

Ecoprogetti installs the biggest Fully Glass-Glass PV Module line in North Africa with Bifacial capacity of up to 250MW

250MW PV Module factory, supplied by Ecoprogetti

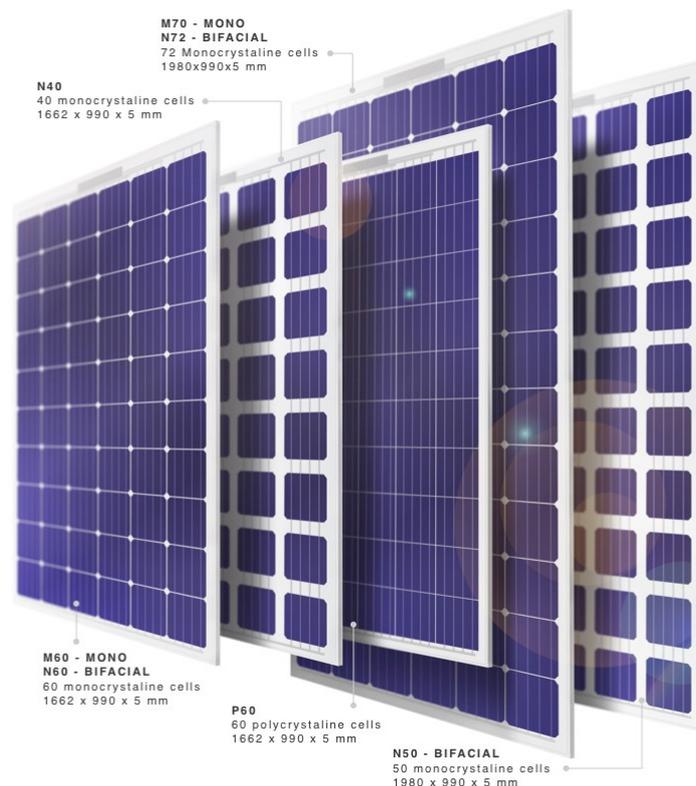
The 1st and only fully Glass Glass and Bifacial automatic manufacturing line in Morocco, produced entirely in Italy, close to Venice, using the highest European Standards.

Ecoprogetti delivered Africa's largest and most modern PV module factory to Almaden Morocco, which has initiated the automatic production line on the 5th of July 2018 and expects the commissioning and production to start in late October 2018.

The New 250 MW automatic production line is equipped with the latest technologies for manufacturing high quality **Bifacial double glass modules**.

Complete Double Glass production configuration.

Ecoprogetti is the only European company that designs and produces in-house every machine of its production lines.



The configuration of the automatic production line supplied by ECOPROGETTI was designed to manufacture the highest quality of Glass Glass solar panels, the most sensitive areas of the line that make this possible are the stringer machines and the laminators.

The Electric laminator (ECOLAM DS 10) has the shortest and most reliable cycle times, as well as the best temperature uniformity over the complete plates which enables a rapid lamination process with excellent Gel Content tests results.

Each heating plate of the laminator can be controlled separately to optimize the lamination of each panel produced. In addition the ECOLAM's fast air evacuation system blocks the formation of air bubbles in the panel during the lamination process which makes this laminator one of the most efficient in the market.

Since 2003, many Companies producing Double glass PV modules and BIPV have been using **the ECOLAM series as their 1st choice laminator**, granting it the reputation of the best solution to produce Glass-Glass PV modules.



The PV industry is fast changing and often requires PV panel manufacturers to use different raw materials as encapsulants which requires a change of the "recipe" of the laminator. The recipe configuration is made easily and quickly together with expert process technicians from Ecoprogetti and customer experts, thanks to the whole laminator features and especially to the separately controllable heating plates as well as a remote support service supplied by Ecoprogetti's experts.

Ecoprogetti has installed a complete "QUALITY CONTROL ISLAND" at the end of the line, integrated with the latest technologies available for quality testing, such as:

1. EL tester "[ECOLAB](#)"
 - Dark current test
 - Fast&Easy image acquisition
 - Great solution for high efficiency solar modules

2. Bifacial Sun Simulator "ECOSUN Bifacial"

- **A+A+A++ light source certified by TÜV Rheinland and compatible with IEC 60904-9 Ed3**
- **Best-in-class LED lifetime guaranteed for 50 Million pulses**
- The perfect solution to test high efficiency PERC cells, Bifacial solar cells, back contact, poly/mono, HIT solar cells as well as Thin film
- Software guarantees quality test for final conditions of installation of the PV panels, making it possible to **guarantee to the final customers the most reliable and correct efficiency measures.**

3. HI-POT tester "[ECO HI-POT](#)"

- In-line electrical insulation and hi-pot measurement
- Insulation resistance measurement: Max 1500V - 1MΩ ~ 9500 MΩ
- Compatible with IEC 61215/61739
- Max DC with standing: 6000 V
- Max AC with standing: 5000 V

Local support service

Ecoprogetti, through a local support network in the whole North Africa (Morocco, Algeria, Tunisia, Egypt etc...) can assist its clients with further know-how for a correct quality production process. Ecoprogetti's qualified technicians have years of experience in the photovoltaic industry and can guarantee a prompt technical feedback both regarding the machines as well as questions regarding the production process and raw material.

Every machine of the line is connected to Ecoprogetti through internet connection, guaranteeing that both remote and on site assistance are easily and quickly taken care of.



Almaden Morocco is now a significant player in Africa with a production capacity of 250 MWp. **They will focus their production solely on double glass modules**, using the highest quality raw materials, (like High quality N-Type Bifacial solar cells, ultrathin 2mm fully tempered glass for a long life of the module and POE encapsulant for the best result in glass-glass module lifespan). **The PV module production line started manufacturing panels at the beginning of July** and is currently under production ramp-up. The Bifacial models of Almaden Morocco come in two sizes of modules each with two types of cell configuration. B 40 and B60 (1662mm x 990mm 40 and 60 cells configurations), B50 and B72 (1980mm x 990mm 50 and 72 cells configurations) which have already been successfully produced in the production line. The broad product range that Almaden Morocco is able to manufacture will make it the most comprehensive producer of double glass modules in Africa for both local and Worldwide distribution for the retail, commercial and industrial market both for utility size and BIPV markets.

Ecoprogetti's production line will give the African PV module producer an outstanding production diversity for Glass Glass Solar Panels. The full range of panels will include the B40, B60(Bifacial), M60(Mono) and P60(Poly), in the small format panels and the B50, B72 (Bifacial), and M72(Mono). They are all designed in terms of production and material composition to be resistant to extreme weather conditions over many years. This means that the modules will withstand the low temperatures of the northern hemisphere (temperatures below 20°C) and the high temperatures of desert climates (fast changing temperatures from -30°C to +85°C), as well as exposure to sand, airborne chemicals and humidity.

Almaden's production facility is one of the first energy efficient manufacturing facility in Morocco with more than 700KWp of roof top installed (PV panels) in auto-consumption. The building of 7,000sqm is a pioneering piece of modern architecture and also a unique energy concept. The entire power for the PV module factory is produced by PV modules. The building is also equipped with exhibition and training facilities for 100+ employees, 60 of which are required in the automated 3-shift-operation.

Ecoprogetti is very proud of being partner of this new important player in the PV production sector, wishing this new company the best with its excellent products in the solar market!

