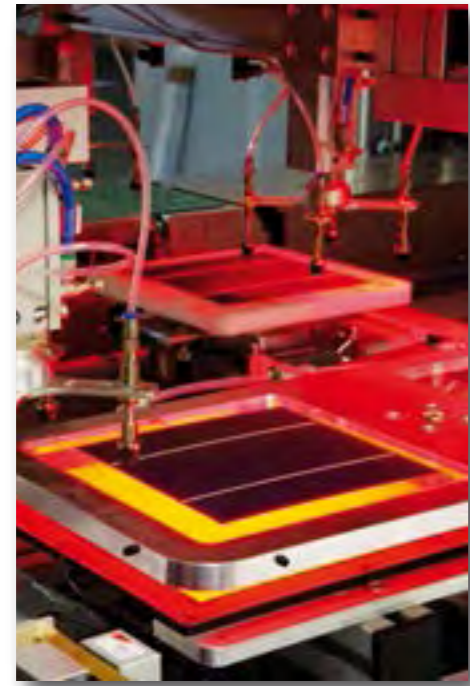


ferrania Solis

60 MW/year of production capacity



PHOTOVOLTAIC SOLUTIONS MADE IN ITALY



OUR PRODUCTION

Excellent Performance and high quality standard are ensured by:

- **Accurate raw material selection:**

our suppliers are chosen with accuracy and all materials are pre-certified and rigorously tested.

- **Advanced manufacturing plants technology:**

a flexible production structure with advanced equipment to respond promptly to a market in constant evolution.

- **Accurate process control and in-process testing:**

the performed tests are much more stringent than industry contemplated standards:

on each module special controls on weld, lamination, insulation.

A "tracking system" that allows to trace all data related to each single module.



PHOTOVOLTAIC MODULES

- Made of **mono and poly-crystalline silicon** with high spectral response and excellent yield.

- Special **anti-reflective glass** to obtain high energy yields: up to 4% more, especially at morning and evening hours.

- High **mechanical strength** and resistance to **atmospheric agents**, even in critical condition, to guarantee the endurance in every place

and type of installation.

- **Current/Power range** strictly classified to reduce mismatching losses and provide fast and optimized installations.

- **Positive module power tolerance** for a reliable plant producibility so to maximize the investment.

- **Packaging** optimized to reduce issues related to transportation (modules arranged in

vertical) and handling.

Modules:

- **60 cells**
- **72 cells**
- **48 cells**
- **Black** for a better aesthetic impact
- **Laminate for BIPV**
- **High transparency for Green Houses and BIPV**
- **Solutions for systems integration, BIPV and Green Houses**

PHOTOVOLTAIC SYSTEMS

Highly qualified and specialized team, in collaboration with selected **partners**, to design, build and deliver:

- Grid connected **turnkey plants** for residential and industrial buildings, farms

and shelters.

- **Energy storage systems**

- to maximize self consumption

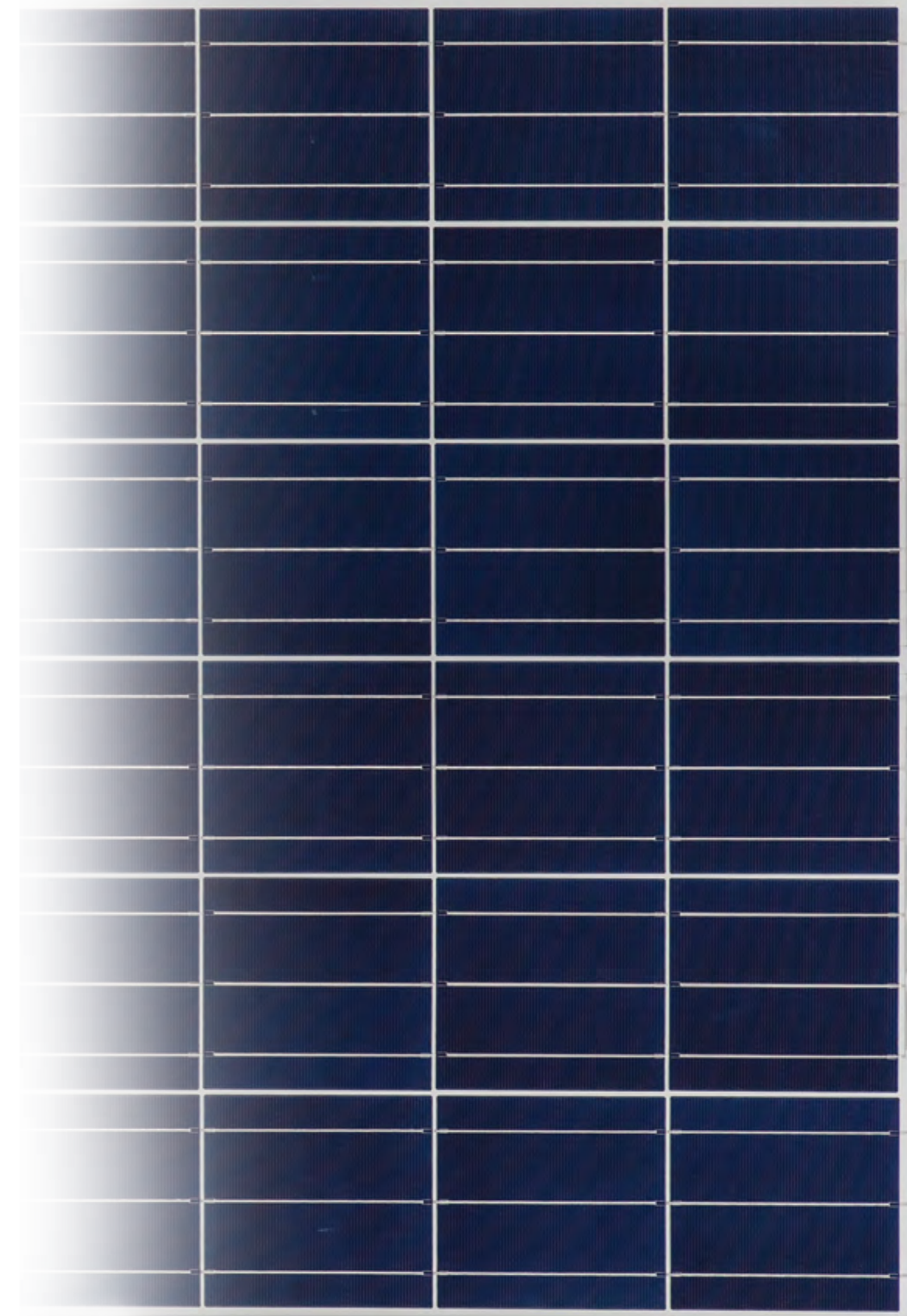
- to be associated to a "weak" power grid.

- **Stand-alone systems** for

areas not connected to power grid.

- **Modular kit** for residential installations.

- **Know how and training** to install and run PV production lines.





System Certifications

Integrated Management System

Also meets requirements of D.Lgs. 231/2001

- UNI EN ISO 9001:2008 (Quality)
- UNI EN ISO 14001:2004 (Environment)
- OHSAS 18001:2007 (Health and Safety)
- CERTIFICATE of EXCELLENCE



- Qualification to carry out public projects SOA



Product Certifications

- IEC 61215:2005
- IEC 61730-1/-2:2007
- Factory Inspection
- Made in EU Attestation



- MCS Certification for UK



- Fire reaction certification (Class 1)

Test in critical condition

- Resistance to salt mist
- Resistance to ammonia fumes
- PID Free (Potential Induced Degradation)
- Resistance to mechanical loading of "Special Component" for BIPV



- Simulation equivalent to 40 years-life of modules: warm moist test until 2000h
- Static Load 600 kg/m2
- Dynamic Load - wind 150 km/h



Respect for the environment

- end of life disposal of the modules
- Member of Cobat (for Italy) ref. D.Lgs. 49/14
- Member of PV Cycle Association (for Europe)



Product guarantees

- 10 years against manufacturing defects
- 12 years at 90% of nominal power
- 25 years at 80% of nominal power

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Made in Italy Certified Quality



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Made in Italy Certified Quality

ferrania Solis

Experience, efficiency and reliability at solar energy service

Ferrania Solis, in Cairo Montenotte (Savona inland-close to Genoa harbour-Northern Italy), is a manufacturer of Crystalline Silicon Photovoltaic **PV Modules**. **PV Plants** and a complete range of **PV solutions** complete the offer to the Customer.

60 MW / year of production capacity



Solidity and Entrepreneurship

Ferrania Solis is controlled by the **MESSINA GROUP**, an Italian Leading Company, active since 1921, in shipping and manufacturing.

Skills and Approach

Strong technological **know-how** as driver for new innovative solutions, continuous improvement to always satisfy Customer expectation, fast response to the market are our main distinctive strengths to be efficiently present today and shape the future.

Quality and Standards

Quality is our added value. Quality proven by certification of integrated management system for Quality, Environment and Health and Safety, according to international standards in force. Quality as the steady path for Customer satisfaction. **Product certifications** to ensure the effective compliance with international standards, the durability, the resistance especially in critical condition and the high levels of efficiency of our products. The **high electrical yield** of our modules is confirmed also by tests performed by the prestigious international magazine "Photon".