



MONDRAGON
ASSEMBLY

TECHNOLOGY AND PERFORMANCE

PV MODULE MANUFACTURING LINES TO
MEET EMERGING US DEMAND

Who are we?

Leaders in automation



EXPERIENCE

Solar

Automation

Energy storage & e-mobility

50 years

50+ annual projects



THEY TRUST US

Schneider
Electric

elringklinger

orkli

MARELLI

PIERBURG

Continental

legrand

ABB

ZKW

MAHLE

HELLA

Myotek



GLOBAL/LOCAL

7 production plants

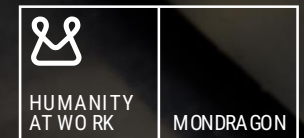
9 service offices



CAPACITY

150M USD

+600 engineers



High efficiency automation for PV industry

High-tech PV turnkey lines



High-tech individual equipment



THEY TRUST US



AGRIVOLTAICS

Q.CELLS



balfar
SOLAR



BIPV



solarge

ULTRALIGHT

LUXOENERGY

FLEXIBLE



PV + THERMAL



IZPITEK

ULTRALIGHT



RECYCLING



THIN FILM

Main Milestones

2001

First equipment for PV successfully installed at customer's premises.

2004

First complete turnkey line delivered.

2021

Opening of our subsidiary in the **US**.

...

First **Tabber & Stringer** developed and installed at customer's premises.

2002

First **BIPV** line developed and installed at our customer's premises. **New Tabber&Stringer** developed: **MTS 3000**.

2020

Development of **first recycling line**

2025

Your European partner for efficient solar manufacturing

Experts in PV Technology

Mainstream modules

Glass-Glass
Glass Backsheet
ZBB to 24BB
Up to G12+
Framed and Frameless

Present and future cell technology

PERC
TOPCON
HJT
xBC
Perovskites
Tandem

Diverse module technologies

Glassless
Lightweight
Customized cell matrixes
Special materials
Oversized

Beyond Mainstream applications

BIPV
Agrivoltaics
VIPV
Space

tecnal:a

ikerlan

TNO innovation
for life



:: csem EPFL

 **Fraunhofer**

cea  **ines**
INSTITUT NATIONAL
DE L'ÉNERGIE SOLAIRE

Your European partner for efficient solar manufacturing



We care

INTRODUCTION TO
NETWORK OF INDUSTRY
EXPERTS

EXPERIENCE WITH MORE THAN
100 RAW MATERIAL
SUPPLIERS

TRAINED MORE THAN
800 INDUSTRY EXPERTS



BUSINESS DEVELOPMENT



TECHNOLOGICAL ADVICE



PRODUCT ENGINEERING
AND RAW MATERIALS



MODULE CERTIFICATION



TURNKEY LINES &
INDIVIDUAL EQUIPMENT



EXTENDED
MANUFACTURING SUPPORT



KNOW-HOW TRANSFER AND
TRAININGS

MORE THAN **4%** OF SALES
ARE INVESTED IN RESEARCH
& INNOVATION

SUCCESSFULLY CERTIFIED
MODULES WITH **3** DIFFERENT
CERTIFICATION BODIES

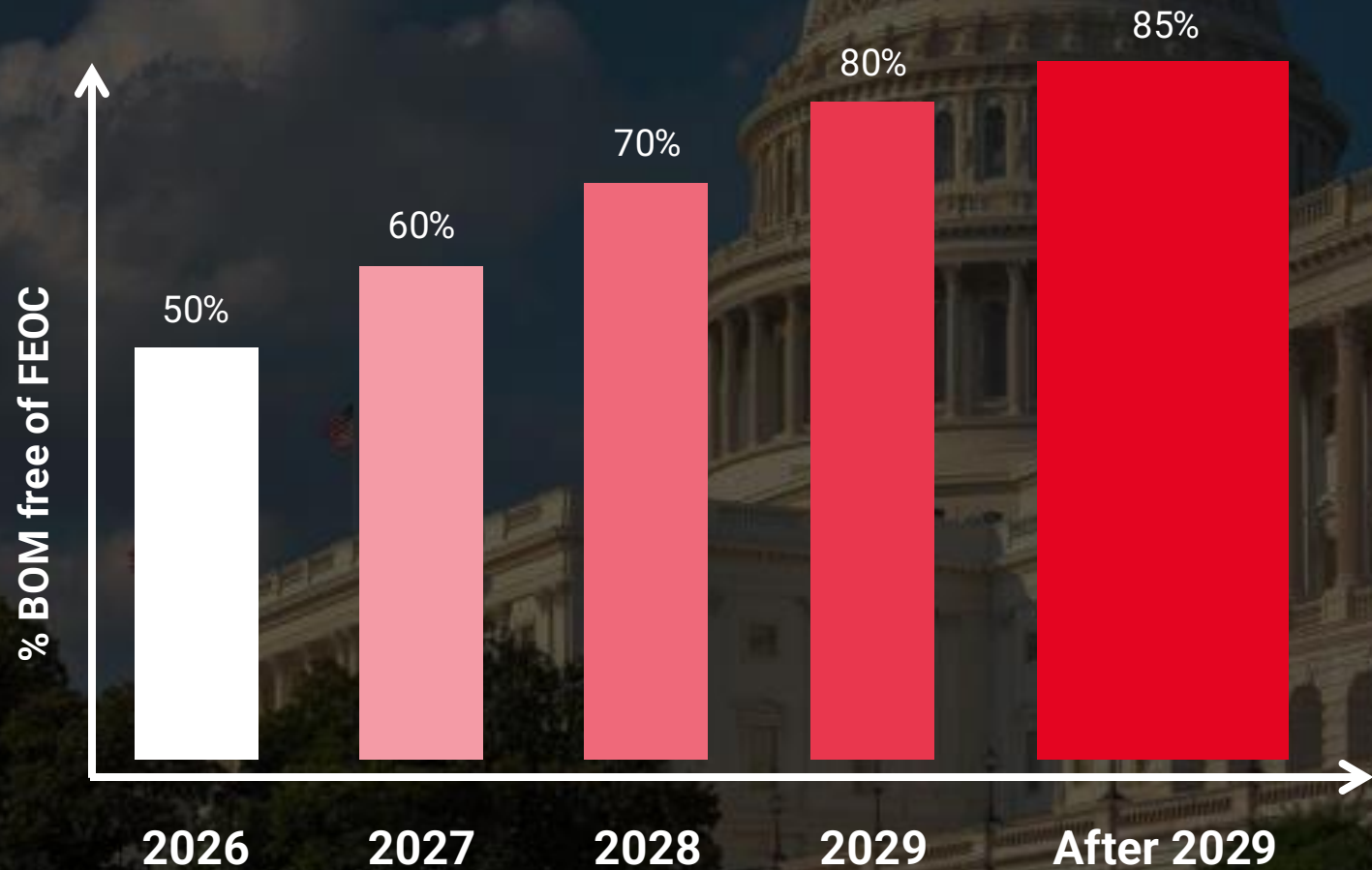
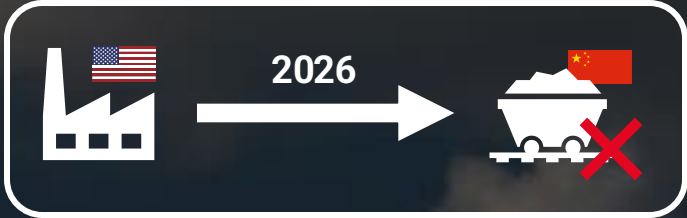
SUPPORTED MORE THAN **20**
COMPANIES IN THE LAST **5** YEARS

All your machines connected, one digital brain: the Digital Toolbox.

- Easy and accurate indicators of the machines' production and performance.
- Incidence registry and statistics for downtime optimisation.
- Better knowledge of machines' processes
- Track of all the parameters and recipes modifications.
- From real-time monitoring to analysing past and future events, ideal for predictive maintenance.



OBBB impact on PV manufacturing – BOM related implications



EQUIPMENT READY
FOR BOM FLEXIBILITY

OBBB impact on PV manufacturing – Free of FEOC concerns

Mondragon Assembly, its intellectual property, equipment, services and contracts are free from Foreign Entity of Concern restrictions for all customers looking to claim 45X tax credits.

! US solar module manufacturers should take extra caution when purchasing equipment or signing contracts with Specified Foreign Entities.

Avoid clauses that grant the counterparty unrestricted rights to:

- ✗ Maintain, repair, or operate equipment exclusively at your factory.
- ✗ Restrict access to critical factory data.
- ✗ Control operations that enable SFE to manage factory operations through licensing agreements.
- ✗ Require service contracts longer than 2 years.
- ✗ Withhold technical data or know-how needed to manufacture independently.

**SERVICE AND SUPPORT
FROM LOCAL US
SUBSIDIARY AND HQ IN
EUROPE**

Solar References



Cooperation with
Research centers:



Contact us



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