OPIS APAC SOLAR WEEKLY

1 EUR = 1 USD | 1 USD = 138.57 JPY | 1 USD = 6.92 CNY | 1 USD = 79.72 INR

PLM**-Polysilicon Marker	37.675	USD/kg	
Price change WoW	0	0%	-
Price change (since 6 Jan 2022)	9.775	35.036%	A
Average Mono grade in China	310.00	RMB/kg	
Price change WoW	0	0%	-
Price change (since 6 Jan 2022)	75.000	31.915%	A
Average Multi grade in China	172.000	RMB/kg	
Price change WoW	0	0%	-
Price change (since 6 Jan 2022)	72.000	72.000%	
CMM*-Chinese Module Marker	0.268	USD/wp	
Price change WoW	0	0%	-
Price change (since 6 Jan 2022)	0.016	6.349%	

**Average price of Non-Chinese polysilicon (3:1 weight for Non-US polysilicon volumes not subjected to the Chinese AD)

*Average Price of Multi and Mono Perc modules prices FOB China (20:80 weightage based on multi and mono modules estimated market share)

Spot & Forward Pricing

Forecasts are based on industry players' market sentiments.

Polysilicon	High	Low	Average	Change	% Change	Next week	Next Month	In 3 months
PLM (USD/kg)	50.000	33.000	37.675	0	0	A		▼
China Multi Grade (RMB/kg)	230.00	130.00	172.00	0	0	A		▼
China Mono Grade (RMB/kg)	330.00	283.00	310.00	0	0		A	•
Wafers (USD/pc, 1USD:6.92RMB)	High	Low	Average	Change	% Change	Next week	Next Month	In 3 months
Multi	0.452	0.438	0.441	-0.004	-0.90		-	▼
Mono G1	0.826	0.785	0.812	-0.009	-1.10		-	▼
Mono M6	0.830	0.790	0.812	-0.009	-1.10		-	▼
Mono M10	0.992	0.945	0.977	-0.010	-1.01		-	▼
Mono G12	1.270	1.250	1.289	-0.013	-1.00	A	-	▼
Cells (USD/wp, 1USD:6.92RMB)	High	Low	Average	Change	% Change	Next week	Next Month	In 3 months
Multi	0.1320	0.1288	0.1300	-0.0031	-2.33	-	-	▼
Mono Perc G1	0.1790	0.1670	0.1746	0	0	-	-	▼
Mono Perc M6	0.1712	0.1650	0.1678	-0.0002	-0.12	-	-	▼
Mono Perc M10	0.1729	0.1680	0.1702	-0.0003	-0.18	-	-	▼
Mono Perc G12	0.1740	0.1678	0.1693	-0.0005	-0.29	-	-	▼
Modules	High	Low	Average	Change	% Change	Next week	Next Month	In 3 months
Multi (USD/wp)	0.248	0.228	0.234	0	0	-	-	-
Multi (RMB/wp)	1.685	1.570	1.674	0	0	-	-	-
Mono Perc (USD/wp)	0.290	0.260	0.276	0	0	-	-	V
Mono Perc (RMB/wp)	2.050	1.970	1.990	0	0	-	-	▼

*Overseas polysilicon not submitted to Chinese Anti-Dumping.

Prices in RMB include VAT but exclude the 4% import duty since these are domestic polysilicon production.

All A-grade based.

Wafer USD price converted from: RMB price/ 1.13(VAT)/ FX

Multi High Cell eff: > 18.8% (> 4.62w)/ Mono PERC High Cell eff: >22.2% (>5.59 w)

Modules prices incoterms: RoW FOB China

Average module output: Multi 335wp / Mono PERC 540wp

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Polysilicon

				CFR ASIA			
CFR Asia	excluding	ı Hemlock an	d Wacker-US (USD/kg)	42.00			
Non SiLIS	- Polysilic	on not suble	cted to AD in China	40.00 38.20 38.20 38.20 38.35 38.35 38.35			
High	Low	Average	Price change	38.00 39.00 36.50			
50 000	33 000	37 450	0.000	36.00 37.30 37.30 37.45 37.45 37.45			
00.000	00.000	01.100	0.000	36.00			
				34.00			
				32.00			
CFR Asia	Hemlock a	and Wacker-	JS (SiUs) (USD/ka)	20.00			
SiUS - Pol	vsilicon si	ubiected to A	D in China	30.00			
High	Low	Average	Price change	28.00			
50 000	27 500	38 350	0.000	PAST 8/30 9/6 9/27 11/30			
				PRICES EXC HW SIUS			
				MONO GRADE CHINA DOMESTIC MARKET			
				345.0			
				335.0			
				325.0 320.0			
Mono g	rade Chin	a domestic m	arket (RMB/kg)	315.0 310.00 310.00			
High	Low	Average	Price change	303.3 303.4 315.00			
330 000	283 000	310 000	0.000	305.0 308.8 310.0			
000.000	200.000	010.000	0.000	295.0 301.0			
				285.0			
				275.0			
				265.0 270.0			
				255.0			
				PAST WEEKS PRICES 8/30 9/6 9/27 11/30			
				MULTI GRADE CHINA DOMESTIC MARKET			
Mult	i grade Cr	nina domesti	c market (RMB/kg)	195.0			
High	LOW	Average	Price change	185.0 180.0 175.00 175.00			
230.000	130.000	172.000	0.000				
				1/0.0 165.0 160.0 162.5			
				160.0			
				150.0			
				140.0			
				13.0			
				125.0 120.0			
				PAST WEEKS PRICES 8/30 9/6 9/27 11/30			

Source: OPIS Survey

Polysilicon weekly insights:

Due to the scarcity of spot trading this week in the domestic Chinese market caused by the shortage of polysilicon, spot prices for polysilicon have not changed from last week.

The average spot prices for Mono-Si and Multi-Si both held steady at RMB310/kg and RMB172/kg, respectively, without any WoW change.

A source claims that certain wafer manufacturers in desperate need of polysilicon were even willing to order spot polysilicon at RMB330/kg from one of the leading polysilicon producers. The latter rejected the bid for the spot order because it appears that their curtailed production under the power shortage conditions have prevented them from even meeting the quota for long-term contract orders.

"They had to refuse," a market expert commented when asked about this situation, "Long-term supply contracts are much more valuable than a short-term deal; if they would have accepted a short-term deal solely out of financial necessity, it would have confirmed the China government assessment of 'profiteering in the solar industry."

The only silver lining this week is that the power cut in Sichuan was lifted on 26 August. Now that the weather has improved and it has begun to rain, easing the power shortage. As a result, the market is anticipating a growth in the supply of polysilicon in September.

Insiders told us that certain international polysilicon manufacturers have lowered or are planning to cut their production as a result of the high cost of electricity, and they are looking into potential government support for electricity pricing. A European insider added, "Power prices are currently a significant burden for all upstream companies, and energy prices are projected to grow further in the winter season."

Looking ahead, another European insider effectively summarized the current state of affairs:" High demand affected by energy crisis, political decisions and lack of supply will keep prices high and will slow down the predicted price drop."

Wafers



Source: OPIS Survey

Wafer USD price converted from: RMB price/ 1.13(VAT)/ FX

Wafers weekly insights:

Wafer prices have remained stable in the domestic Chinese market this week as a result of the shortage of polysilicon not being reflected in the polysilicon price in a timely manner. However, a sharp appreciation in the value of the US dollar relative to the Chinese yuan resulted in a decline in USD wafer prices across the board.

The Multi wafer price fell 0.90% WoW to \$0.441/pc.

Prices for Mono G1 and M6 wafers were both slipped to \$0.812/pc, a WoW decrease of 1.10%.

With comparable WoW drops of 1.01% and 1%, the Mono M10 and G12 wafer prices were reported at \$0.977/pc and \$1.289/pc respectively.

"The wafer pricing in China stayed steady, and the wafer makers may hold back, because the pain level may have been reached," a senior market insider commented. Since sales of certain cell sizes have already been reported as having shrunk, it is important to keep an eye trained on this situation to determine if it will have an impact on wafer sales in the near future.

Since the Sichuan power rationing was only just lifted, the decline in wafer production caused by it has not yet been entirely restored. If anything, truth will come to light when the two largest wafer manufacturers reveal their September wafer pricing - whether wafer costs will climb in line with anticipated rises in polysilicon prices next month or return to stability owing to reductions in downstream demand.

Cells



Source: OPIS Survey

Cells weekly insights:

This week, the Chinese domestic market saw a drop in cell prices across the board, with the exception of the Mono G1 cell price that remained unchanged WoW at \$0.1746/wp.

The Multi cell price declined to \$0.130/wp on a WoW dip of 2.33%.

The Mono M6 cell price edged down to \$0.1678/wp with a gentle WoW decline of 0.12%.

Mono M10 and G12 cells prices were reported at \$0.1702/wp and \$0.1693/wp respectively, with 0.18% and 0.29% decreases WoW.

A decline in downstream demand for cells appear to be one of the reasons manufacturers are willing to cut prices, in addition to the USD appreciating against the Chinese yuan. Feedback gathered from a handful of cell manufacturers indicate a gradual building of inventory in a small part of the cell segment.

Multi cells with 18.8% and 18.9% efficiency were previously scarce in the market due to a shrinking supply of high-efficiency Multi wafers, but a major Multi cell manufacturer told OPIS that they now have them in stock and would like to offer them at prices lower than the average Multi cell price of \$0.130/wp.

Another sizable cell maker stated that they have approximately one million pieces of Mono M10 cells in stock.

"It is still difficult to lower the price, even though we know that demand for cells, particularly from overseas, is not high," a producer of Mono cells said. Nevertheless, such manufacturers have chosen to continue maintaining their price levels from the previous week, indicating that some cell companies are now under pressure due to high manufacturing costs and slowing sales.

Furthermore, based on the information from a Tier-1 Mono cell maker, their pricing for Mono M6 cells is higher than that of Mono G12 cells. With the rapid development and popularity of large-sized products, this situation appears unbelievable. As a result, we can conclude that the market demand of M6 products is rapidly shrinking.

To top it off, the power outages in Sichuan have left an adverse impact on the overall supply in the cell market, allowing cell prices to remain high for an extended period of time.

Modules

		CHINA				
RMB/wp, EXW						
Category	High	Low	Average	Price change		
Multi	1.685	1.570	1.674	0.000		
Mono Perc	2.050	1.970	1.990	0.000		
China prices are VAT-inclusive.						



FOB China

USD/wp, FOB

Category	High	Low	Average	Price change	
Multi	0.248	0.228	0.234	0.000	
Mono Perc	0.290	0.260	0.276	0.000	
The ROW refers to FOB China prices for following regions:					

South East Asia, Australia Latin America, Europe and the Middle East.



		U.S.A				
USD/wp, FOB						
Category	High	Low	Average	Price change		
Mono Perc	0.420	0.330	0.380	0.000		



Modules



Source: OPIS Survey

Module weekly insights:

Unlike the wafer and cell segments upstream, the module market did not response to the USD strengthening against the Chinese Yuan. If anything, it has been consistent. Our survey of the market this week presented very little or no change to both Multi and Mono PERC module prices. Multi modules continued to warm their seats at \$0.234/wp while Mono PERC modules stood firm at \$0.276/wp, both unchanged WoW.

Last week, three of China's central government agencies including the State Administration for Market Regulation issued a joint statement requesting local authorities to look into possible illegal actions within the solar industry. They alluded to practices such as price gouging and monopolistic behavior along the PV supply chain. The local authorities are directed to coordinate the speed of supply chain expansion to circumvent bottlenecks while vetoing possible hoarding and profiteering activities.

A market expert source shared, "According to my assessment, it appears to be rather an appeal, because the high price environment undermines the gov[ernmen]t targets. Remember, NEA announced 108 GW for this year. Hence, they try to get the message across to better coordinate, etc. I am not sure whether companies take advantage of the overall situation, simply because, none of us could expect such a surge in demand, caused by the Russian invasion in particular."

A source from a Tier 1 manufacturer confirmed that the notice has not made any obvious impact on the market except for a drop in stock prices of some solar manufacturers. Another module supplier reminded us that the polysilicon segment had suffered for year when the did not get their share of profits along the supply chain. She added, "Now it seems to be the perfect time for the segment to make their profits and I don't trust that the companies or businessmen would let this money-making chance go. And from this year on, there are many new players joining the [poly]silicon end, maybe what we actually can expect is the new capacity's release and gradually achieve a better balance between [poly]silicon and the wafer/cell/modules ends."

Last week we mentioned about market observers postponing module price drops in their outlook. Some of our sources remain upbeat about a softening in module prices. "We still expect that Q4 price will go down," offered a key source at a module manufacturer.

An insider at a module maker believes prices "will remain stalemate, but the situation will change next year", sharing with us the company's pricing guidance for Q1 2023 delivery which indicated a relative lower price.

According to a source in the U.S. market, the people most excited about the recently enacted Inflation Reduction Act (IRA) are "at the moment, are my investment friends, rather than those developing projects, or those installing projects or even residential installers. There is no doubt there is good secular impetus but there is also a lot of development inertia that has been impacted [by] the recent uncertainty."

Another describes what lies ahead for U.S. manufacturing: "... domestic producers are becoming aware of the value of their domestic content panels. I think everyone is trying to figure out what quarter in 2024 they can start planning for domestic panels. Aspirant domestic producers are still trying to nail down their sites before targeting start of construction in Q4 and first panels in 2024."

Historical Data PLM and CMM



PLM is the average price of Non-Chinese polysilicon (3:1 weight for Non-US polysilicon volumes not subjected to the Chinese AD)



Average Price of Multi and Mono Perc module prices FOB China (20:80 weightage based on Multi and Mono modules)

2022-08-29 04:54:08 EDT

***SPNEC Solicits Funds For 10GW Solar Plans But Projects' Timeline Uncertain

Solar Philippines Nueva Ecija Corporation (SPNEC), a unit of Solar Philippines that has over-100 megawatt (MW) of solar capacity in operation, is conducting a stock rights offering (SRO), which allows existing shareholders to buy more of its stocks.

The targeted P2.8 billion (\$50 million) from the SRO "will be a catalyst for its goal of expanding into a P400-billion renewable energy company with a total capacity of 10 gigawatts (GW)", Solar Philippines said on its website.

Among the initiatives announced by the firm is a massive 3.5 gigawatt (GW) photovoltaic (PV) solar farm.

This, together with a 500 megawatt (MW) solar project that is under construction in Luzon, is supposed to make the combined 4 GW farm the biggest in the world, the firm said on its website.

But to gain the coveted title, the full 4 GW capacity of the project would have to start operations ahead of other ambitious initiatives in the making. However, market sources said they are still unclear of when Solar Philippines' project is likely to start commercial production.

"[There are] too much uncertainty and potential problems," an experienced Southeast Asia-based industry observer told OPIS, adding that he did not know many who would invest in a project without a timeline.

A critical part of Solar Philippines's plan would be for SPNEC to procure another 2,500 hectares of surrounding land in the provinces of Nueva Ecija and Bulacan, but this will depend on the success of the ongoing SRO, it admitted on its website.

The market is also waiting to see if it can secure enough financing and lock in adequate amounts of power purchase agreements (PPA) to guarantee long-term sales for power distribution.

The media spotlight on Solar Philippines has mostly been on its 28-year-old CEO Leandro Leviste - a Yale university alumni whose mother is Loren Legarda, deputy speaker of the Philippines' House of Representatives and a candidate for vice president in the last election, while his father was the governor of Batangas province outside Manila, according to the news articles featured on the firm's website.

Solar Philippines raised eyebrows this year after foreign fund managers were reported to be investing in it, reflecting the growing interest among ESG (environmental, social and governance) investors in renewable energy, according to a Philstar story report on Jan. 19 featured on its website.

The firm has been deploying solar on rooftops since 2014 and has grown a portfolio of solar power projects scattered across the country.

Currently, two of its projects are in full operation - a 63MW solar farm in Calatagan operating since 2016 and another 100MW one at Tarlac operating since June 2020.

The 500MW Nueva Ecija Solar Farm under construction in Luzon will be built in two phases. Phase 1A (50MW) is scheduled to be commissioned in mid-2023 while the target completion for Phase 1B (175MW) has been set for the end of 2023 or within nine months from when relevant funding is secured, according to the firm's website.

The remainder 275MW under Phase 2 will follow suit, it added.

Solar capacity in the Philippines has been increasing rapidly in recent years, with demand and deployment expected to grow, thanks to a significant pipeline of projects approved or under development.

According to REN21's 2019 Renewable Energy Status Report on Asia and The Pacific, the Philippines had only 7GW of renewable energy power generation capacity in 2018, compared to its neighbors, Thailand at 10GW and Vietnam at 19GW.

Of the 7GW, only 896 MW was derived from solar. By 2022, solar power generation capacity in the Philippines is expected to rise to 3GW, the report added.

The latest regulations proposed in the country's National Renewable Energy Program (NREP) 2020-2040 will push electric utilities to target at least 35% of their power needs from renewable sources by 2030, compared with 21% in 2020.

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2022-08-26 04:21:27 EDT

***A Net Zero Australia Requires Massive Solar And Wind Investments: Study

Australia will need to expand its renewable generation capacity to 40 times today's generation capacity of the national grid for the country to reach its net zero by 2050 goal, according to a study released Thursday.

Launched last year, the "Net Zero Australia" study is a collaboration between the University of Melbourne, the University of Queensland, Princeton University and management consultancy Nous Group.

Applying Princeton University's framework to the Australian context, the study uses modelling to identify detailed pathways and infrastructure requirements by which Australia can transition to net zero and become a major exporter of low emissions energy by 2050.

Among its key interim findings are that solar and wind, both offshore and onshore, will be the main sources of energy for domestic use while carbon capture, utilization and storage (CCUS) will play an important complementing role.

The country will need to add renewable energy capacity at a much faster pace than it has, which will require more than A\$100 billion in investments each year in the coming decades, from around A\$90 billion today.

In eight years' time, Australia will need to have installed renewable generation capacity equal to three times today's coal-dominated generation capacity, 15 times by 2040 and 40 times by 2050.

The study envisions the country to be powered by 1.9 terawatts of solar, 132 gigawatts of onshore wind and 42 gigawatts of offshore wind by 2050.

CCUS is required to help Australia reach net zero in all the scenarios modeled by the study.

A high rate of renewable rollout will cap or reduce the need for CCUS but if the rollout is constrained, as much as 1 billion mt/yr of carbon will need to be sequestered by 2060.

The study also said Australia has the resources to build a new clean export industry to replace its two biggest energy exports today - thermal coal and gas

- by producing clean energy carriers such as hydrogen and ammonia.

It projects green hydrogen, produced from solar and to a less extent wind, to become Australia's largest clean energy export.

To support the projected growth in clean energy exports, the country will also need about 1 to 1.3 million new workers to work on renewable generation, transmission, energy storage, clean hydrogen and CCUS.

Most of the new workforce will be based in the export-oriented northern part of the country, according to the study.

The study also found that emissions from agricultural use of the land, including land clearing, ruminant animals and waste are unlikely to reach net zero by midcentury.

This means that emissions-intensive industries may not be able to rely on offsets from land and forestry to reach net zero, it said.

The two-year Net Zero Australia study is funded by APA Group, Dow, Future Energy Exports, Future Fuels, Worley Ltd. and the Minderoo Foundation.

--Reporting by Trisha Huang, thuang@opisnet.com; Editing by Hanwei Wu, hwu@opisnet.com © 2022 Oil Price Information Service, LLC. All rights reserved.

2022-08-23 11:25:55 EDT

***Norwegian Climate, Pension Funds Buy 49% Stake in Indian Solar Power Plant

Norfund's Norwegian Climate Investment Fund and Norway's largest pension company KLP have agreed to buy a 49% stake in a 420 megawatt (MW) solar power plant in India developed by Italian multinational manufacturer and distributor of electricity and gas Enel, according to a press statement Aug. 19.

Norfund and KLP together will take a 49% stake in the solar energy project Thar Surya 1 for approximately 2.8 billion rupees (\$35 million), according to the statement. The 420 MW new solar power plant is being built in Rajasthan by Enel Green Power.

The climate investment fund will allocate 10 billion Norwegian krone (\$1 billion) over the next five years, with 1 billion coming from Norfund's capital and 1 billion from the state budget each year. Since Norfund can advance parts of the fund that originate from Norfund's own capital, the total amount in the fund could already reach 2.8 billion krone by the end of 2022.

The plant is expected to deliver more than 750 gigawatt hours/year and, by using solar-generated energy instead of coal, it will avoid the production of more than 615,000 metric tons/year of carbon dioxide emissions, said Norfund.

"We are extremely glad to have this large-scale investment in place," said Tellef Thorleifsson, CEO of Norfund in the statement. "If India is to base its energy needs on renewables there is an enormous need for capital."

--Reporting by Rob Sheridan, rsheridan@opisnet.com; Editing by Yazdi Merchant, ymerchant@opisnet.com © 2022 Oil Price Information Service, LLC. All rights reserved.

2022-08-23 05:10:01 EDT

***S Korea Budgets KRW21.3 Billion For Green Energy Projects

The South Korean Ministry of Trade, Industry and Energy announced via a press release the second International Joint Energy Research Project on Wednesday, with a budget of KRW 21.3 billion (\$15.85 million) for 12 green energy projects over three years.

This was significantly higher than the first round, which was announced in February, for KRW 4.8 billion budgeted for three projects with Spain, Norway and the Czech Republic over three years.

The KRW 21.3 billion will be split among the following 12 projects:

• KRW 10.8 billion for a research and development (R&D) project each in the fields of solar power, wind power, energy storage system (ESS), smart electricity grid, energy efficiency improvement and nuclear power.

• KRW 4.2 billion for an overseas demonstration project each in the field of hydrogen and ESS.

- KRW 4.2 billion for two joint projects with Australia in hydrogen, and core minerals.
- KRW 1.2 billion for a joint project with Singapore in cybersecurity in smart electricity grid.

• KRW 900 million for a joint project with Thailand in bioenergy.

The key objectives of the joint research projects are to develop new technologies to combat climate change, develop the domestic energy industry and to revitalize the introduction of South Korean technology in overseas markets.

(\$1 = KRW 1,344.12)

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2022-08-22 05:48:57 EDT ***Heatwave-Fuelled Power Rationing Hit Factory Production in Southwest China

Power rationing, arising from record-breaking heatwaves and severe drought in southwest China, has put many factory productions in the regions on halt, including those involved in the solar supply chain, according to multiple company filings to the stock exchanges in Shanghai and Shenzhen over the last few days.

Sichuan, a province in southwest China with a population of 83.7 million, is experiencing its longest sustained heatwave since 1961 when the recordkeeping started, according to China Meteorological Administration.

Since July this year, Sichuan province has been witnessing unseasonably high temperature and low rainfalls that, coupled with a historical high level of power usage, have led to a power crunch, the Sichuan provincial government said in a statement today.

Sichuan, which hosts the upper portion of China's longest river, the Yangtze River, and many other water streams, gets 80% of its electricity from hydropower. This summer's heatwave has been reducing its hydro power generation sharply, from a typical 900-million-kilowatt hour(kWh) per day to 450 million kWh per day, with the volume declining by 2% on a daily basis, Sichuan government said.

The heatwave has also been driving a rapid surge in power usage, led by air-conditioning, which exacerbated the power crunch.

On August 15, Sichuan provincial government ordered factories in 19 cities in the province to shut down or scale back production fox six days to give priority for electricity usage for residential homes, according to a notice seen by OPIS and referenced in company filings.

The power cut in industrial production will be extended to August 25, according to people familiar with the matter and one company filing on Monday.

Jinko Solar, one of the world's largest solar module producers, said on Monday that its factory production lines in Sichuan have been following the government order to reduce to minimum running rate, in its filing to the Shanghai Stock Exchange. Jinko Solar added it is unclear when it will return to full production, which will impact its performance for the year.

Tongwei and GCL, two major producers in polysilicon, the upstream material in the solar value chain, said their Sichuan-based production have been affected with the full impact being evaluated, according to Securities Times, a China's state-owned financial media.

The impact is not limited in the solar industry. Lier Chemical, which produces mostly insecticides and pesticides, also issued a stock exchange filing on Monday saying that the power rationing which lasts until August 25 will adversely affect its operating performance.

Last week, Tesla Inc. and SAIC Motor asked Shanghai's government to help ensure its suppliers in Sichuan province would have sufficient electricity supply during the stipulated power rationing period, according to a government letter seen by OPIS.

--Reporting by Patrick Han, phan@opisnet.com; Editing by Carrie Ho, cho@opisnet.com © 2022 Oil Price Information Service, LLC. All rights reserved.

2022-08-18 03:04:39 EDT

***Energy Crisis Boosts European Solar PV Deployment

Europe is riding a new wave of solar PV capacity growth this year after tensions over the Ukraine war with major fuel supplier Russia led to energy shortages that have further fueled the continent's renewable power ambitions, according to several sources.

"European solar is set to overshoot even our highest deployment projections for 2022, and support the continent's shift from gas," said research firm SolarPower Europe (SPE) in a report on July 20.

New solar installations will likely reach 39 GW, a 48% jump from last year's all-time high of 27 GW, SPE added.

The UK, for instance, saw an 80% increase in new solar PV deployment during the first half (H1) of 2022 compared to the same period last year, with 556MW of capacity installed, according to the local trade association Solar Energy UK.

According to Germany's Federal Network Agency (Bundesnetzagentur or BNetzA), the country's half-year solar PV installations in 2022 have surpassed 3.217 GW, up 17% from 2.75 GW on-year. In June, Germany installed 615MW of solar energy, a 43.5% increase from 428.5MW a year ago. This puts the nation on track to end the year with an annual total of more than 6 GW.

The trend is also evident in export data from the world's largest PV module producer China, which accounted for 82.3% (181.8 GW) of the world's total output (220.8 GW) in 2021.

The country exported 78.7 GW of PV modules in H1 2022, of which 42.4 GW went to Europe. This represents a 137% on-year increase and accounts for 53.88% of China's overall module export volume, China's customs data showed.

The second half of the year could see even more PV module installations in Europe, with the continent expected to face a power crunch as heating demand rises towards the winter.

As part of the sanctions against Russia announced in April, the European Union (EU) has banned the import of Russian coal beginning August 10, while Russian gas supplies have dwindled following political spats with Moscow.

Europe's shortfall in fossil fuels can be seen in rising power prices, a collective effort to cut gas consumption until after the 2022/23 winter and a push towards alternative energy, including solar power.

For example, based on the UK's latest wholesale energy prices, the cap on the most widely used household energy contracts is projected to rise by about 70% at the next change in October, taking average annual household dual-fuel bills - covering both gas and electricity - to more than £3,359 (\$4,103), said analysts at Cornwall Insights.

The cap is expected to rise again in January 2023, to £3,616 a year, and remain above £3,000 a year until at least 2024, Cornwall Insight said. According to BNetzA, declining Russian gas supplies may cause German consumers' monthly heating costs to triple the following year.

EU member states agreed on July 26 to take measures of their own choosing to cut their gas demand by 15% between August 1, 2022, and March 31, 2023, against their average consumption over the previous five years, to strengthen the bloc's energy security.

The purpose of the gas demand reduction is also to save energy ahead of winter to prepare for possible disruptions of gas supplies from Russia. It makes it critical for Europe to locate alternate energy sources to offset the gas shortfall.

Europe has aggressively implemented several new energy incentive programs, including the adoption of new standards for the deployment of solar power, in response to the energy crisis and power problem.

The German Federal Parliament's Bundestag has adopted the Easter Package, allowing the nation to pursue the earlier-proposed goal of 215 GW of total installed solar PV capacity by 2030 and 400 GW by 2040.

The government's annual targets for the solar PV industry, supported by the Renewable Energy Sources (EEG) 2023, are now much clearer.

Germany will strive for 88 GW of solar power by 2024, 128 GW by 2026, 172 GW by 2028, 215 GW by 2030, 309 GW by 2035, and 400 GW by 2040 on the indicated expansion route. Accordingly, Germany will need to build roughly 18 GW of solar deployment per year, which is comparable to what the EU-27 installed in 2020.

On July 26, the European Commission's special energy committee approved a new regulation that will raise the EU's new installed capacity target for this year to 39 GW from 29.9 GW, a jump by a third. With 26 GW installed in 2021, the 39 GW target represents a 13 GW, or 50%, capacity increase over last year, and a doubling of 2020's installed capacity.

Previously, as part of its REPowerEU Plan, the EU set a goal to bring online over 320 GW of solar PV newly installed by 2025, more than doubling today's level, and almost 600 GW by 2030. These frontloaded additional capacities can displace 9 billion cubic meters of natural gas consumption annually by 2027.

"Every megawatt of energy generated by solar and renewables is fewer fossil fuels we need from Russia," said Walburga Hemetsberger, CEO of SPE.

"European solar is rolling out as fast as possible in anticipation of a difficult winter," she added.

---Reporting by Summer Zhang, szhang@opisnet.com; Editing by Carrie Ho, cho@opisnet.com © 2022 Oil Price Information Service, LLC. All rights reserved.