

Press Release

Heraeus says market consolidation will promote R&D innovation and accelerate market momentum and global growth of solar energy

SHANGHAI, China- June 5, 2019- Heraeus today stated that there is strong evidence that the PV market continues to outperform forecasts. Additionally, current industry consolidation will actually set the stage for a period of high-impact, uncapped innovation. Those insights were some of the major themes of an industry briefing by Heraeus Photovoltaics President Martin Ackermann at the 2019 SNEC Smart Energy Exhibition and Conference in China.

Based on industry research and input from its global network of customers in the PV value chain, Heraeus believes in forecasts indicating 124 gigawatt (GW) of new solar installations around the world. Ackermann stated that for the fourth consecutive year, the global PV market outperformed industry forecasts, providing momentum for 2020 and beyond. He said, "The industry saw a quicker than expected recovery and stability last year. It is setting the stage for the solid and sustainable growth that we are seeing now. That is good news for the industry and consumers seeking clean, affordable energy."

Some of the other key findings discussed in the briefing include:

- A strong, robust market for solar energy exists, with a record 108 GW of new installations last year, despite new policies in China and the end of subsidies in several countries
- Solar adoption will continue on a strong and consistent growth trajectory, with 124 GW of new installations in 2019, 136 GW in 2020 and 140 GW in 2021
- China remains the world's leader in photovoltaics/solar energy, and is expected to add 40 GW of new installations by the end of the year
- Considerable market consolidation is taking place, which will make market entry more difficult; however, it will actually benefit the industry because capital resources will be more strategically concentrated into higher-impact R&D

Another trend that is generating industry optimism is that subsidy-free PV projects are on the rise. A new policy in China now supports unsubsidized PV installations and the move toward grid-parity can help fast-track solar development across the country. Spain has announced seven subsidy-free projects with 685 MW of capacity, with six additional projects (with a total of 1.2 GW) to be launched in 2020. Germany is building several large-scale projects without subsidies. Korea is expected to be subsidy-free in the 2022-2025 timeframe, subject to land availability and public acceptance. And the United States was the busiest market in 2018, with significant projects sold within portfolio management. "Subsidy-free projects are a strong indicator, grid-parity is within reach in Europe, Asia and other key markets. PV is sustainable even without subsidies and market incentives. Solar is proving it can compete as a reliable and affordable source of clean energy," Ackermann stated.

In technology development, Heraeus sees "PV plus Storage" as the next innovation that will energize and expand the global PV market. Dr. Albert Lu, Global Head of Business Development, noted that non-tracking PV is already competitive to coal. The next big leap for the industry will be advancements in storage to turn PV into a dispatchable power source. "We believe electric vehicles will be the catalyst. As EV demand grows and battery costs drop, it will create a stronger market for storage applications,

with batteries for short-term needs; chemical storage like hydrogen and methane will serve mid-term needs,” he said.

Additionally, Dr. Lu noted that limited space for new installations, especially in population-dense cities, is driving diversification and the development of new highly-specialized, high-efficiency modules. He said there is a growing shift away from conventional solar cell modules to new applications utilizing shingled modules and other advanced module technologies. “We believe modules will undergo a considerable innovation transformation in the next few years. By the end of 2023, we expect shingled and other advanced modules to be used on 75 percent of all new installed capacity,” he said.

While trade disputes and negotiations generate considerable media headlines, Ackermann says it will actually have little global impact on the industry’s future growth. “Innovation and solar adoption are increasing and per-watt prices continue to drop. Improvements in cell efficiency and performance continue to be realized. Collectively, these advancements are producing strong tailwinds for the PV industry. It is why we believe solar energy growth and adoption has a bright future in the coming years.”

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About the Heraeus Photovoltaics Global Business Unit

The Heraeus Photovoltaics Global Business Unit is an industry leading developer and manufacturer of silver metallization pastes for the photovoltaic industry. For over 40 years, Heraeus has built a reputation of innovation, extensive research and new product development in thick film technologies for some of the most prominent companies within a variety of industries. In the field of photovoltaics, the Heraeus Photovoltaics Business Unit applies this history and its innovative technology to offer metallization pastes for solar cell applications. The Heraeus SOL Series of silver pastes is specially formulated to provide higher efficiencies and wider processing windows, resulting in better yields and higher output for cell manufacturers.

About Heraeus

A globally leading technology group, Heraeus is headquartered in Hanau, Germany. Founded in 1851, it is a family-owned portfolio company which traces its roots back to a pharmacy opened by the family in 1660. Today, Heraeus combines businesses in the environmental, energy, electronics, health, mobility and industrial applications sectors. In the 2017 financial year, Heraeus generated revenues of € 21.8 billion. With approximately 13.000 employees in 40 countries, the FORTUNE Global 500-listed company holds a leading position in its global markets.

Heraeus is one of the top 10 family-owned companies in Germany. With technical expertise, a commitment to excellence, a focus on innovation and entrepreneurial leadership, we are constantly striving to improve our performance. We create high-quality solutions for our clients and strengthen their long-term competitiveness by combining unique material expertise with leadership in technology.

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