

Spot Prices – AT A GLANCE

1 USD = 7.20 CNY, 1 EURO = 1.1343 USD

TOPCon Panels	6-May	WoW change	WoW % change
CMM (\$/wp)	0.088	-0.001	-1.12
DDP EU (\$/wp)	0.117	-0.001	-0.85
DDP US (\$/wp)	0.263	-0.001	-0.38
Polysilicon	6-May	WoW change	WoW % change
GPM (\$/kg)	19.380	-0.320	-1.62
China Mono Premium (¥/kg)	38.500	-0.625	-1.60
China Mono Grade (¥/kg)	32.000	-1.125	-3.40
GPM (\$/wp)	0.041	0	0
China Mono Premium (¥/wp)	0.081	-0.001	-1.22
China Mono Grade (¥/wp)	0.067	-0.003	-4.29


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Benita DREESEN


Sakura YAMASAKI

Spot Prices – Solar Supply Chain

Polysilicon		High	Low	Average	WoW Change	WoW % Change
CIF Asia	GPM (USD/kg)	20.90	16.00	19.380	-0.320	-1.62
	China Mono Premium (CNY/kg)	41.00	37.00	38.500	-0.625	-1.60
	China Mono Grade (CNY/kg)	41.00	30.00	32.000	-1.125	-3.40
Wafers (USD/pc)		High	Low	Average	WoW Change	WoW % Change
FOB China	Mono PERC M10	0.147	0.134	0.142	-0.002	-1.39
	Mono PERC G12	0.217	0.198	0.206	-0.004	-1.90
	N-type M10	0.140	0.134	0.137	-0.011	-7.43
	N-type G12	0.191	0.178	0.182	-0.006	-3.19
Cells (USD/wp)		High	Low	Average	WoW Change	WoW % Change
FOB China	Mono PERC M10	0.0394	0.0369	0.0382	-0.0002	-0.52
	Mono PERC G12	0.0370	0.0357	0.0363	0	0
	TOPCon M10	0.0382	0.0344	0.0362	-0.0003	-0.82
Modules (540-600Wp)		High	Low	Average	WoW Change	WoW % Change
EXW China	Mono PERC (CNY/wp)	0.720	0.680	0.695	0	0
	TOPCon (CNY/wp)	0.720	0.690	0.707	-0.009	-1.26
FOB China	Mono PERC (USD/wp)	0.088	0.082	0.085	0	0
	TOPCon (USD/wp)	0.090	0.085	0.088	-0.001	-1.12
DDP Europe	TOPCon (EURO/wp)	0.112	0.096	0.103	-0.001	-0.96
	TOPCon (USD/wp)	0.127	0.109	0.117	-0.001	-0.85
DDP U.S.	TOPCon (USD/wp)	0.325	0.210	0.263	-0.001	-0.38
Modules (400-450Wp)		High	Low	Average	WoW Change	WoW % Change
FOB China	TOPCon (USD/wp)	0.098	0.090	0.093	0	0
EXW Rotterdam	TOPCon (EURO/wp)	0.115	0.097	0.104	-0.001	-0.95
	TOPCon (USD/wp)	0.131	0.110	0.118	-0.001	-0.84
EXW New Jersey/New York	Mono PERC (USD/wp)	0.520	0.230	0.308	-0.006	-1.91

Market highlights

Corning announced that its **wafer factories** will receive an additional **\$600 million in funding for expansion**, bringing the total investment to \$1.5 billion, with the project is expected to begin operations in the second half of this year.

China's polysilicon prices have **declined for four consecutive weeks** amid persistently subdued trading activity.

GFEX: **Polysilicon futures** for June 2025 delivery in China stood at 37.300 yuan/kg as of April 30, down 3.12% from this week's OPIS spot price.

Global Polysilicon Marker (GPM) reflects the mono-grade premium material made outside of China, CIF Asia prices

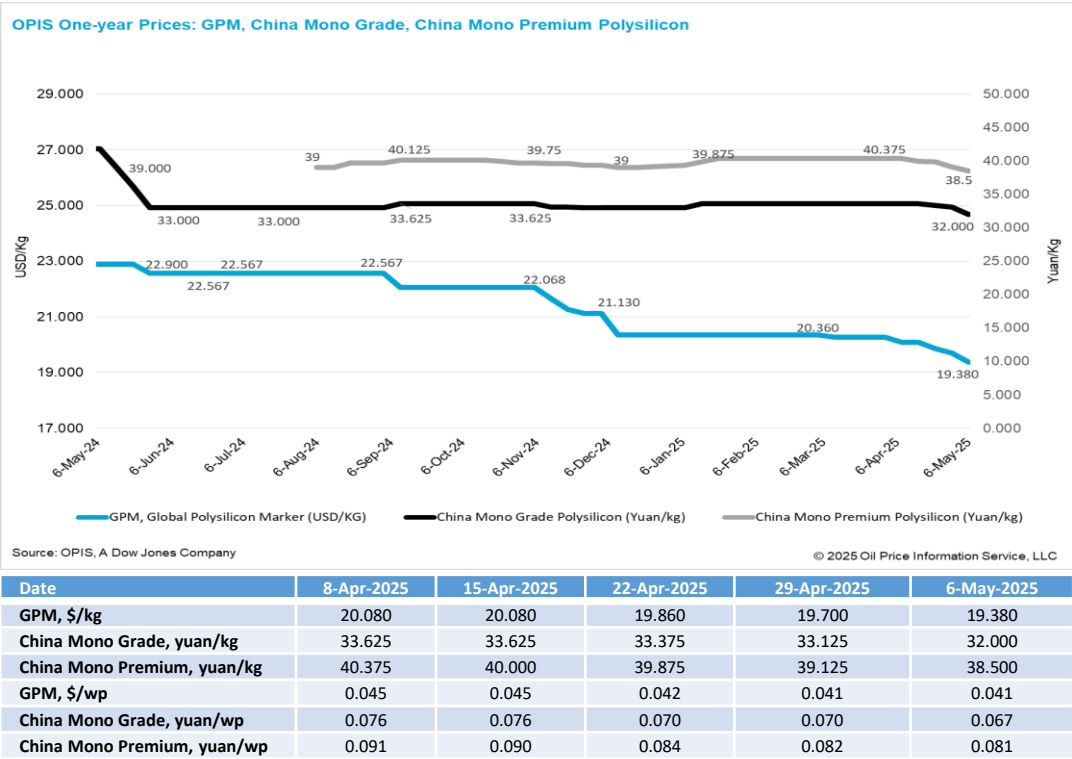
Chinese Module Marker (CMM) reflects the TOPCon module FOB China prices, w.e.f. March 05, 2024

China Mono Premium polysilicon reflects the material for N-type ingot pulling.

Conversion between polysilicon prices assessed in kg and wp: 1 watt of module production requires 2.10 grams of polysilicon, effective Apr. 22, 2025.

Cell efficiency basis: Mono PERC High Cell eff: ≥23.1% (7.63W); TOPCon Cell eff: ≥25.0%.

Module power basis: Mono PERC ≥540wp; TOPCon ≥600W



Polysilicon weekly insights:

Global Polysilicon: The Global Polysilicon Marker (GPM), the OPIS benchmark for polysilicon produced outside of China, was assessed at \$19.380/kg or \$0.041 per watt peak (wp) this week, reflecting a 1.62% decline based on reported buy-sell indications. Pessimism in the global polysilicon market continues to intensify, as supply consistently exceeds the total monthly purchasing volume of buyers. Multiple global polysilicon buyers have confirmed holding substantial inventories, which has contributed to the current subdued trading activity.

Nevertheless, some buyers have continued to place spot orders beyond their long-term contract commitments. These transactions are primarily driven by the greater pricing flexibility of spot purchases, which buyers view as an opportunity to diversify their supply chain at lower costs and enhance their ability to manage future risks.

A major global polysilicon buyer— a Southeast Asian wafer manufacturer with an estimated capacity of 6 GW, is reportedly increasing its wafer production rate from below 50% to over 70% in May, driven by the accelerated build-out of cell manufacturing in Indonesia. However, despite this planned production ramp-up, the company has confirmed holding significant inventories of global polysilicon and has not correspondingly increased its procurement volumes for the time being.

While overall global polysilicon trading volumes remain limited, sources report that one global polysilicon producer—despite not having the largest production capacity—is expanding its share of monthly transactions. This development is attributed to the competitive pricing it offers, which has attracted more buyers. Sources added that the weakening influence of long-term contracts has also led to a broader shift toward flexible spot trading models, further supporting the increased trading share of this particular supplier.

China Polysilicon: The China Mono Grade, OPIS' assessment for mono-grade polysilicon prices within the country, fell by 3.40% this week to 32.000 yuan/kg, equivalent to 0.067 yuan/wp. Likewise, the China Mono Premium, OPIS' price assessment for mono-grade polysilicon used in N-type ingot production, declined by 1.60% week-on-week to 38.500 yuan/kg, or 0.081 yuan/wp.

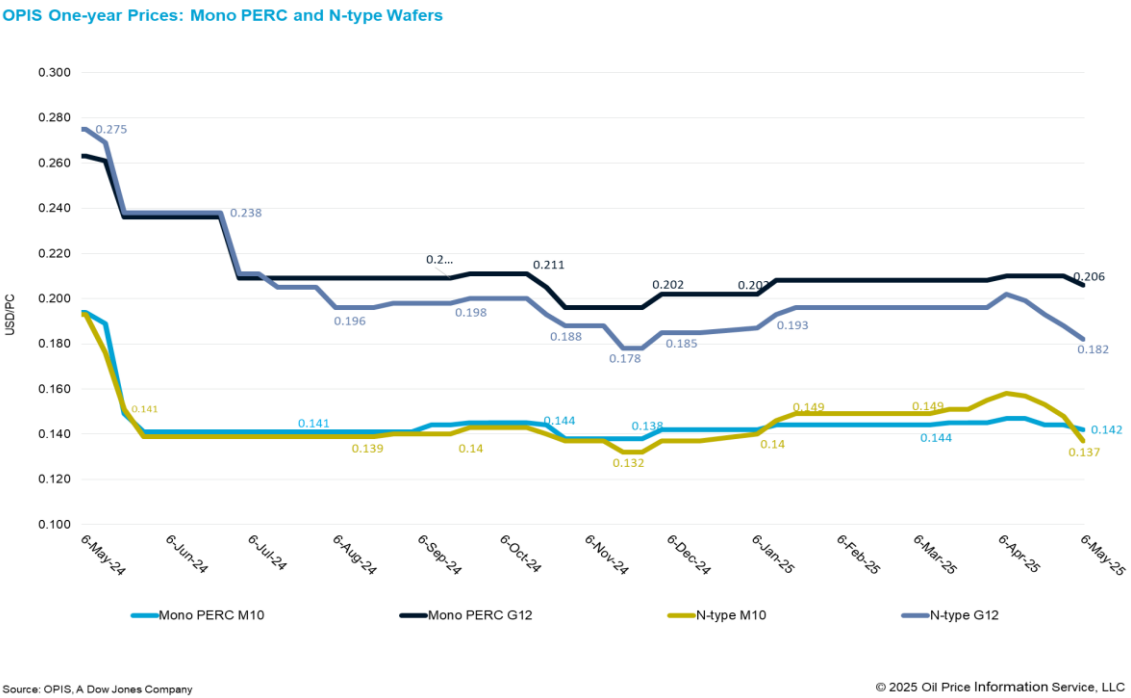
According to trading sources, current polysilicon trading volumes remain very limited. Certain manufacturers have offered a mixed binding price of 34 yuan/kg for N-type and P-type polysilicon, yet no transactions have been concluded. Sources attribute this to the prevailing bearish sentiment surrounding the short-term price outlook across the entire photovoltaic supply chain. As a result, even with reduced price offers from polysilicon producers, wafer manufacturers remain hesitant to commit to contracts.

Sources indicate that the polysilicon market currently lacks any supportive factors, with persistently low operating rates and subdued demand expected to continue in the short term, thereby exerting further downward pressure on prices. From a cost perspective, the key components—electricity tariffs and metal silicon prices—have remained relatively stable, offering no relief to producers under current market stress.

According to the Silicon Branch of the China Nonferrous Metals Industry Association, polysilicon production in May is projected to remain at approximately 100,000 mt, consistent with April's output. Sources suggest that this implies polysilicon factories located in hydropower regions, which typically benefit from seasonal electricity discounts in May, are unlikely to significantly increase their operating rates during this period.

A separate market observer noted that the price trend of Fluidized Bed Reactor (FBR) granular polysilicon is closely aligned with that of Siemens polysilicon. Although inventory levels for FBR granular polysilicon remain within manageable ranges, weak market demand continues to exert pressure, necessitating that its pricing decline in tandem with the broader market in order to maintain its relative cost advantage. "At present, the major FBR granular polysilicon manufacturer is maintaining inventory levels below 20,000 mt and operating at 60–70% capacity," the source added.

Industry insiders believe that polysilicon futures prices have already reflected the anticipated downward trend in the market. According to trading data from the Guangzhou Futures Exchange on April 30, the settlement price for N-type polysilicon scheduled for delivery in June 2025 was 37.300 yuan/kg, declining further to 35.145 yuan/kg for delivery in November 2025. Notably, the June 2025 futures price was 3.12% lower than the current spot price for Chinese N-type polysilicon assessed by OPIS this week, signaling continued market pessimism.



Date	8-Apr-2025	15-Apr-2025	22-Apr-2025	29-Apr-2025	6-May-2025
Mono PERC M10, \$/pc	0.147	0.147	0.144	0.144	0.142
Mono PERC G12, \$/pc	0.210	0.210	0.210	0.210	0.206
N-type M10, \$/pc	0.158	0.157	0.153	0.148	0.137
N-type G12, \$/pc	0.202	0.199	0.193	0.188	0.182

Wafers weekly insights:

FOB China wafer prices saw broad-based declines this week. Mono PERC M10 and G12 wafer prices decreased to \$0.142 per piece (pc) and \$0.206/pc, representing week-on-week drops of 1.39% and 1.90%, respectively. Likewise, N-type M10 and G12 wafer prices fell to \$0.137 and \$0.182 per piece, down 7.43% and 3.19% from the previous week.

The notable downward trend in wafer prices is primarily attributed to the weakening of downstream demand following its recent peak. According to market sources, there are plans to reduce operating rates for both solar cell and module production beginning in May.

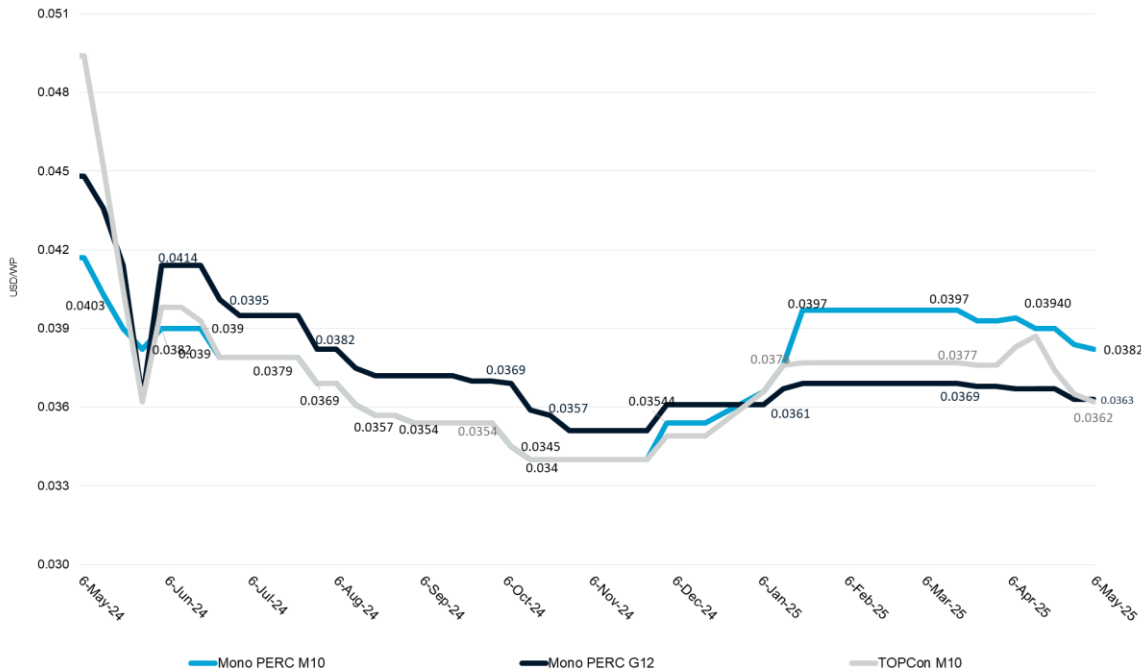
A trade source reported that the transaction price for mainstream N-type 182*183 mm wafers in the China domestic market has approached 1.05 yuan/pc among Tier-2 and Tier-3 manufacturers, while leading producers are currently maintaining a price premium of 0.02–0.03 yuan/pc. The source noted that if this pricing trend persists, integrated major manufacturers may once again halt in-house wafer production and shift toward outsourcing.

Another unfavorable factor is the recent rebound in the price of high-purity quartz (HPQ), primarily used for manufacturing the inner layer of crucibles—critical equipment in ingot production processes. According to a source, the price increase is mainly attributed to reduced HPQ imports from the U.S., coupled with a decline in overall mining output from global quartz sources. Although the current price rise remains modest and has not yet had a significant impact on the wafer market, the source noted that the situation warrants close monitoring.

In terms of global new production capacity, Corning announced during its earnings call last week that its wafer factories will receive an additional \$600 million in funding for expansion, bringing the total investment to \$1.5 billion. The project is expected to begin operations in the second half of this year.

Additionally, a manufacturer that has announced substantial wafer manufacturing capacity in the Middle East is reportedly set to begin construction on its projects as early as the first or second quarter of next year. However, a source familiar with the matter indicated that the company is still evaluating the economic viability of the project, suggesting the possibility of further delays.

OPIS One-year Prices: Mono PERC and TOPCon Cells



Source: OPIS, A Dow Jones Company

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Date	8-Apr-2025	15-Apr-2025	22-Apr-2025	29-Apr-2025	6-May-2025
Mono PERC M10, \$/wp	0.0394	0.0390	0.0390	0.0384	0.0382
Mono PERC G12, \$/wp	0.0367	0.0367	0.0367	0.0363	0.0363
TOPCon, \$/wp	0.0383	0.0387	0.0374	0.0365	0.0362

Cells weekly insights:

FOB China cell prices declined this week amid weaker market fundamentals. TOPCon M10 cell prices fell 0.82% week on week to \$0.0362/wp, while Mono PERC cells dropped 0.52% to \$0.0382/wp, according to OPIS data. Mono PERC G12 cell prices held steady at \$0.0363/wp.

Chinese cell manufacturers remain under pressure amid weaker wafer and module prices. According to industry sources, end-user demand is expected to stay subdued in the near term following front-loading of module installations in the first half of the year.

Cell production levels were elevated from March through early April, with top-tier manufacturers running above 70% utilization, while second and third-tier manufacturers were around 50%, one industry source told OPIS.

However, the outlook for May has deteriorated, with top producers expected to cut operating rates below 60% and smaller manufacturers potentially falling under 30%. The source added that production plans have been revised down from 64GW in April to 58GW in May, with further reductions likely due to continued downstream weakness.

The China Nonferrous Metals Industry Association (CSIA) noted that the end-user installation rush, led by the rollout of two solar policies in May and June, has now ended. As such, downstream manufacturers are expected to reduce operations in the coming months.

The association added that wafer manufacturers' weak demand and limited procurement activity remain fundamental challenges for the industry. Downstream buyers have lowered their price expectations to levels well below the average production costs, putting financial pressure on polysilicon producers for them to sustain operations.

Price indications for domestic Mono PERC M10 cell prices were between 0.29-0.31 yuan/wp, while mono PERC G12 prices averaged 0.285 yuan/wp, with a range of 0.280-0.290 yuan/wp. Domestic TOPCon M10 cell price averaged at 0.284 yuan/wp, with indications between 0.270-0.300 yuan/wp.

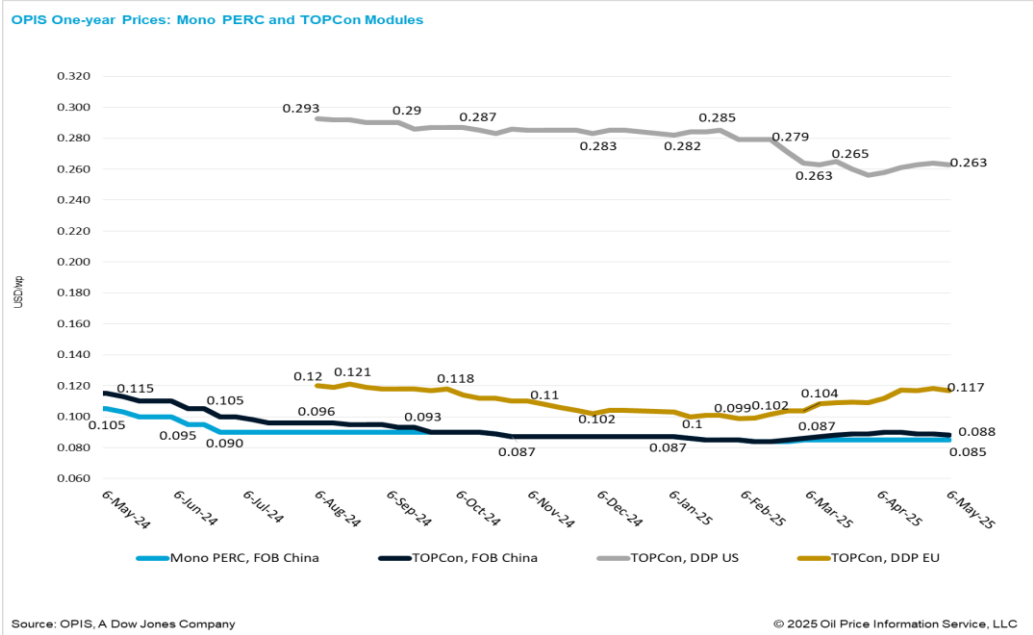
Chinese cell makers continued to expand capacity in the face of first-quarter losses. Tongwei announced an 8GW addition to its Phase IV cell production line at Meishan, bringing the total capacity to 24GW by August 2026.

Strategic realignment in upstream planning also continued. Yingfa Group canceled plans for a second-phase 12GW rod project and instead committed to building an 8GW HPBC cell line, citing demand shifts toward high-efficiency N-type products. The project will be treated as a new build, separate from its existing mono silicon capacity.

Outside China, cell manufacturing plans reflected a growing focus on tariff-free access to the U.S. market. Shijing Solar received approval to build a high-efficiency cell plant in Mexico, aimed at bypassing both the existing anti-dumping and countervailing duties (AD/CVD) and the recently announced reciprocal tariffs.

In the U.S., Boviet Solar announced plans to add 2GW of cell capacity to its North Carolina module base by the second half of 2026. The \$390 million investment will support PERC and N-type technologies, positioning the company to meet domestic content requirements and strengthen its IRA-aligned value chain.

Separately, Corning announced a \$1.5 billion investment to build the largest U.S. solar wafer factory in Michigan, with production scheduled to begin in the second half of 2025. Alongside Suniva (cells) and Heliene (modules), Corning's project is part of a coordinated effort to establish a fully domestic cell-to-module supply chain in the U.S.



Date	8-Apr-2025	15-Apr-2025	22-Apr-2025	29-Apr-2025	6-May-2025
Mono Perc, FOB China, \$/wp	0.085	0.085	0.085	0.085	0.085
TOPCon, FOB China, \$/wp	0.090	0.090	0.089	0.089	0.088
TOPCon, DDP U.S., \$/wp	0.258	0.261	0.263	0.264	0.263
TOPCon, DDP EU, \$/wp	0.112	0.117	0.117	0.118	0.117

Module weekly insights:

China: The Chinese Module Marker (CMM), the OPIS benchmark assessment for TOPCon modules from China fell 1.12% to \$0.088/wp Free-On-Board (FOB) China, with lower indications between \$0.085-0.090/wp. FOB China Mono PERC module prices were stable at \$0.085/wp FOB China with indications between \$0.082-0.088/wp.

On the forward curve, Q3 2025 prices were assessed 2.33% lower at \$0.084/wp, with indications from \$0.082-0.086/wp. Prices for Q4 2025 fell 2.35% on the week to \$0.083/wp while Q1 2026 dipped 2.38% to \$0.082/wp. Q1 and Q2 2026 loading prices were assessed at \$0.082/wp and \$0.081/wp, respectively, with indications ranging \$0.080-0.084/wp.

Prices of FOB China TOPCon ≤450wp modules for spot loading are maintained at \$0.093/wp, with price indications between \$0.090-0.098/wp. According to industry sources, the smaller output 450wp full-black modules for spot loading was concluded to be between \$0.095-0.100/wp basis FOB.

In the domestic market, TOPCon module prices fell 1.26% to 0.707 yuan/wp EXW China, amid lower indications between 0.690-0.720 yuan/wp. Mono PERC modules were assessed stable at 0.695 yuan/wp basis EXW, with prices ranging from 0.680-0.720 yuan/wp.

FOB China modules prices are expected to soften in the coming weeks, following a sharp decline in domestic prices. A top-five module manufacturer source told OPIS that the company has shifted its focus to export markets as the domestic installation rush subsides. However, the source added that the front-loading of module purchases in the first half of 2025 has disrupted normal market activity, with demand projected to weaken further after June.

Domestic PV installations in China are anticipated to decline over the remainder of 2025, with future growth increasingly relying on centralized utility-scale projects, according to industry sources. One market analyst noted that new regulations on distributed generation will likely curb growth in the commercial and industrial segments, making it difficult to replicate the momentum seen in 2024.

The analyst also noted that China’s transition toward market-based renewable energy pricing is expected to negatively impact project revenues. Furthermore, grid integration bottlenecks in some regions could limit the growth of residential solar installations.

Adding to demand uncertainty, a 1.5GW centralized procurement tender for modules and inverters was recently cancelled due to changes in project conditions, according to a company notice. The tender had originally planned deliveries in 500MW batches.

This follows the early April cancellation of PowerChina’s 51GW centralized module tender, the largest in China, citing adjustments to renewable energy pricing policies. These back-to-back disruptions have added to uncertainty around project timelines and near-term delivery planning.

Several top Chinese module manufacturers reported losses in the first quarter, despite higher shipments during the 430 and 531 procurement periods. These losses were largely attributed to inventory write-downs, low line utilization, and persistent cost pressures. Q1 reports from several manufacturers emphasized that improving profitability depends on strengthening export layouts toward higher-margin markets such as Europe and the U.S.

Outside China, investment in HJT module capacity continued. Reliance commissioned a 1GW HJT module line in India as part of a 10GW vertical integration plan, targeting 720W output and 26% efficiency. Separately, Nippon Energy is refurbishing a dormant facility in Dubai to begin 1GW HJT module production, aiming to serve demand in Africa, Europe, and Asia.

In policy update, Australia's Queensland government has introduced stricter approval requirements for large-scale renewable energy projects. As of May 1, major solar farms are classified as "impact assessable," subjecting them to the same comprehensive approval and public consultation processes as other major developments.

Under the new rules, developers must complete a social impact assessment and enter into binding community benefit agreements with local governments before submitting project applications. Deputy Premier Jarrod Bleijie stated that the reforms aim to restore local voices in the planning process, with developers having to "engage early and authentically" with local communities.

Europe: DDP Europe TOPCon prices for modules $\geq 600\text{wp}$ slipped by 0.96% week on week. OPIS assessed the average price at €0.103/wp, with indications between a low of €0.096/wp and a high of €0.112/wp for Tier1 panels.

EXW Europe TOPCon prices for modules $\leq 450\text{wp}$, decreased by 0.95% and were assessed at the average price of €0.104/wp, with indications between a low of €0.097/wp and a high of €0.115/wp for Tier1 panels.

Made in Europe TOPCon modules were down by 0.71% and were estimated at an average price of €0.281/wp.

After a series of price increases in the first quarter of this year—up 8.33% between January and April—DDP module values have begun to decline again. This shift comes amid growing geopolitical and regulatory uncertainties and stagnant demand within Europe.

However, market sources don't expect significant changes in the short term. "Margins in the value chain are still too thin to allow Chinese manufacturers to lower their prices meaningfully," a major project developer told OPIS.

"But if the Chinese market experiences a sharp decline due to weak domestic demand, overproduction could once again push prices down," he added.

Another source confirmed that imported panel prices are expected to stabilize, or at most see a slight decline, over the coming months.

Meanwhile, European producers are reporting growing interest in "Made in Europe" cells and panels. "We're seeing this trend across many European countries," a European PV manufacturer told OPIS.

As Europe's leading PV conference and exhibition Intersolar, kicks off this week in Munich, much attention will be given to last week's historic power blackout across the Iberian Peninsula and parts of France. Especially after rumours that the outage is possibly linked to grid instability and the rapid expansion of solar PV in Spain's energy system.

Spain has installed record levels of utility-scale solar PV capacity in recent years, with a 23% increase between 2023 and 2024. At the time of the blackout, solar energy accounted for 59% of Spain's electricity mix.

"We might see political turbulence for PV in the coming months," a Chinese panel manufacturer told OPIS. "This incident could spark some anti-PV sentiment in Europe and accelerate the push for more storage projects," he said.

"Batteries are a big topic right now, especially in the residential segment," another PV manufacturer noted.

While Intersolar is traditionally the stage for major innovations, sources don't anticipate game-changing announcements this year. TOPCon remains the dominant technology, though interest in HJT developments continues.

"We'll probably see even more TOPCon than before," one source said. "It'll be interesting to watch whether the industry's 'bigger is better' trend in panel size continues, or if we're hitting a practical limit."

Additionally, fully integrated solutions—including storage—are expected to be more prominently featured at PV manufacturers' booths, a distributor told OPIS.

U.S.: The spot price for TOPCon $\geq 600\text{wp}$ modules DDP US fell 0.38% this week to \$0.263/wp, and the spot price for Mono PERC modules $\leq 450\text{wp}$ EXW fell 0.32% to \$0.308/wp. Amid a subdued market, average spot prices have yet to reflect the one to two cent across-the-board price hike sources say they expect as the 10% universal tariff remains in effect, though some individual quotes reflect this trend. Sources continue to see a split in quotes for TOPCon modules from Indonesia/Laos (quoted between 21 and 25 cents/wp) and their Indian equivalent (quoted between 26 and 30 cents/wp). Quotes for US-assembled modules with imported cells continue to be heard between 26 and 39 cents per watt.

OPIS is assessing the DDP price of TOPCon modules in the first quarter of 2026 at \$0.276/wp, and Mono PERC modules in the same period at \$0.266/wp. The forward curve is unchanged week on week, with sources citing hesitation around forward deals from both buyers and sellers.

A large developer source said he sees spot prices for TOPCon modules DDP U.S. from Southeast Asia around 23 to 24 cents per watt, and is no longer quoted 21 or 22 cents, which were common before the announcement of the 10% universal tariff was announced. Modules assembled in the U.S. are between 26 and 27 cents per watt, he said.

Despite that premium, the developer source is focusing his procurement efforts on modules made in the U.S. to hedge against the shifting trade environment, suggesting the possibility of a new AD/CVD petition to investigate suppliers in Laos and Indonesia is just a "matter of when."

On top of that, nearly a month into the three-month pause on 'reciprocal tariffs,' it could be too tight of a timeline to bring modules in before the window closes in July, the source said, adding there's "no way to convince management to do something like that right now."

A small distributor source said he has been able to secure “firm commitments” to offtake nearly 10 MW of modules in recent weeks, or all but 200 kW of his inventory.

TOPCon modules assembled in Southeast Asia imported before the early April tariff announcement have been quoted recently around 26 and 27 cents per watt, while similar U.S. assembled modules are priced slightly higher at 28 or 29 cents, according to the source. At the same time, the source said many customers are “trying to wait as long as possible” to pull the trigger on purchase orders, hoping some clarity will emerge.

The big question mark that looms beyond July for pricing and tariffs makes it so the industry is essentially in a spot market, according to the source. Even domestic assemblers are not offering much indication around forward pricing given they are subject to the tariffs for components.

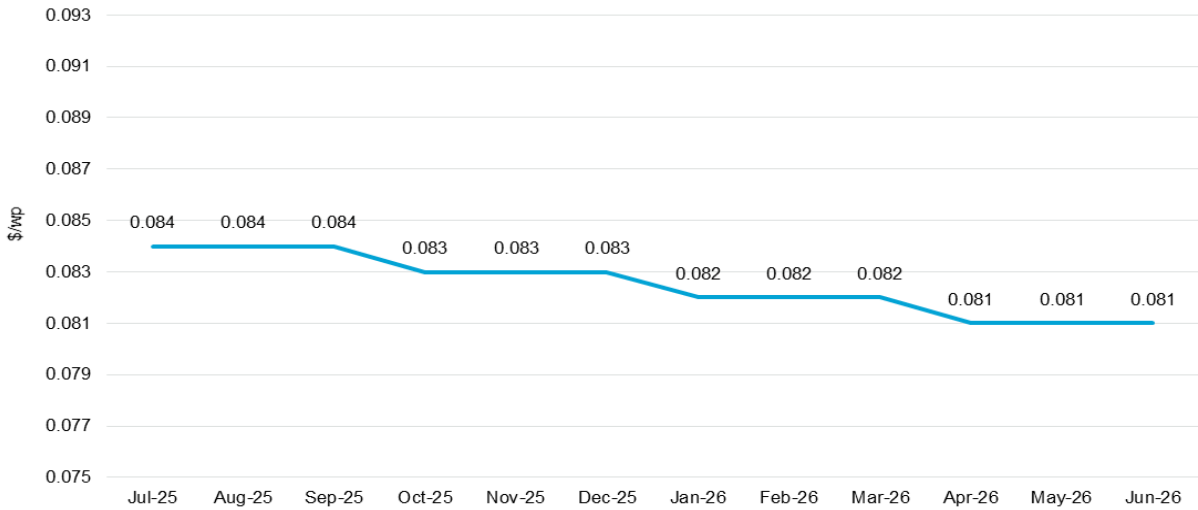
“There’s just so much uncertainty, especially around projects actually getting greenlit,” the distributor said.

The source said he will no longer buy modules on spec once his remaining inventory is sold, and will only buy from suppliers upon request from customers.

Another developer source shared quotes from a distributor that illustrate forthcoming price hikes. If purchased by the end of the second quarter, the developer can have 580wp n-type modules assembled in Southeast Asia by a major supplier for \$0.24/wp EXW or \$0.25/wp DDP. Beyond that, “you will be looking at \$0.29/wp DDP.” U.S.-assembled modules with cells from Korea, currently \$0.29/wp, will “probably” go up to \$0.30 in the third quarter.

TOPCon Modules: Forward Curves

OPIS TOPCon Module Pricing Forward Curve - FOB China

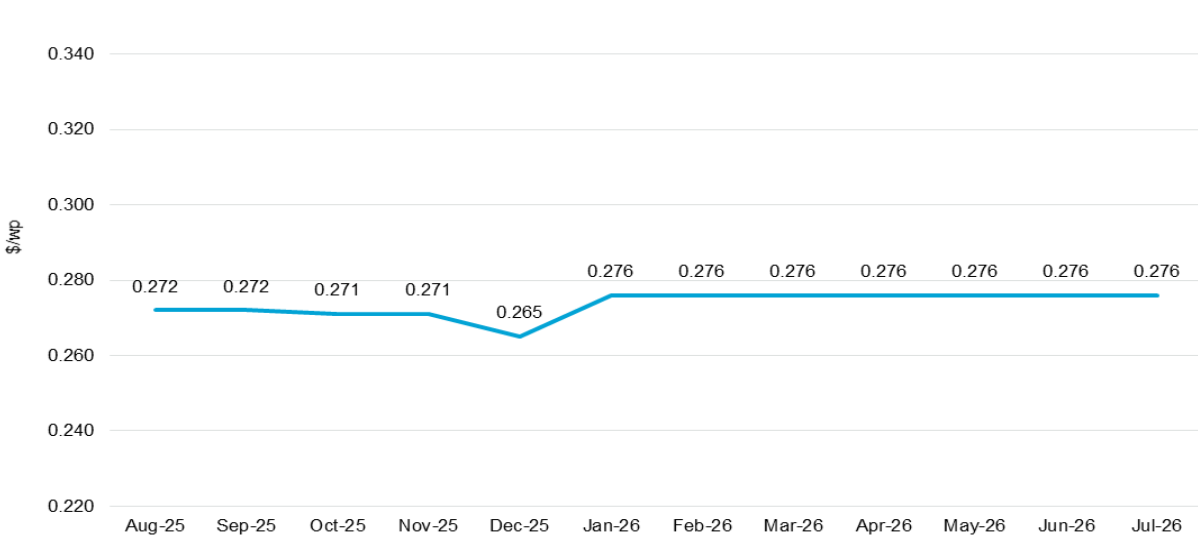


Source: OPIS, A Dow Jones Company

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Forward Month	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26
High	0.086	0.086	0.086	0.085	0.085	0.085	0.084	0.084	0.084	0.084	0.084	0.084
Low	0.082	0.082	0.082	0.082	0.082	0.082	0.080	0.080	0.080	0.080	0.080	0.080
Average	0.084	0.084	0.084	0.083	0.083	0.083	0.082	0.082	0.082	0.081	0.081	0.081

OPIS TOPCon Module Pricing Forward Curve - DDP U.S.



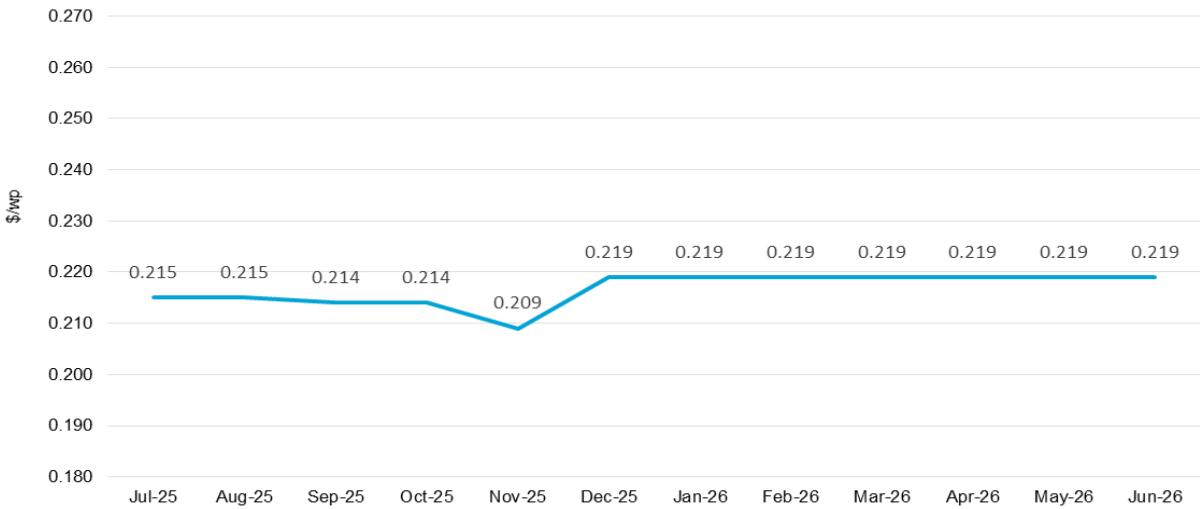
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Forward Month	Aug-25	Sep-25	Oct-25	Nov-25	Dec-24	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26
High	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325
Low	0.215	0.215	0.215	0.215	0.215	0.220	0.220	0.220	0.220	0.220	0.220	0.220
Average	0.272	0.272	0.271	0.271	0.265	0.276	0.276	0.276	0.276	0.276	0.276	0.276

Mono PERC Modules: Forward Curves

OPIS Mono PERC Module Pricing Forward Curve - FOB SEA

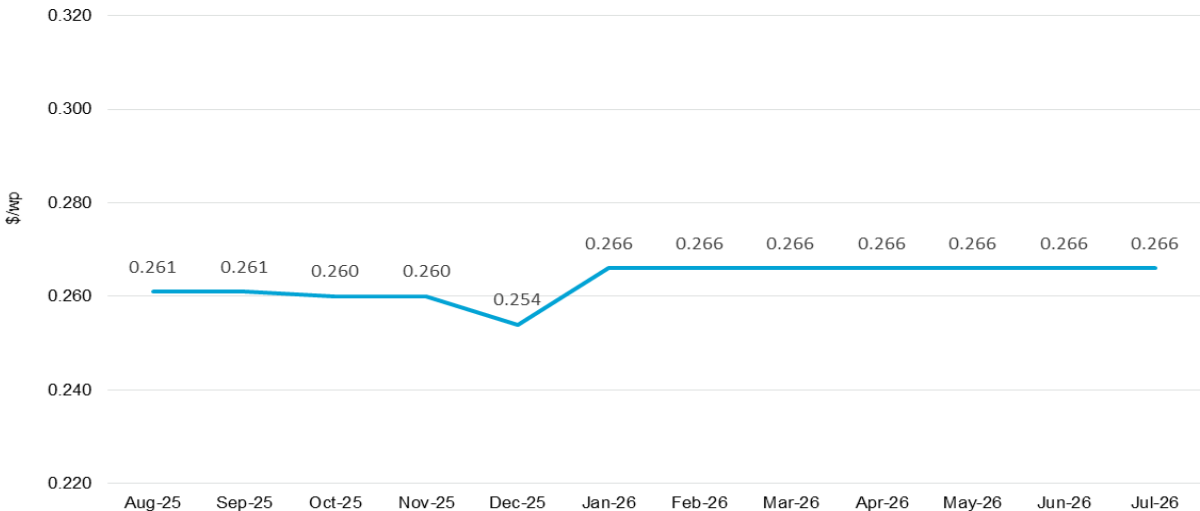


Source: OPIS, A Dow Jones Company

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Forward Month	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26
High	0.262	0.262	0.262	0.262	0.262	0.262	0.262	0.262	0.262	0.262	0.262	0.262
Low	0.157	0.157	0.157	0.157	0.157	0.171	0.171	0.171	0.171	0.171	0.171	0.171
Average	0.215	0.215	0.214	0.214	0.209	0.219	0.219	0.219	0.219	0.219	0.219	0.219

OPIS Mono PERC Module Pricing Forward Curve - DDP U.S.

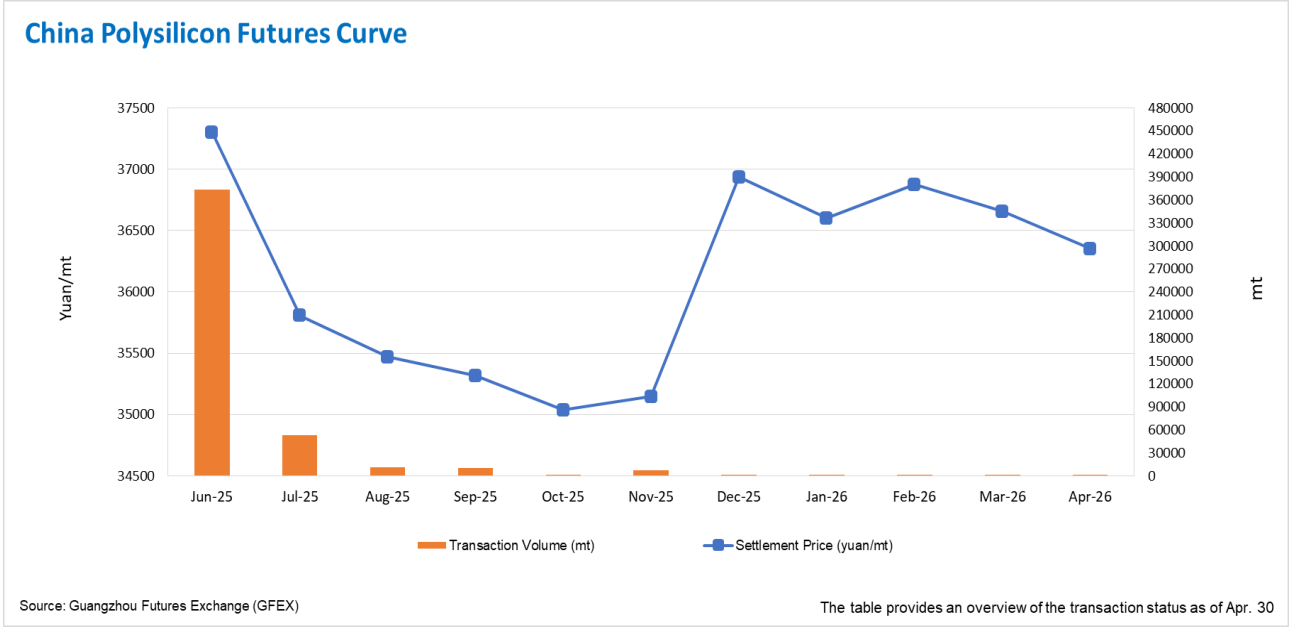


Source: OPIS, A Dow Jones Company

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Forward Month	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26
High	0.315	0.315	0.315	0.315	0.315	0.315	0.315	0.315	0.315	0.315	0.315	0.315
Low	0.195	0.195	0.195	0.195	0.195	0.210	0.210	0.210	0.210	0.210	0.210	0.210
Average	0.261	0.261	0.260	0.260	0.254	0.266	0.266	0.266	0.266	0.266	0.266	0.266

China Polysilicon Futures Curve

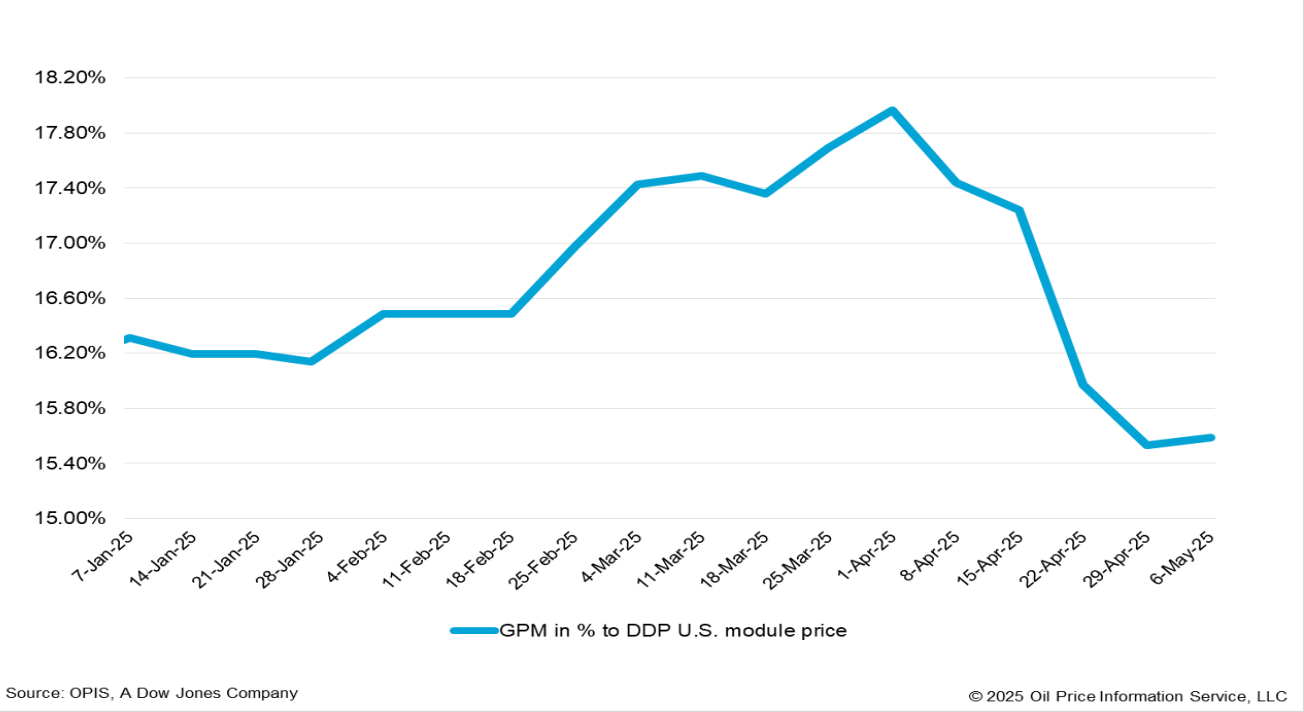


The standard delivery quality for the GFEX polysilicon futures contract align with the quality specifications of China Mono Premium polysilicon as assessed by OPIS, representing material suitable for N-type ingot pulling.

Polysilicon Cost to Module

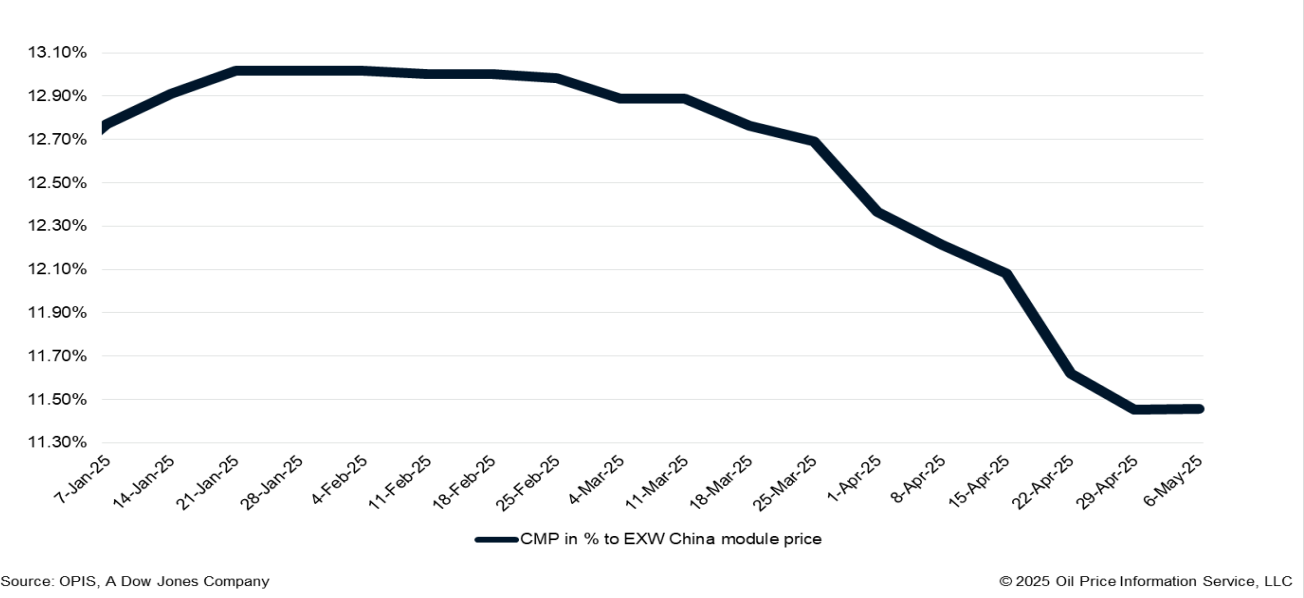
GPM ratio to module prices

GPM ratio to DDP U.S. Module Prices: 2025



CMP ratio to module prices

CMP ratio to EXW China Module Prices: 2025

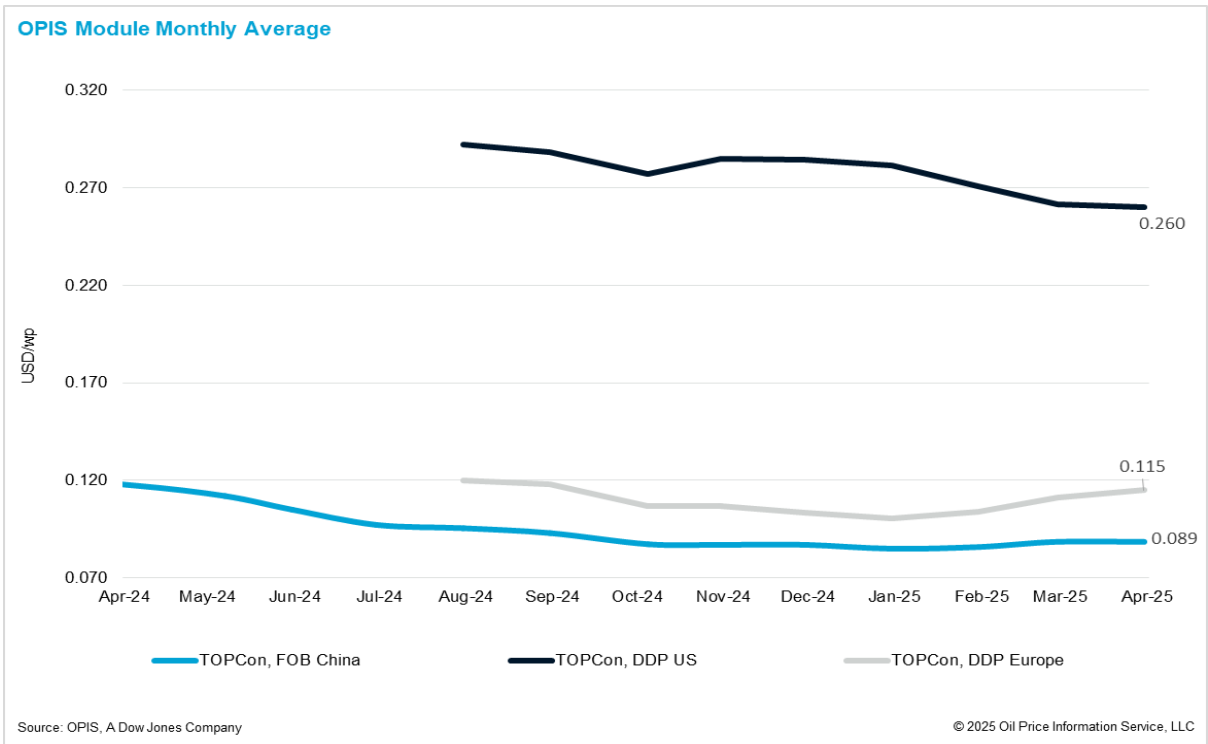
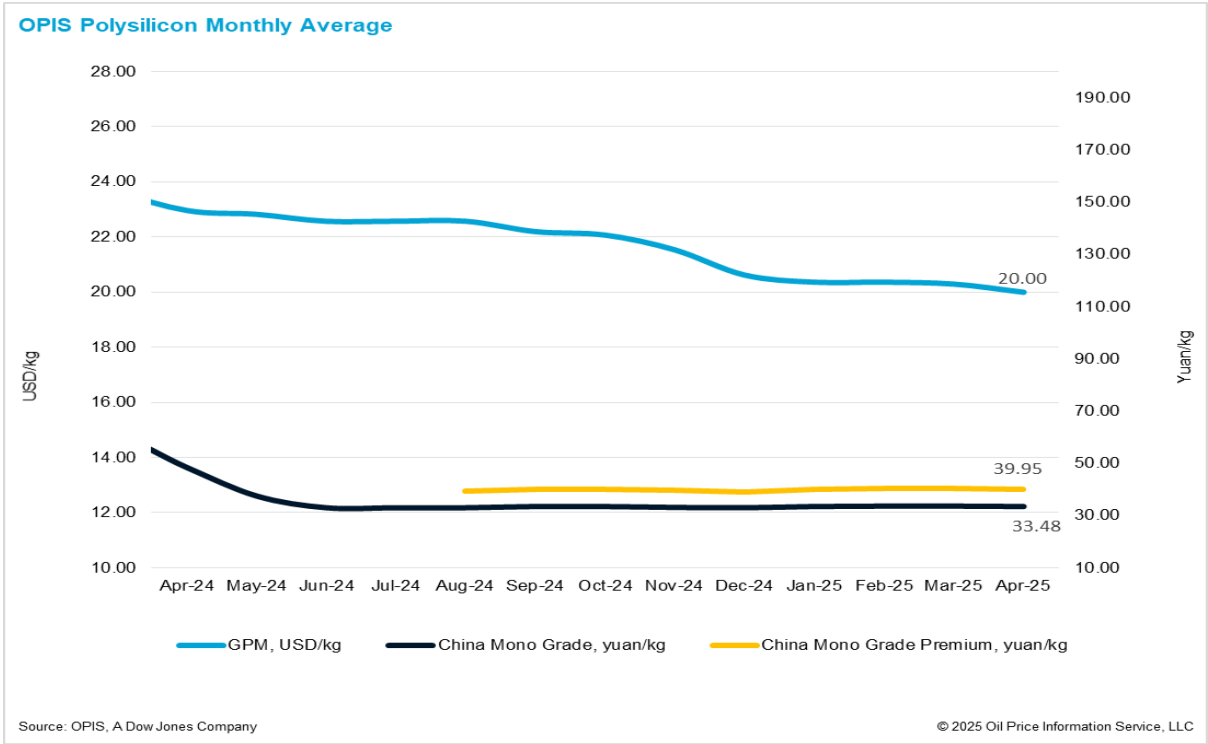


OPIS assessed spot prices for GPM (polysilicon produced outside of China), as a percentage of OPIS assessed spot prices for modules DDP US.

OPIS assessed spot prices for CMP (Mono Premium grade produced in China), as a percentage of OPIS assessed spot prices for modules EXW China factories.

Module refers to TOPCon modules.

Historical Data



w.e.f. March 2024: CMM reflects TOPCon module FOB China prices
(The CMM is updated to represent TOPCon modules instead of Mono PERC modules as TOPCon modules gain market share.)

Solar Manufacturing Capacity Build

OPIS CAPACITY UPDATES, WEEK 19 (30 APR – 6 MAY, 2025)

WEEK OF LISTING	COMPANY	PRODUCT	COUNTRY	PROVINCE/CITY	TYPE	STATUS	DETAILS
19	Corning (Hemlock)	Wafer	USA	Michigan	Update	Under construction	Corning's wafer plant sees additional \$600M funding expansion; total investment at \$1.5B. To be commissioned in 2H25.
19	Yingfa	Cell	China	Sichuan	Update	Under construction	12GW ingot project planning switched to 8GW BC cell project. Received EIA approval in Apr'25.
19	Longi	Cell	China	Shaanxi	Update	Commissioned	3GW BC cell project commissioned.
19	Nippon Energy	Panel	UAE	Dubai	New	Planning	1GW HJT project announced.
18	DAS Solar	Cell	France	Doubs	Update	Planning	5GW cell plant announces timeline: begin construction Oct'25, start operations in 2026.
18	Solex	Cell	India	Gujarat	New	Under construction	2GW TOPCon cell plant to be commissioned early 2027.
18	Toyo	Cell	Ethiopia	Hawassa	Update	Commissioned	2GW TOPCon cell plant commissioned. To be in full production by June'25. Additional 2GW (total 4GW) to be commissioned by Aug'25.
18	Tongwei	Cell	China	Sichuan	Update	Under construction	Meishan Phase IV (16GW) expanded by additional 8GW, to reach total 24GW. Construction period from Mar'25 to Aug'26.
18	Reliance	Panel	India	Gujarat	Update	Commissioned	First 1GW of HJT panel production line commissioned.
18	DAS Solar	Panel	France	Doubs	Update	Under construction	3GW plant under construction. 2GW to be commissioned by end 2025 and another 1GW by 2026.

Sources: OPIS, company announcements. Compiled by OPIS, a Dow Jones company.

2025-05-05

***China's Polysilicon Prices Decline Amid Subdued Trading: CSIA

Polysilicon prices in China fell across the board for the week ended April 30 amid sluggish trading activity, according to data from the Silicon Branch of the China Nonferrous Metals Industry Association or CSIA, an official body representing the country's silicon industry.

The price of Siemens premium chip-sized polysilicon used in N-type ingot production was reported at 39,200 yuan per metric ton (\$5,437/mt), marking a 2.7% week-on-week decline. Siemens dense chunk-sized polysilicon for N-type ingots dropped by 0.8% to 35,600 yuan/mt, while polysilicon used in P-type ingot production averaged 32,300 yuan/mt, down 2.12% from the previous week.

The price of fluidized bed reactor granular polysilicon used in N-type products also declined, falling 2.6% week on week to 37,000 yuan/mt.

The prices were listed in a weekly review posted on April 30 on the association's website and WeChat account.

According to the review, polysilicon trading volumes were subdued during the week ended April 30, primarily due to a lack of consensus between buyers and sellers on pricing. Downstream enterprises have lowered their price expectations to levels significantly below the industry's average production costs, making it increasingly difficult for polysilicon producers to maintain operations under such financial strain.

The association further noted that weak downstream demand and limited procurement activity by wafer manufacturers remain fundamental challenges. With the end-user installation rush -- driven by the implementation of two solar policies in May and June -- now concluded, downstream producers are expected to scale back operations in the coming months.

In response to these conditions, some polysilicon manufacturers are looking to implement further production cuts to weather the market downturn. CSIA said the current environment is unfavorable for the stability of both the quality and pricing of polysilicon products, and poses challenges in sustaining regular shipment volumes.

The association added that all polysilicon manufacturers operating in China are running at reduced load. While production schedules for May remain uncertain, output is expected to be broadly in line with April, likely maintaining a level of around 100,000 mt.

CSIA is the only legal representative of China's silicon industries, according to its website.

-----Reporting by Summer Zhang, szhang@opisnet.com; Editing by Mei-Hwen Wong, mwong@opisnet.com
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2025-05-05

***Corning Boosts Solar Wafer Investment as US Demand Grows

Corning in an earnings call last week said it will increase investment in its forthcoming Michigan solar wafer factory after securing offtake for all of its 2025 capacity and 80% of its planned output over the next five years.

The additional \$600 million will bring the total cost of Corning's project, which is scheduled to start operations in the second half of this year, to \$1.5 billion.

Corning is "accelerating" the plant's ramp up to operations, CEO Wendell Weeks said in the earnings call.

"Recent trade actions are increasing new customer engagement," Weeks said. "The goal of US policy is to ensure domestic energy security so our US solar assets just became even more valuable."

The wafer plant was announced in February and followed up shortly with the news that Corning would join with other manufacturers to produce solar modules made fully in the U.S. Corning, the majority owner of Hemlock Semiconductor, will use Hemlock polysilicon to produce wafers in Michigan. Suniva will treat the wafers in its Georgia plant to make cells, which Heliene will assemble into modules in Minnesota.

-----Reporting by Colt Shaw, cshaw@opisnet.com; Editing by Jordan Godwin, jgodwin@opisnet.com
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2025-04-29

***Solar Module Shipments, Revenue Down for Jinko in Q1

Citing ongoing trade disruption and decreased shipments to the U.S., Chinese module supplier Jinko on Tuesday reported a net loss of \$181.7 million for the first quarter of 2025.

The company shipped more than 19 GW of modules, cells and wafers in the first three months of the year, down 27.7% from the previous quarter and 12.7% from the first quarter of 2024. Total revenues of \$1.91 billion represented a drop of 33% from the previous quarter and 39.9% from a year earlier.

Low prices and decreased demand driven by international trade policies "pressured profit margins" in all segments of the supply chain over Q1, according to Jinko's Chairman and CEO Xiande Li.

"Due to a year-over-year decline in shipments to the U.S. market and a continued decline in higher-price overseas orders, our module prices and profitability decreased both year-over-year and sequentially," Li said.

In response to the disruption of reciprocal tariffs, Li said Jinko, which has 10 GW of manufacturing capacity across Southeast Asia, has "flexibly adjusted our supply chain strategy and regional shipment mix."

The expansion of Jinko's Florida plant to 2 GW of n-type capacity is now complete, according to the earnings presentation, and the "largest overseas n-type production facility" is steadily progressing in Saudi Arabia. That facility will produce 10 GW each of cells and modules annually when it starts operations in the second half of 2026.

The company is making the overseas market its "strategic priority" for its energy storage business. Battery shipments totaled 300 MWh in the first quarter, a "substantial" increase from this time last year, and Jinko expects to ship around 6 GWh worth by the end of 2025, leveraging its PV customer base to offer integrated solar-and-storage options.

The company anticipates shipping between 20 and 25 GW of modules in the second quarter and between 85 and 100 GW for all of 2025. Jinko shipped a total of 92.9 GW in 2024.

Installations were up 31% in China year-over-year in the first quarter, and the average monthly bids for modules are "returning to a more rational level.", which Li attributed to "market self-regulation and high-quality development initiatives."

-----Reporting by Colt Shaw, cshaw@opisnet.com; Editing by Jordan Godwin, jgodwin@opisnet.com
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2025-05-02

***US-Based First Solar: Tariffs Bring 'Significant Challenges'

First Solar -- the leading U.S.-headquartered solar module producer -- is facing a "significant economic headwind" related to the imposition of reciprocal tariffs on countries in Southeast Asia, CEO Mark Widmar said in a first-quarter earnings call this week.

First Solar has manufacturing facilities in India, Vietnam and Malaysia, which are now facing reciprocal tariff rates of 26%, 46% and 24%, respectively. The company will focus its Indian capacity on the Indian domestic market going forward, and will continue to evaluate its options in Malaysia and Vietnam, acknowledging it may need to reduce or idle production in one or both.

Contracts for shipments from Southeast Asia to the U.S. typically involve provisions meant to address changes in trade policy, according to Widmar, with some allowing termination and others requiring the customer to absorb the tariff risk or both parties to split it, with "the majority" stipulating a negotiation period before either party can cancel without penalty.

First Solar has an overall sales backlog of 66.1 GW as of the end of March. That includes 12 GW worth of shipments from Southeast Asia to the U.S. at risk of being terminated by the end of the year, he said.

The company has adjusted its 2025 net sales target range down from \$5.3-\$5.8 billion to \$4.5-\$5.5 billion, and its volume sold target down from 18-20 GW to 15.5-19.3 GW.

"While the implementation of certain new trade policies was a possibility with the change in administration, the new tariff regime imposed has introduced significant challenges to 2025 that were not known at the start of the year," Widmar said.

The 90-day pause "partially mitigates" the impact, but even the lower 10% universal tariff that remains in effect adds "meaningful adverse gross margin impact to sales into the United States," Widmar said. The uncertainty surrounding the end of the 90-day pause will make it difficult to quantify the exact rate to apply to modules in the second half of 2025 and beyond, he added.

Widmar said the long-term outlook for solar demand in the U.S. remains strong, and First Solar is well positioned to serve it as "the only US headquarter PV manufacturer scale."

"By the end of this year, we will be the only (supplier) with a fully vertically integrated US solar manufacturing presence across three states, including a large domestic supply chain," Widmar said.

In addition to its 7 GW factory in Ohio, the thin-film module supplier's 3.5 GW factory in Alabama continued to ramp up production in the first quarter of this year, and "equipment installation and commissioning is fully underway" at the company's 3.5 GW Louisiana factory, which will bring First Solar's U.S. capacity to 14 GW when it starts operations in the second half of this year.

The ongoing budget reconciliation process, and the potential impact of any modification to tax incentives in the Inflation Reduction Act that could result, are also adding to "significant near term uncertainty," Widmar said. The company continues to advocate for maintaining the 45X Advanced Manufacturing Tax Credit, and demand-side incentives like the Investment Tax Credit (ITC) and the Production Tax Credit (PTC), and has been "encouraged" by the response from the administration and members of Congress, Widmar said.

The continued policy uncertainty around the IRA -- which could stretch until the end of 2025 or into 2026 -- could lead to delayed introduction of new wafer and cell manufacturing to the U.S., which First Solar could leverage in offering certainty in the early stages of a project with to customers through "long-dated module sales contracts." First Solar's proprietary thin-film module tech means it does not need cells produced in the US to make "domestic content modules," unlike its crystalline silicon PV competitors.

At the same time, in a field largely dominated by Chinese firms, the company's status as an American entity would leave it "unencumbered" by any future change in law limiting the ability of foreign entities of concern (FEOC) from benefiting from manufacturing tax incentives, according to Widmar.

Widmar also applauded the recent final determination from the Department of Commerce in the anti-dumping/countervailing duties investigation into Chinese solar manufacturers operating in Vietnam, Malaysia, Cambodia and Thailand, which First Solar helped initiate this time last year as part of the petitioning group. He suggested a new petition could be filed to address companies moving to Laos and Indonesia to avoid these new duties, saying "all trade remedy options remain on the table."

-----Reporting by Colt Shaw, cshaw@opisnet.com; Editing by Jordan Godwin, jgodwin@opisnet.com
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