿大最高的，也居于世界最高范围，所有的太阳能光伏项目根据不同大小，每千瓦时有44.3到80.2美分的补贴。所有的FIT价格均网络可查。

该FIT计划已经相对成功地推动了加拿大绿色能源市场。安大略包括温莎，多伦多和桑德贝近700个太阳能光伏屋顶项目受到审批，足见太阳能光伏项目很受欢迎。地面光伏项目更加受欢迎，已经有超过16000份关于太阳能光伏项目的申请已经提交，其中大部分为地面光伏系统。

新的FIT价格能更好的反映加拿大太阳能光伏项目的支出么？

目前所有低于10KW（归类为微FIT项目）的项目（不管是地面项目还是屋顶项目），FIT价格为80.2美分没千瓦时。7月初，安大略电力部门（OPA）宣布由于地面光伏项目的流行，该部门将开立一个新的价格分类，将较小的项目（少于10kw）分解成屋顶和地面两个类别。屋顶项目将继续维持80.2美分的费率，而小于10kw的地面项目将实施58.8美分每千瓦时的费率。

该部门CEO，Colin Anderson表示：“OPA相信新的价格分类将更准确的反映地面项目的费用。并使得FIT计划能实现其最初的目标，提供更合理的价值。”提议的58.8美分的费率仅适用于目前尚未有得到审批合同的开发者。已通过的地面项目将继续得到如之前合同所列的80.2美分的FIT价格。感兴趣的申请者 and 开发商有30天时间对新提议的价格做出评论。

价格计划的变化使得合适的设计和安装更加重要，因此而突出合适的太阳能培训的重要性。类似安大略太阳能学会的计划为技术设计，安全考量，安装和维护太阳能光伏项目等方面提供课程。由于更改的价格表对太阳能光伏市场更深入的分段，新的目标群体将有机会和激励来加入绿色行动。这一需求将使得培训和课程对于进入光伏行业是必需的。

### 3. IMS Research predicts module shipment decline in Q1 '11

#### IMS预计2011年第一季度组件出货量将下降

Source: Photovoltaic International来源：光伏国际

IMS Research has reported that from Q4'10, module shipments are due to take a downturn, declining by almost 10% quarter-on-quarter in Q1'11. This contradicts the shipment increases which have been apparent for six consecutive quarters since Q1'09.

The analyst predicts that the first quarter of 2011 will be very different to the first quarter of 2010 when speculation of additional cuts to incentive schemes drove unusually high demand in Europe and prompted extensive production capacity expansions across the globe.

Sam Wilkinson, research analyst at IMS said, "We predict the return of classic seasonal installation patterns and forecast that completed installations will decrease by nearly 40% in Q1'11 versus Q4'10. This fall in demand for installations after 31st December 2010, combined with huge capacity expansions certainly poses some problems for the market. We predict a sharp slowdown in module shipments from Q4'10 and PV module prices are forecast to decline once again during the first half of 2011."

After declining by an average of 10% each quarter in 2009, high demand resulted in relatively small price decreases from Q4'09 to Q1'10, says IMS Research. Factory-gate prices of crystalline modules fell just 2% in euros between the two quarters, despite the German FIT reducing by 9 to 11% as planned at the end of the year.

In Q2'10, average crystalline module prices are estimated to have increased by 1% in euros over the previous quarter. By the end of the year, prices are forecast to fall just 1% from their levels in the final quarter of 2009.

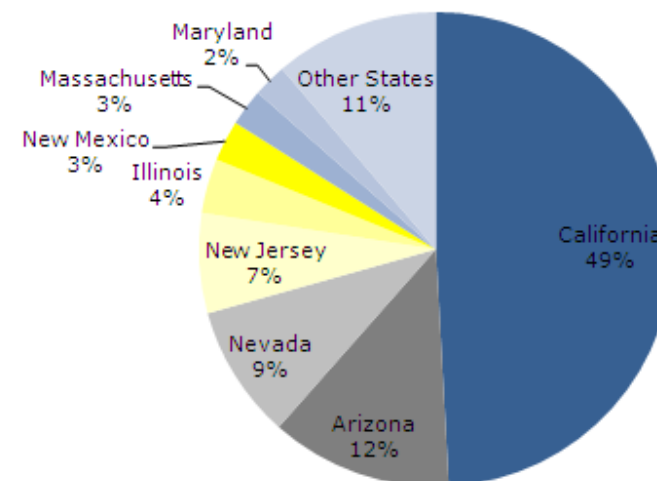
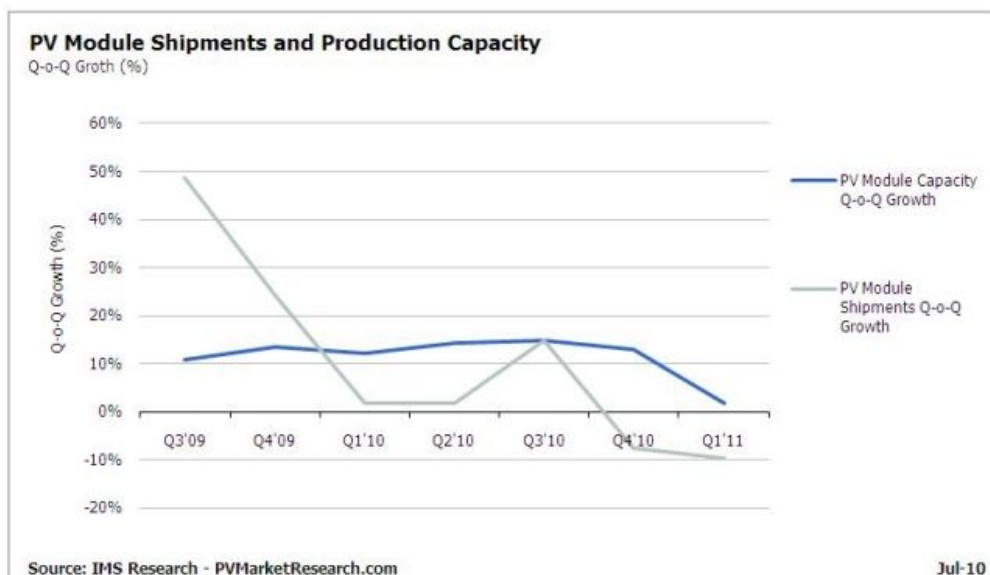
IMS近日公布，从2010年第四季度起，组件的出货量将会出现下降，在2011年第一季度出现约10%的同比下降。这一预测结果与从2009年第一季度起出现连续六个季度的出货量上涨的事实相悖。

分析人士预计，2011年第一季度的情况将与2010年第一季度大为不同。在今年第一季度里，由于对进一步削减刺激政策的投机行为，使得欧洲地区出现了不同寻常的需求上涨，并进一步导致全球范围内的产能扩大。

IMS分析师Sam Wilkinson表示：“我们认为市场必将恢复到传统的季节性安装模式，相对于2010年第四季度来说，2011年第一季度完成的安装数额将下降接近40%。2010年12月31日之后的安装量需求下降，加上巨大的产能扩张，必然会对市场造成一些问题。我们预计，组件的出货量将从2010年第四季度开始大幅下降，并且组件的价格也将在2011年上半年再次下跌。”

IMS表示，自从2009年以来每季度平均10%的降幅之后，2009年第四季度到2010年第一季度的高需求量相对地减缓了价格。尽管德国的FIT补贴按计划计划在年底下降了9%至11%，但晶硅组件的出厂价格在两个季度的时间里仅下降了2%(以欧元计价)。

在2010年第二季度，晶硅组件的均价估算比上一季度上涨了1%(以欧元计价)。而年底组件的价格预计将在2009年第四季度的基础上下跌仅1%。



#### 4. Solarbuzz predicts U.S. solar market could grow tenfold by 2014

Solarbuzz预计美国太阳能市场到2014年将增长10倍

Source: Photovoltaic International 来源: 光伏国际

Solarbuzz's latest report, "United States PV Market 2010," reveals that the U.S. solar market grew 36% in 2009, responding positively to the economic downfall. These results rank the country's solar photovoltaic market third largest in the world, behind Germany and Italy.

"2009 marked a year of transformation for the U.S. solar market," said Craig Stevens, president of Solarbuzz. "Changes in the roles of utility companies, new market entrants, lower cost PV modules from Asia and new direct-to-market approaches became more prevalent. As a result, solar companies doing business in the States will need to adapt quickly to these challenges while also being responsive to frequent adjustments in the fragmented incentive and regulatory environment."

California is still driving the solar power market in the U.S., accounting for 53% of on-grid installations in 2009 and maintaining this position into 2010. While SunPower remained leader for PV installed, Chevron Energy and SPG Solar moved up to the number position in California in 2009. Installers REC Solar, SolarCity and Real Goods Solar led the residential field.

The large number of state policy initiatives has created a fragmented regulations and incentive environment. However, states are doing their job of stimulating local markets. The dispersed funding sources mean the U.S. market does not carry the same level of risk compared to countries driven by a single national policy. Federal incentives are therefore due to play a much larger role in stimulating demand into 2012. Solarbuzz forecasts the market will grow to between 4.5-5.5GW depending on this given scenario. This is an average annual growth rate of 30% per annum.

The U.S. order book for photovoltaic systems currently stands at 12GW.

Solarbuzz最新报告“2010年美国光伏市场”显示，由于对经济衰退的积极应对，美国太阳能市场在2009年该市场增长了36%。这一结果使得美国的光伏市场规模位居世界第三，仅次于德国和意大利。

“2009年对于美国太阳能市场来说是转型的一年”，Solarbuzz总裁Craig Stevens表示，“公共事业公司的角色变化、新进企业、来自亚洲的低价光伏组件以及与市场直接挂钩的新经营方式变得更加普遍。因此，在美国经营的各家太阳能公司就必须快速应对这些挑战，还要有能力适应变化莫测并且零碎的激励和监管环境。”

加州仍是美国太阳能市场的领跑者，2009年的并网安装量占到了全国的53%，在2010年将继续保持这一位置。光伏安装领域的领袖仍然是SunPower，而在2009年里，Chevron能源和SPG太阳能公司在加州太阳能市场所占据的位置也大幅上升。而REC Solar、SolarCity和Real Goods Solar三家太阳能公司则占据了住宅领域的主要份额。

各州政府所出台的大量政府刺激政策造成一种零碎的激励和监管环境。然而，各州政府仍尽全力促进地方市场的发展。零散的筹资渠道意味着美国市场并不能承担与采用单一政策的国家相同的市场风险水平。因此联邦刺激政策在激励直到2012年市场需求方面起相当重要的作用。Solarbuzz公司预测整个市场将会按照这种方案增至4.5到5.5GW，年均增长率将达30%。

美国市场目前对光伏系统的需求预定量为12GW。

## 5. China solar module makers lower 3Q10 quotes by 3-5%

### 中国组件生产商 2010年第三季度报价下降 3-5%

Source: Digitimes 来源：电子时报

Some China-based solar module makers have lowered quotes for the third quarter by 3-5% to about US\$1.85-2/W, industry sources revealed, noting that the larger and more vertically integrated players, however, have yet to follow suit due to full capacity utilization, and their quotes will remain level in the third quarter. Though solar wafer and cell prices are buoyed by tight supply, the stabilizing euro has given the module makers some flexibility in pricing with substantial losses from currency exchange less likely, according to the sources.

The 3-5% slash is considered quite modest compared with Germany's FIT (feed-in-tariff) cut and previous module price reduction. Another reason for the price decrease is the fixed-price contracts offered by the Chinese module makers. Whether it is shipments for the current or future quarters, the price is fixed at lower than the current spot price and is non-renegotiable in the future, the sources said. With so much uncertainty still surrounding subsidization and demand in Germany and other major solar markets, the Chinese companies are using such contracts to secure orders and possibly better quotes down the line when module prices are pressured to fall further. Moreover, the volume commitments also give the module makers more leverage during component procurement.

行业信息透露，一些中国组件生产商已经将2010年第三季度的报价下降3-5%到大概每瓦1.85到2美金。值得注意的是，大的甚至是垂直产业链的生产商由于产能已满，没有跟随此市场趋势，他们的报价在第三季度仍然维持之前水平。虽然硅片和电池片价格由于供应紧张而上浮，稳定的欧元给组件生产商在价格上更大的弹性，避免由于汇率兑换造成大量损失。

3-5%的下降相对于德国的FIT削减和之前的组件价格下跌是相当适度的。组件价格下跌的另一个原因是中国组件制造商签订的固定价格合同。无论是当前季度交货还是未来交货，价格固定比当前现货价格低并且未来也无法重新商谈。尽管德国和其他市场的补贴政策 and 需求有如此多的不确定性，中国公司仍然使用这种合同来确保订单并在组件价格被逼下降更多时报更好的价格。此外，量的保证能给组件制造商在采购辅料时有更大的影响力。

## 6. Europe PV module suppliers maintain price cuts for 3Q10

### 欧洲组件供应商 2010年第三季度将下调价格

Source: Digitimes 来源: 电子时报

First-tier Europe-based makers of PV solar modules have notified customers that third-quarter quotes will be reduced by 10% as originally planned in mid-second quarter, according to sources familiar with the situation. Solar module quotes will fall 0.15-0.20 euros to around 1.73-1.78 euros to stay in line with Germany's recent FIT (feed-in-tariff) cut, said the sources. Europe-based module companies are prepared to take a hit in gross margin to maintain demand as solar wafer and cell makers in Asia, which are still seeing orders in excess of capacity, are likely to maintain or even raise prices, the sources indicated.

Solar module makers in Europe, particularly in Germany, in the past were able to quote higher prices compared with their counterparts in Asia due to comprehensive government subsidies, strong home markets and brand recognition. With Germany's FIT to be cut again in the fourth quarter, which will further impact the solar market, Europe's module players now have to learn to compete in price for business outside of Europe, the sources said.

根据熟悉市场的消息人士透露，欧洲一流的组件生产商已经通知客户第三季度的报价将如第二季度中计划的一样下降10%，组件报价将下降0.15至0.2欧到1.73至1.78欧，以和德国最近的FIT削减相一致。欧洲组件公司已经做好在毛利上受到影响的准备，以此来维持需求。而亚洲的硅片和电池片生产商在超出产能的情况下则可能维持甚至提高价格。

欧洲特别是德国的组件制造商，由于广泛的政府支持，强烈的国内市场和品牌认可，他们的报价格比亚洲同行高很多。随着德国的FIT将在第四季度进行削减，将进一步对市场造成影响，欧洲组件生产商现在必须学会在欧洲市场以外在价格上尽心竞争。

## 7. Solar in for healthy Q2 but fears about 2011 remain

### 第二季度光伏市场健康 对2011年担忧继续

Source: Reuters 来源: 路透社

Strong sales of modules in Germany, the world's No.1 solar market, are set to boost revenues for the sector elite's in the second quarter but won't allay fears about weaker 2011 demand as incentives wane.

After a horrific 2009, top makers of the clean energy systems such as First Solar, Renewable Energy Corp (REC), Q-Cells and Suntech Power Holdings have seen robust sales so far this year.

That has been driven largely by strong demand in Germany, where developers rushed to build projects ahead of subsidy cuts that began to take affect this month and will reduce financial incentives for the industry.

Norway's REC, which will start off the solar earnings season on July 20, will likely highlight its efforts to grow outside Germany in new markets such as Italy, the Czech Republic and the United States.

But Italy's new plan to slash production incentives for Europe's third-biggest solar power market in 2011-2013 has raised worries that that market may not offset expected declines in German demand.

"Demand outlook for 2011 remains sketchy with further regulatory uncertainties looming in Italy and the Czech Republic, the second- and third-most important PV (photovoltaic) end markets in 2010," BHF-Bank analyst Goetz Fischbeck wrote.

According to EPIA, the world's biggest solar industry association, newly added capacity in Germany could drop to 4 gigawatts in 2011 from an expected 7 gigawatts this year.

Much of that decline should be offset by growth in non-European markets such as China and the United States, while overall EU markets are likely to shrink by 27 percent in 2011

versus 2010.

That cloudy outlook has punished shares in the sector, knocking REC 48 percent lower so far this year, Germany's Q-Cells 49 percent and the U.S.-listed shares of Chinese companies Suntech and Trina each 35 percent.

#### SOLD OUT, FOR NOW

First Solar, the leading manufacturer of modules and the industry's lowest-cost producer, has been the among the top performers, recording a drop of just 4.4 percent this year.

Companies based in the United States and China are expected to begin reporting quarterly earnings late this month and in August, while their German peers are scheduled to release results in the second week of August.

According to data compiled by StarMine, Q-Cells and U.S.-listed SunPower Corp are the mostly likely among the sector leaders to miss Wall Street's profit forecasts for the quarter, while China's Yingli and JA Solar Holdings the most likely to top forecasts.

Several companies including First Solar have said they had sold out all their production for 2010, a positive development that has helped support solar cell and module prices which had shrunk by as much as half in 2009.

European solar companies also got a reprieve from ever-increasing price competition from low-cost Chinese producers in the first half of 2010 as the euro fell by 15 percent against the dollar.

That hurt pricing power for both Chinese and U.S. manufacturers, although the recent rebound in the European currency could turn up the pressure again for Q-Cells and other European companies in the coming months.

"I don't think a weak euro/strong yuan is a key focus in the short- to mid-term. (The) Chinese cost advantage (is) still too huge, and unlike the euro, the yuan isn't going to jump around. Wage inflation in China is unchanged," said CLSA analyst Charles Yonts.

Coupled with austerity-driven cuts in European subsidies, that does not bode well for European-based producers.

"As you see another round of (subsidy cuts) coming in 2011 I think you'll see even more uneconomic solar manufacturing come off in Europe," said analyst John Hardy of Gleacher & Co.

虽然世界第一的光伏市场-德国的光伏组件的巨大销售会促进精英群体在第二季度的营收，但却丝毫无法减轻他们对2011年市场需求由于政策调整而减弱的担忧。

经过可怕的2009年，清洁能源系统顶级制造商，如First Solar, Renewable Energy Corp (REC), Q-Cells以及Suntech今年的销售都很火爆。

市场火爆的主要原因在于德国的开发商纷纷抢在于本月生效的削减补贴政策前建设项目，从而造成巨大的市场需求。

挪威的REC公司，将于7月20日开始其盈收季节，其主要努力将放在德国以外的新兴市场，如意大利，捷克共和国和美国。

但是目前意大利新计划削减补贴，因为人们普遍预估欧洲第三大光伏市场在2011到2013年无法抵销德国需求的减少。

“由于对作为2010年全球第二和第三重要市场的意大利和捷克政策调整的不确定，2011年的需求前景仍不明朗。” BHF银行分析师Goetz Fischbeck说。

根据世界最大的光伏行业协会EPIA预估，德国2011年的新增装机容量将从2010年的7GW下降到4GW。

这种下降将很大程度上被非欧盟市场如中国和美国所抵销，但欧盟总体市场在2011年相比2010年有可能萎缩27%。

不明朗的前景已经造成该领域股票的下跌，REC股票今年已经下跌48%，Q-Cells下跌49%。美国上市的中国企业Suntech-尚德和Trina-天合亦各下跌35%。

目前 售罄

**First Solar**，世界领先的组件制造商和业界成本最低的生产商，一直是表现最佳，今年仅下降**4.4%**。

美国和中国公司计划于本月末和下月初公布季度营收，而他们的德国同行则计划于**8月**第二周公布相关财务情况。

根据**StarMine**编制的**数据**，**Q -Cells**和美国上市的**SunPower**公司这些行业领袖很可能错过华尔街季度利润预估，而中国的**Yingli-英利**和**JA Solar-晶澳**太阳能控股最有可能获得最高的预估。

包括**First Solar-第一太阳能**在内的几家公司已经表示，他们已经卖完了**2010年**的所有产能，这是对电池片和组件价格自**2009年**下降接近一半的一个很好的帮助。

由于**2010年**上半年欧元对美元汇率下降**15%**，欧洲的太阳能公司在同低成本的中国制造商的价格竞争中获得暂时的解救。

这使得中国和美国制造商的定价权力受到威胁，尽管目前欧元的反弹将未来的压力转移到**Q-cells**和其他的欧洲公司。

“我不认为欧元疲软/强劲人民币是短期到中期的重点。中国的成本优势仍然很大，不像欧元，人民币不会跳来跳去。中国工资通胀将保持不变，” **CLSA**分析师**Charles Yonts**说。

再加上欧洲补贴的削减，对于欧洲制造商来说不是一个好兆头。

“当你看到在**2011年**接下来的另一轮补贴削减后，我想你可以看到更多的太阳能生产从欧洲剥离，” **Gleacher**公司的分析师**John Hardy**说道。



## 1. Solarfun Announces Plans for Increase in Cell Capacity and Introduction of High-Efficiency Cell Technology

林洋宣布扩充太阳能电池片产能 推出高效电池片生产技术

Source: Solarfun | 来源: 林洋

SHANGHAI, July 19, 2010 /PRNewswire via COMTEX News Network/ -- Solarfun Power Holdings Co., Ltd. ("Solarfun" or the "Company") (Nasdaq: SOLF), a vertically integrated manufacturer of silicon ingots, wafers and photovoltaic ("PV") cells and modules in China, today announced its plan to increase its cell capacity by 50 MW through the enhancement of its manufacturing processes, and to convert 160 MW of its existing cell lines to high-efficiency selective emitter technology, both to be completed in the early first quarter of 2011.

Dr. Peter Xie, President of Solarfun, commented, "We experienced robust demand from customers in the first half of 2010, and customer demand in the second half of 2010 turned out to be much stronger than what we had anticipated. We are largely sold out of existing capacity for the remainder of 2010. Our continued ramp-up in capacity is driven by increased visibility of demand from our key customers in the first half of 2011 and we want to be prepared to meet this additional demand." Dr. Xie also noted, "The introduction of high-efficiency cell technology is a culmination of increased focus and aggressive investment in R&D, leading to a significant gain in cell efficiencies which are critical to reducing our costs and maintaining our competitive position."

The Company's cell capacity is expected to reach 550 MW by the early first quarter of 2011. The addition of 50 MW incremental capacity will be achieved through debottlenecking and the enhancement of manufacturing processes without the purchase of any new cell lines.

Also by the early first quarter of 2011, the Company plans to finish converting 160 MW of its existing cell capacity to high efficiency cell capacity through the introduction of selective emitter technology. The Company's approach is expected to realize efficiency targets exceeding 18.5% and 17.0% for monocrystalline and multicrystalline cells, respectively. According to Dr. Mohan Narayanan, Vice President of Technology, "We believe our selective emitter technology offers several advantages in addition to higher cell efficiencies, including lower capital and physical space requirements, better utilization of existing equipment and employee skills, and reduced costs and higher yields."

The Company also announced that new manufacturing complexes are currently under construction allowing for major future cell and module capacity additions. These facilities will be completed during the first half of 2011 and are expected to provide the ability to add 500 MW of cell capacity and 1.2 GW of module capacity. Dr. Xie concluded, "The investment in these new manufacturing facilities are reflective of our confidence in the continued growth in renewable energy and solar energy in particular, as well as our abilities to capture an increasingly larger share of that market."

林洋新能源有限公司（江苏林洋）（纳斯达克：SOLF），一个集硅锭，硅片和光伏电池和组件垂直产业链的中国制造商，今天（7月19日）宣布其太阳能电池片扩产计划，公司将在现有基础上增加50兆瓦的电池片生产线，同时在现有的160兆瓦电池片生产线上应用高效电池片生产技术。预计这两项计划将在2011年第一季度完成。

林洋董事长谢平博士评论说，“2010年上半年，我们的客户需求十分强劲，而且我们客户在2010年下半年的需求势头比我们预期的更强。我们基本上将2010年的剩余产能售空。我们不断扩大产能的动力来自于我们主要客户在2011年上半年的需求显著增加，我们也做好准备，以满足这些额外的需求。”谢博士还指出：“采用高效的电池技术是增加产品研发和投资的高潮，这将大大增加电池片的效率，从而减少成本，保持我们在竞争中的有利地位。”

到2011年的第一季度早期，公司的电池产能预计将达550兆瓦。增加的50兆瓦产能将通过消除生产障碍，并不购买任何电池片生产线的基础上加强对生产过程的控制来获得。

2011年一季度早期，公司计划通过采用选择性发射极技术转化成高效电池来对现有的160MW产能进行转化。公司希望实现单晶和多晶硅电池效率分别超过18.5%和17.0%。技术副总裁Mohan Narayanan博士说“我们相信我们的选择性发射极技术，为生产更高效的电池提供优势，包括降低成本和所需的面积，更好地利用现有的设备和员工技能，降低成本，并达到更高的产量。”

该公司还宣布，目前新的生产大楼正在建造，这将大大提高电池和组件的生产能力。这些设施将在2011年上半年完成，预计将能够提供生产500MW电池片和1.2GW组件产能。谢博士总结说：“对这些新的生产设施的投资表明了我们对于可再生能源特别是太阳能的信心，同时也表明我们有能力占领该产业更多市场份额。”

## 2. TRINA SOLAR ANNOUNCES INDUSTRIAL LIAISON PROGRAM WITH MIT

### 天合光能宣布与麻省理工学院产学研合作计划

Source: Trina Solar | 来源: 天合光能

Trina Solar Limited (NYSE: TSL) ("Trina Solar" or the "Company"), a leading integrated manufacturer of solar photovoltaic (PV) products from the production of ingots, wafers and cells to the assembly of PV modules, today announced the signing of a Letter of Agreement with the Massachusetts Institute of Technology ('MIT') to become a member of its Industrial Liaison Program ('ILP'), a program devoted to promoting university-industry collaboration and technology transfer.

Under the terms of the agreement, the ILP will provide Trina Solar facilitated access to MIT and its resources including technology conferences and the possibility to directly access research opportunities with MIT researchers to stay at the forefront of advanced technological developments.

"We are very excited to announce this collaboration with MIT, one of the world's leading research institutes, which is expected to strengthen ties between Trina Solar's State Key Lab of PV Science and Technology and MIT's research teams," said Mr. Jifan Gao, Chairman and Chief Executive Officer of Trina Solar. "Trina Solar and MIT share the same commitment to developing high quality solar electricity solutions for businesses and households worldwide and the Industrial Liaison Program is a great way to bring together top minds in the industry to help drive innovation."

"We are delighted to welcome Trina Solar to join our ILP program and we look forward to working with the Company to develop and sustain a mutually beneficial relationship," said Mr. Karl F. Koster, Executive Director of Corporate Relations from MIT during his visit to the Changzhou Trina PV Park. "As a member of the Industrial Liaison Program, Trina Solar can benefit from MIT's significant expertise and vast resources."

天合光能有限公司（纽约证券交易所：TSL）（“天合光能”），一家全球领先的从硅锭，硅片和光伏电池到组装光伏组件的太阳能光伏垂直产业链制造商，今天宣布一个与麻省理工学院签署的协议书，成为MIT产学研合作计划（ILP）的一员，产学研合作计划是一个旨在促进大学与产业合作和技术转让的项目。

根据协议条款，该计划将提供天合光能更便利的获取麻省理工学院的资源，这包括参加技术研讨会和直接访问麻省理工学院的研究人员的研究，接触最先进和最前沿的技术。

天合光能主席和CEO高继凡表示“我们很高兴地宣布与麻省理工学院的这次合作，MIT是世界领先的研究机构，这将加强天合光能的国家重点光伏实验室和麻省理工学院的研究团队的联系。天合光能和麻省理工学院共同承致力于寻找解决商用和家用的高品质太阳能电力的方案，同时ILP项目为集中行业最新思维，为创新提供了一个途径。”

MIT合作关系的执行董事Karl F. Koster在访问常州天合光能光伏园时表示“我们非常高兴地欢迎天合光能加入我们的ITL项目，我们期待着天合光能合作，创建和维持互利合作关系。作为ILP的一员，天合光能将受益于麻省理工学院的专业知识和丰富的资源。”

## 3. Canadian Solar Opens Italian Sales Office

### 阿特斯在意大利开设销售办事处

Source: Canadian Solar | 来源: 阿特斯

Canadian Solar (Nasdaq: CSIQ), one of the world's largest solar companies, today announced the opening of its Italian sales office in Rome. The office will be headed by Marco Di Pietro, Country Manager Italy, who is responsible for the continued success and growth of Canadian Solar's photovoltaic business in Italy. Customers can find out about the latest product information and reach sales and customer support using a toll-free service number (800 86 45 33).

Marco Di Pietro, Canadian Solar's Country Manager Italy, said, "Italy is one of the world's top alternative energy markets, with impressive demand growth and installations of photovoltaic systems. Canadian Solar has effectively grown its business in Italy with sales, marketing, support and executive focus led from our international offices. Given our significant existing customer base, demand and projected growth, it made strategic sense to expand on a local basis with our new office in Rome. We are very excited about this market."

Dr. Shawn Qu, Chairman and CEO of Canadian Solar, said, "Italy is currently ranked as the world's third largest PV market. Opening this office underscores our commitment to providing the best support to customers and to developing new business opportunities. Canadian Solar's high quality modules have been very well received in Italy since 2008. We fully expect to build on our momentum in the important Italian market as we move forward with a dedicated local sales platform."

阿特斯（纳斯达克：CSIQ），是世界上最大的太阳能公司之一，今天宣布成立其在罗马的意大利销售办事处。该办事处将由意大利区经理Marco Di Pietro负责，他的主要任务是开拓阿特斯在意大利的市场。客户可以拨打免费服务电话：（800 86 45 33）了解最新的产品和客户支持信息。

阿特斯公司在意大利地区的经理Marco Di Pietro说：“意大利是世界上最好的能源市场之一，这里有广阔的市场需求和先进的光伏安装技术。阿特斯在意大利已经取得初步成效，销售，市场开发和技术支持等已经成为我们在意大利的重点业务。现有的大量客户群，日益增长的市场和项目需求，使得我们在罗马开设办事处具有战略性的意义。我们很高兴开拓这个市场。”

阿特斯公司总裁和首席执行官瞿晓铤博士说：“意大利是目前全球第三大光伏市场。意大利办事处的成立表明了我們为客户提供更好的服务的决心和我们寻找新的商业机会。2008年以来，阿特斯高质量的光伏组件在意大利市场获得广泛好评。我们建立的这个区域性的销售平台，并以此作为阿特斯在意大利市场的重要动力。”

#### **4. GCL-Poly New Investment in Silicon Wafer Production Facilities**

##### **保利协鑫对硅片生产的新投资**

Source: GCL-Poly Energy | 来源: 保利协鑫能源

GCL-Poly Energy Holdings Limited is pleased to announce that it has approved to invest an additional US\$300 million in the silicon wafer business with an additional capacity of approximately 1GW in the PRC.

The new investment allows the Company to expand further in its silicon wafer business in producing monocrystalline wafers and multicrystalline wafers, which will be sold as semi-finished materials to cells and modules manufacturers. The scope of production will include the pulling of monocrystalline silicon ingots and molding of multicrystalline silicon ingots, as well as the slicing and grinding of the monocrystalline and multicrystalline silicon wafers. Under the Group's latest plan, the new production facility with approximately 1 GW of capacity will be constructed in Jiangsu Province, the PRC and is expected to be fully ramped up by end of this year.

Subsequent to the investment of US\$300 million to be made by the Group, the Group's total investment in silicon wafer production facilities will amount to approximately US\$1,000 million (equivalent to approximately HK\$7,800 million) with a total capacity of approximately 3 GW. The new US\$300 million investment will be funded by the Group's internal resources or banking facilities.

保利协鑫能源控股有限公司宣布，其已批准额外投资3亿美元在中国增加产能约为1GW的硅片业务。

这项新投资使得公司能够扩大开发硅片业务，生产单晶和多晶硅片。这些硅片将作为半成品材料销售给电池和组件制造商。生产范围将包括拉单晶硅棒和铸造多晶硅锭以及单晶硅多晶硅硅片切割。根据集团的最新计划，产能约1GW的新生产基地将在中国江苏兴建，预计年底前竣工。

该集团作出上述3亿美元的额外投资后，对硅片生产总的投资将约为10亿美元（约为78亿港元），总产能将达到约3GW。上述3亿美元的额外投资将由集团内部资金或银行拨付。

#### **5. Solarstrom AG to Implement 48 MW PV Project in Italy**

##### **Solarstrom公司将在意大利安装48兆瓦光伏项目**

Source: Trade Signal | 来源: 贸易信号

S.A.G. Solarstrom AG is to set up one of the largest connected ground-mounted projects in northern Italy in the region of Veneto. Construction will start before the end of 2010.

The planned construction of the ground-mounted system in the region of Veneto, in the municipality of Canaro, northern Italy, with a total output of 48 MWp, is the largest project to date in the corporate history of S.A.G. Solarstrom AG. The project will be managed by S.A.G. Solarstrom AG, who will work together with their cooperation partner Solibra Solar Solutions GmbH, Lahnstein. S.A.G. Solarstrom will apply financial resources from the refinancing of completed projects in the first stage. Work on implementation planning is currently ongoing at full power. The system will be constructed on a total area of 150 ha, and the site is structurally developed. All approvals have been granted, so that work on construction of the power plant can be started. In order to enable a fast, secure mains connection of the system, S.A.G. Solarstrom AG is building their own transformer substation that will allow the system to be connected directly and the electricity to be fed into the high-voltage grid. It is planned to sell the transformer substation to the Italian company Terna S.P.A. after the project has been completed. The project will be implemented in 2010 and 2011 and substantiates the forecast for 2010 with sales of between EUR190 and EUR210 million and an EBIT of between EUR 8 and EUR11 million.

Solarstrom公司将要在意大利北部Veneto（维尼托）建设一个该地区最大的地面并网光伏项目。项目开工日期定于2010年底之前。

这个位于意大利北部Canaro地区的Veneto（维尼托）的电站规模为48MWp，是Solarstrom公司成立以来接手的最大项目。公司在将与合作伙伴德国Solibra公司一起通力合作该项目。目前Solarstrom公司正在为第一阶段的工程施工筹措资金。实施规划工作目前正在紧锣密鼓的展开。该系统项目建在一个总面积150公顷的地面，地面设施正在建设中。所有审批项目已通过，电厂建设工作也可以开始。为了创建快速、安全的系统，公司正在建立自己的变电站，使该系统能与电网直接连接并将电力输送给高压电网。Solarstrom公司计划在项

目完成后将变电站出售给意大利Tema公司。该项目将在2010年和2011年实施安装，预计该变电站将以19亿到21亿欧元的价格出售，税前利润为800万到1100万欧元。

## 6. Yingli Green Energy to Collaborate with Innovalight, Aiming to Boost Multicrystalline Cell Efficiency

### 英利绿色能源与Innovalight合作提高多晶太阳能电池效率

Source: Yingli Green Energy | 来源: 英利绿色能源

Yingli Green Energy Holding Company Limited (NYSE: YGE) ("Yingli Green Energy" or the "Company"), a leading solar energy company and one of the world's largest vertically integrated photovoltaic manufacturers, which holds the brand "Yingli Solar," today announced that it has signed a technology, research and production collaboration agreement with Innovalight, Inc. ("Innovalight"), a privately-held firm selling a platform of silicon ink-based high efficiency solar cell materials and technology. By collaborating with Innovalight, Yingli Green Energy expects to raise the average efficiency of the multicrystalline cells produced on its commercial production lines.

"We are glad to sign this agreement with Innovalight," said Dr. Dengyuan Song, Chief Technology Officer of Yingli Green Energy. "We believe strong research and development capabilities are critical to strengthen our industry leadership, and we have recently launched a series of innovation initiatives. Our collaboration with Innovalight once again reaffirms our commitment to technology advancement and allows us to bring the benefits of cutting-edge technologies to our valued customers."

"We are delighted to have Yingli Green Energy as our customer and partner," said Conrad Burke, Chief Executive Officer of Innovalight. "Innovalight's silicon ink technology is a powerful platform to incorporate in the production of high efficiency solar products. Our collaboration with one of the largest vertically integrated solar product manufacturers in the world today is very exciting," he added.

Innovalight manufactures a proprietary nanotechnology-based silicon ink and licenses a proprietary platform process which allows a simple upgrade to solar cell manufacturing production lines to boost performance of solar cells and lower production costs.

英利绿色能源控股有限公司（纽交所交易代码：YGE）（“英利绿色能源”）是一家全球领先的太阳能公司，也是全球最大的垂直一体化光伏制造商之一。其拥有的品牌是“英利太阳能”。今天宣布该公司签署的一项与Innovalight公司合作的关于技术、研究和生产合作协议。Innovalight是一家私人控股公司，公司旨在销售油基墨为基础的高效电池片材料与技术。通过与Innovalight的合作，英利绿色能源希望提高其商业化生产线生产的多晶硅电池的平均效率。

“我们很高兴能与Innovalight签署这项协议，”英利绿色能源公司首席技术官宋登元表示。“我们坚信雄厚的研发能力对于加强公司在业内的领导地位十分重要，因此公司已于近日开始了一系列的创新举动。我们与Innovalight公司的合作再次证明了我们致力于技术研发的决心，并使得公司能够应用前沿技术为我们的客户带来利润。”

Innovalight公司首席执行官Conrad Burke表示：“我们很高兴英利能成为我们的客户和合作伙伴，我们公司的硅墨技术为与高效太阳能产品制造提供了强大的平台。公司对于能与全球最大的垂直一体化太阳能产品制造商之一的英利合作而倍感兴奋。”

Innovalight专有的油基墨纳米技术和专有的工艺生产平台能让现有的电池片生产线轻松得到升级，既提高电池片的效率也能减少生产成本。

\* If you are the marketing of the solar pv company, please share us your company news.  
请与我们联系分享贵公司的新闻。

### 1. Solar cell and wafer makers intended to push prices up

电池片和硅片制造商意图推高价格

Source: PV insights | 来源: 光伏透视

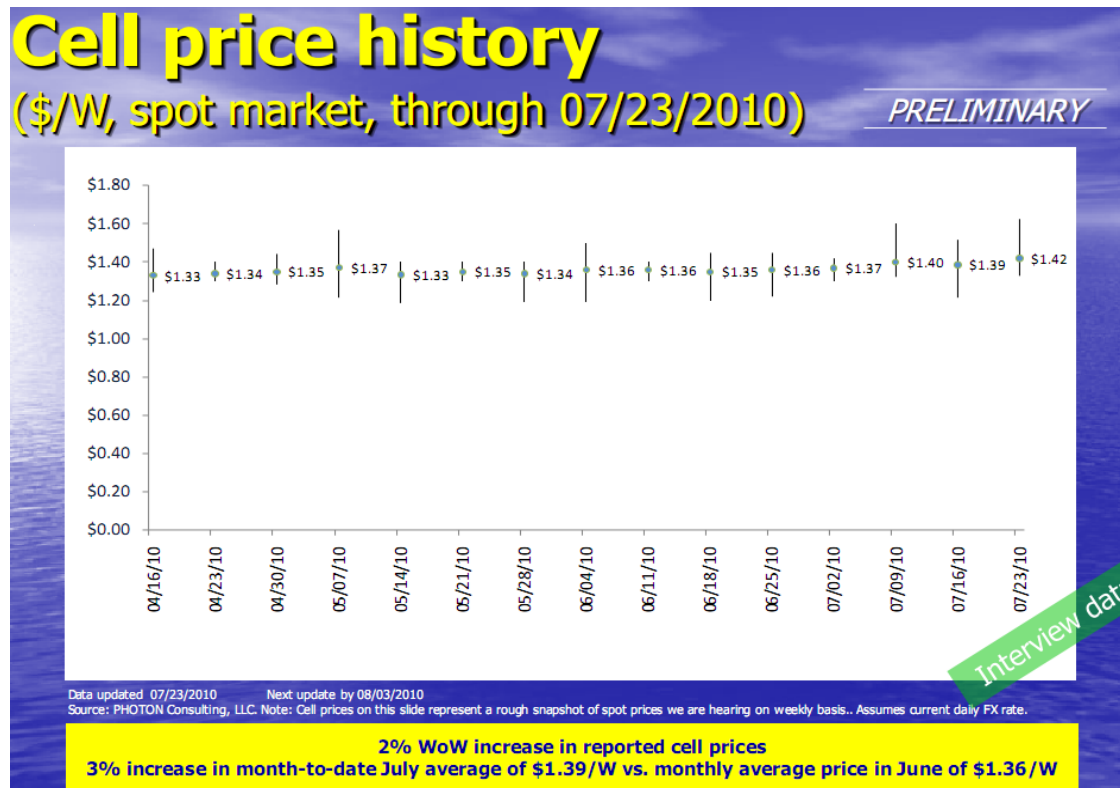
Solar cell and wafer makers are now planning to push price up in August, because their orders seemed to be solid before September. According to PVinsights market survey, Germany demand seemed to be still good until Sep. PVinsights also expect that Germany demand will be still fine in December, because there will be 10% Feed-In-Tariff cut effectively in January, 2011. If solar cell prices really go up in August, solar module prices should be stable then. Moreover, solar wafer makers are still trying to have more poly-silicon supply in August, due to strong demand from solar cell makers. Therefore, poly-silicon makers still have chance to increase selling prices as well in August. PVinsights, www.pvinsights.com, think that Poly-silicon, solar cell and wafer prices will probably keep a slight price uptrend in August.

电池片和硅片制造商在9月前订单可靠的情况下, 计划于8月推高价格。通过PV insights的市场调查, 德国到9月的订单目前看来仍然不错。PV insights同时也预计德国的需求到12月仍然会很旺盛。因为2011年1月将进行下一轮10%的FIT削减。如果8月电池片价格真的走高, 组件价格应该会保持稳定。此外, 由于电池片生产商巨大的需求, 硅片生产商在8月将试图获得更多的多晶硅。因此, 多晶硅在8月仍然有机会提高销售价格。PV insights-www.pvinsights.com认为多晶硅, 电池片, 硅片的价格在8月均将轻微上扬。

### 2. Solar Cell Price and Solar Module Price

电池片和组件价格

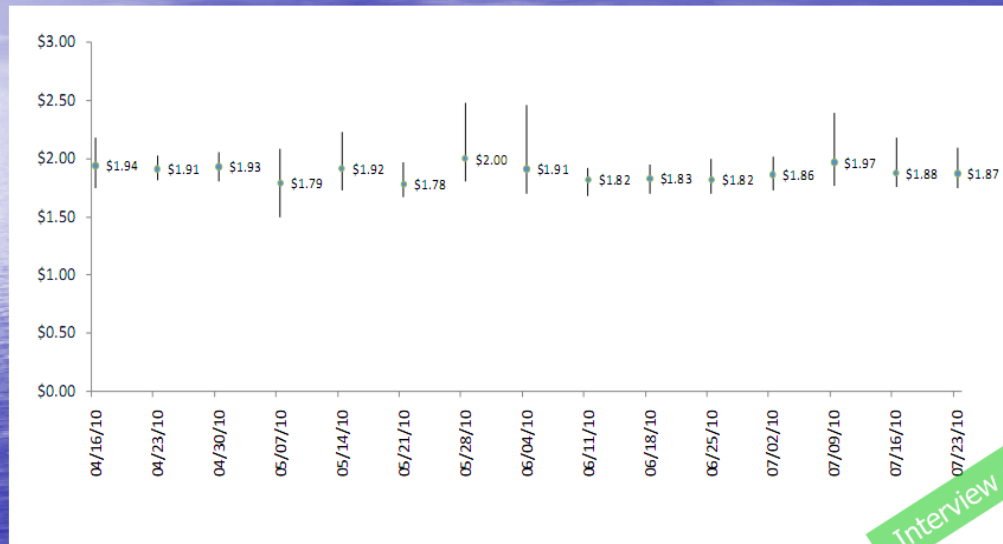
Source: PHOTON Consulting | 来源: PHOTON 咨询



# c-Si module price history – Factory gate

(\$/W, spot market, through 07/23/2010)

PRELIMINARY



Data updated 07/23/2010 Next update by 08/03/2010  
Source: PHOTON Consulting, LLC. Note: Cell prices on this slide represent a rough snapshot of spot prices we are hearing on weekly basis. Each weekly price point assumes the FX rate that was current as of that week. For current week data, FX rate of 1 EUR=1.23USD simple average of daily FX rate between 07/16/2010 – 07/23/2010 was used.

**<1% decrease WoW in reported c-Si module FG price**  
**3% increase in month-to-date July average of \$1.90/W vs. monthly average price in June of \$1.85/W**

1. Upcoming Events\* | 展会预告

Name	Date	Location
25 <sup>th</sup> EU PVSEC	6-10 <sup>th</sup> September, 2010.	Valencia, Spain.
Solar Power International 2010	12-14 <sup>th</sup> October, 2010	Los Angeles, USA.
PVTech Milan 2010	17-19 <sup>th</sup> November, 2010	Milan, Italy.

名称	时间	地点
25 <sup>th</sup> 欧洲光伏巡回展	9月6日-10日, 2010年	西班牙 瓦伦西亚
2010 <sup>th</sup> 美国太阳能国际展会	10月12日-14日, 2010年	美国 洛杉矶
2010 <sup>th</sup> 米兰光伏科技展	11月17日-19日, 2010年	意大利 米兰

2. Exhibition Reservation\* | 展会预定

Name	Date	Location
World Future Energy Summit 2011	17-20 <sup>th</sup> January, 2011.	Abu Dhabi,
SNEC 2011	22-24 <sup>th</sup> February, 2011.	Shanghai, China.
PV Expo 2011	2-4 <sup>th</sup> March, 2011	Tokyo, Japan
Green Energy Expo Korea 2011	6-8 <sup>th</sup> April, 2011.	Daegu, Korea.
Solar Expo 2011	4-6 <sup>th</sup> May, 2011.	Verona, Italy.

名称	时间	地点
2011 阿联酋未来能源展	1月17日-20日, 2010	阿联酋 阿布扎比
2011 上海国际太阳能光伏展	2月22日-24日, 2010.	中国 上海
2011 日本太阳能展	3月2日-4日, 2010.	日本 东京
2011 韩国太阳能及可再生能源展	4月6日-8日, 2010	韩国 大邱
2011 意大利维罗纳太阳能展	5月4日-6日, 2010	意大利 维罗纳

\*If you want to list your solar pv exhibition information here, please contact us at [solar@nicholaswan.info](mailto:solar@nicholaswan.info)  
 如果您想将贵公司的展会信息列于此, 请与我们联系。

\*If you want to reserve the booth, please contact us at [solar@nicholaswan.info](mailto:solar@nicholaswan.info)  
 如果您想预定相关展会, 请与我们联系。

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IMS Research | IMS研究 <http://www.imsresearch.com>

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## Questions&Suggestions | 问题 和建议

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Email: [solar@nicholaswan.info](mailto:solar@nicholaswan.info) if you have any questions or feedback for future reports.  
有任何问题或建议, 请与我们联系。

