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EnergyTrend Market Intelligence, 3Q18 Market of Advanced PV Technology

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CH3 Supply Chain of PERC Cell Technology

3.1 PERC Cell Market Overview

The production capacity of the global solar industry has kept expanding in 2018. With respect to the total production capacity for PERC cells worldwide, it came to 35.6GW in 2017 and is forecast to nearly double to reach 70.2GW in 2018 (Figure 6). As for the production capacity of non-PERC (conventional) cells, it is showing slowing growth and may even start to contract in the future, as cell manufacturers begin replacing their obsolete equipment. The global PERC cell capacity, by contrast, is projected to top 90GW and surpass non-PERC cell capacity for the first time in 2019. Growing rapidly over the next several years, the global PERC cell capacity may even exceed 100GW by 2020.

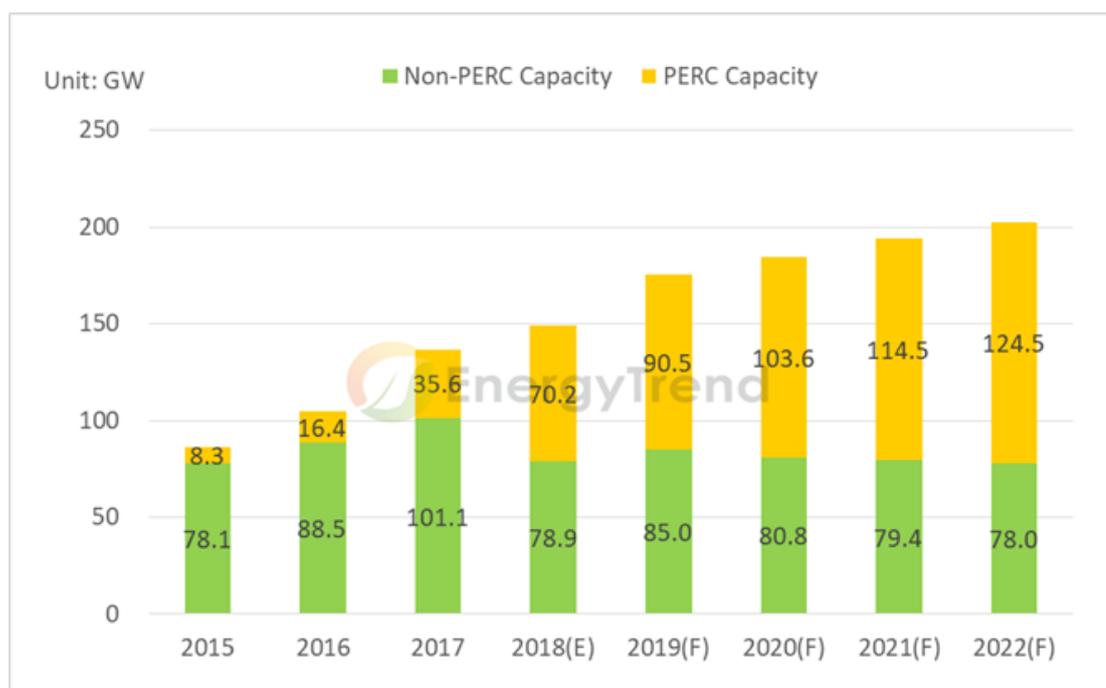


Figure 6: Trends of Global PERC and Non-PERC Cell Capacity, 2017-2022

Statistical data shows that installations of PERC equipment in 1H18 was more than 10GW greater than the total PERC installations for the whole 2017. If installations meet the annual projection, then the global PERC cell production for the whole 2018 is estimated to reach a total of almost 25GW. The annual PERC cell production worldwide in 2017 just

totaled slightly over 11GW (Figure 7).

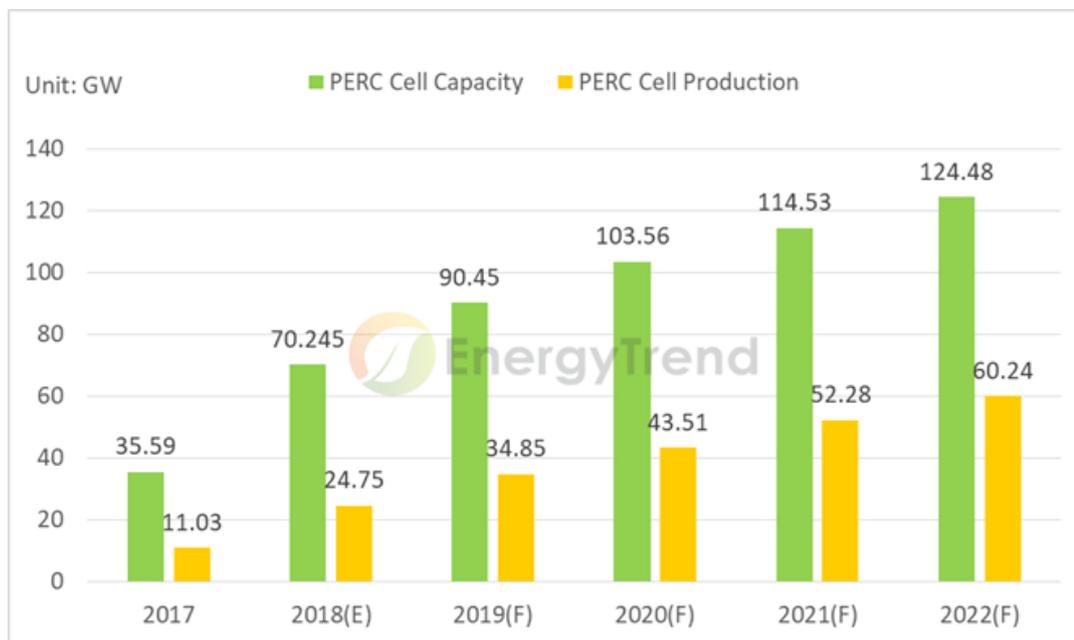


Figure 7: Global PERC Cell Capacity and Production, 2017-2022

The discrepancy between production capacity for PERC cells and their actual production may be something that the market recognizes or has expected. The reason is that the development of the PERC manufacturing process has encountered various kinds of technological barriers. Although capacity expansion is mainly driven by the use of more advanced equipment, each cell manufacturer has devised its own process and material formula. Manufacturers will also keep making adjustments according to the output results. Once a general standard for the process and formula is widely adopted, the gap between capacity and production will begin to narrow. EnergyTrend anticipates that PERC cells will grow in popularity over the next several years, with global production eventually surpassing 50GW in 2021. On the whole, the solar market is very bullish on the future growth potential of PERC.



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