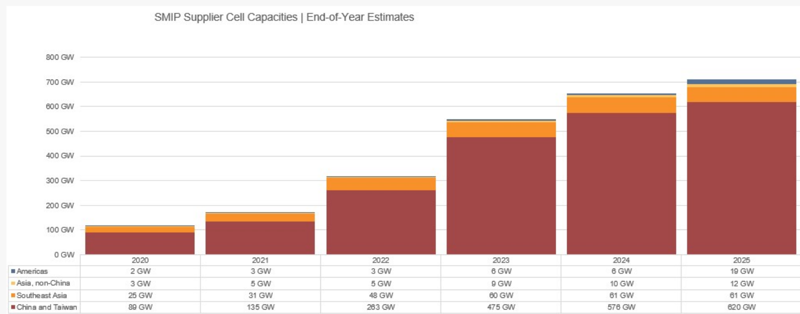
Global solar production continues to expand rapidly, with rising focus on highly efficient n-type technologies

CEA's PV Supplier Market Intelligence Report for Q3 2022 forecasts further rapid expansion, ambitious plans for TOPCon and HJT products



DENVER, COLORADO, USA, February 14, 2023 /EINPresswire.com/ -- According to Clean Energy Associates' PV Supplier Market Intelligence Program report, leading solar suppliers reported increased production capacity of approximately 10% in the third quarter of 2022 for ingots, wafers, cells, and modules.

More capacity increases are ahead: the surveyed suppliers' announced expansions to bring the annual global solar production capacity above 700 GW by 2025, nearly double the 360 GW reported in Q3 2022.

The quarterly report is authored by the Market Intelligence team at Clean Energy Associates, the leading solar and storage supply technical advisory. It is available by subscription and includes insights gathered from 1-on-1 interviews with technical leaders at many of the industry's leading suppliers.

The latest report continues to follow the progress of several industry trends, including:
• Next-generation n-type TOPCon and HJT capacity expansions
• Reduced future polysilicon prices driven by significant new production capacity
• Tongwei's rapid entrance into module production
• China's strong installation market

Many suppliers are reaching PERC cell efficiencies of 23.2% in mass production. While most cell capacity brought online this quarter employs p-type PERC technology, many future cell expansion plans are earmarked for next-generation n-type TOPCon or HJT technology. For these technologies many suppliers are announcing cell efficiencies above 24% in mass production. N-type technologies will increasingly compete with incumbent PERC technologies as costs come down via increased production scale.

Supplier module capacities reached over 360 GW in Q3 2022, with recently added capacity adding up to 41 GW. By the end of 2022, module production capacities were on track to reach nearly 400 GW.

Non-China outlook

- While there is more than enough module manufacturing capacity outside the countries named in restrictive U.S. trade policies to meet expected U.S. installations, the report found that almost all of this capacity is from non-bankable, non-established producers with little to no U.S. track record.
- There are currently 5.6 GW of ingot/wafer, 48.3 GW of cell, and 51.9 GW of module capacity online outside of China. These capacities are projected to grow to 17.1 GW, 75.4 GW, and 76.0 GW respectively.
- Most suppliers offer non-China 182 mm or 210 mm products and need additional time to finalize 210 mm offerings due to the higher equipment upgrading costs.

The executive summary of the report can be downloaded for free and a complete copy purchased here.

About Clean Energy Associates
CLEAN ENERGY ASSOCIATES (www.cleanenergyassociates.com), an Intertek company, helps buyers and long-term owners of solar and energy storage equipment buy the right products and ensure they are properly manufactured and installed. CEA's global team has helped a diverse customer base of project developers, EPCs, IPPs, and financial institutions understand industry trends and market dynamics, select the best suppliers, negotiate the best contracts, carefully audit production processes, test equipment in the field, and perform technical and acquisition due diligence. CEA’s experience executing over 135 GW of solar and 10 GWh of storage projects in over 65 countries, including work in over 350 production facilities, is invaluable to clients as they navigate the ever-changing and hyper-competitive landscape of clean energy.

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