

## PRESS RELEASE

Global News Media

T +39 06 8305 5699  
ufficiostampa@enel.com  
gnm@enel.com

enelgreenpower.com

### 3SUN UNVEILS NEW NEXT-GENERATION PHOTOVOLTAIC MODULES

- *Three innovative photovoltaic modules based on 3SUN CORE-H, a 100% European technology, made their world premiere at the Intersolar Europe trade show in Munich and will be available to the market in 2024*

**Rome/Munich, June 15<sup>th</sup>, 2023** - 3SUN, Enel Green Power's company dedicated to the production of innovative photovoltaic modules based in Catania, Italy, held the world premiere of three new photovoltaic modules, M40, M40 BOLD and B60, during the Intersolar Europe 2023 trade show in Munich. The modules, set to come to market in 2024, are based on 3SUN CORE-H, the tried and tested heterojunction technology (HJT) entirely developed by 3SUN, and therefore 100% European. This technology guarantees consistent levels of efficiency, performance and reliability, higher than any product on the market, for both utility-scale and distributed generation installations.

*"This is a new milestone for 3SUN that comes to fruition with the presentation to the solar industry of the new photovoltaic modules that will be produced in our Catania Gigafactory," commented **Eliano Russo**, CEO of 3SUN. "Excellence, innovation and sustainability are our cornerstones for building the latest generation of photovoltaic panels, able to compete with the big names in the market. Starting today, the photovoltaic industry can count on a new player to help achieve decarbonization goals while building a more energy-independent and secure Europe."*

3SUN CORE-H combines crystalline silicon with amorphous silicon layers to maximize the ability to extract energy from incident light and make solar modules more efficient, durable and competitive. 3SUN's utility scale technology is differentiated by a symmetrical cell design that allows a bifaciality factor of 95%, almost 20% higher than competitors, ensuring extremely high levels of efficiency and yield by capturing sunlight from both sides of the photovoltaic cell. It is no coincidence that in 2020 3SUN managed to break the world record for commercial cell efficiency, reaching 24.63%.

Furthermore, 3SUN modules are entirely produced in Italy, without the use of lead or fluorine, in line with the most stringent sustainability and circularity criteria. The production process uses reduced temperatures, allowing 3SUN to offer its customers a 30-year performance warranty while maintaining over 91.8% performance after 30 years, which is significantly higher than the market standard.

The modules presented at Intersolar Europe 2023, Europe's largest and one of the world's most important trade shows for the solar industry, have different features for different uses and requirements, under the common banner of high efficiency, sustainability and innovation:

- **3SUN M40**, a "base" module dedicated to residential and commercial/industrial rooftops, with a capacity of 440-480 W and a design aimed at minimizing installation costs;
- **3SUN M40 BOLD**, a premium high-end product, also intended for buildings and, in general, distributed generation, to maximize practical and aesthetic requirements. With a demonstrated

lifetime up to 3 times higher than IEC (International Electrotechnical Commission) standards, a capacity of 430-470 W, and efficiency up to 24.5%, it offers excellent performance and high energy yield at both lower latitudes, usually characterized by hot summers, and northern latitudes, characterized by adverse climatic conditions, such as snow and wind, as well as low light;

- **3SUN B60**, a module intended for the utility-scale segment with capacity of 640-680 W and efficiency reaching 24%. The glass-glass configuration with a white grid between cells for better light reflection, alongside maximum energy yield in different locations and climatic conditions, thanks to reduced temperature coefficients and low annual degradation, enable optimized performance and LCOE (Levelized Cost of Energy). The 95% bifaciality factor and materials combined with anti-reflective coatings that minimize losses due to light reflection make 3SUN B60 particularly suitable for large-scale systems mainly installed on the ground and on structures that can track the sun throughout the day in order to maximize production.

These three new products, which are set to be on the market starting in 2024, represent a first, major success of the research and innovation work of the 3SUN factory in Catania, which is also currently engaged, together with CEA/INES (the French national institute for solar energy), in the development of “Tandem” technology that combines heterojunction and perovskite to expand the range of the solar spectrum that can be converted into electricity. The Tandem technology recently broke a record by achieving, in the R&D phase, a certified efficiency of 27.1% in a 9 square centimeter-cell.

The “TANGO” (iTaliAN Giga factOry) project will increase the Catania factory’s current annual production capacity of 200 MW to about 3 GW per year by initially developing HJT photovoltaic modules. The Tandem technology will then be implemented, significantly outperforming the efficiency of today’s photovoltaic cells, achieving over 30% while improving panel reliability. The 3SUN Gigafactory expansion process, which began in April 2022 and is expected to be completed by 2024, will consist of two stages: an operational capacity of 400 MW will be available from September 2023, while full operational capacity will be reached by July 2024. Tandem photovoltaic modules are set to be on the market starting from late 2025.