

Techbau 
Green Energy

**FUTURE
IS NATURE**

Techbau Green Energy

Techbau Green Energy aims to transform an increasingly pressing need into an opportunity from both environmental and economic perspectives. Flexibility, expertise, market knowledge, and innovative technologies, combined with technical skills and professional ethics, make

Techbau Green Energy
A UNIQUE PARTNER IN THE ENERGY FIELD

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Techbau S.p.A

Born from the experience and expertise of **Techbau S.p.A.**, a market-leading company in the construction industry, **Techbau Green Energy** establishes itself as a **specialist in the development of green projects**. It gives particular attention to the construction and management of rooftop and ground-mounted photovoltaic systems, extending to the **management of Power Purchase Agreements (PPA)** for the energy produced

OUR DNA

SOLUTIONS



ENERGY MONITORING

Techbau Green Energy offers advanced energy monitoring of your utilities, allowing you to reduce your energy expenses and accurately anticipate future maintenance needs,



EPC & ESCO

Techbau Green Energy carries out interventions directly in your company, even taking on the financial and technological burden and sharing the savings generated with you,

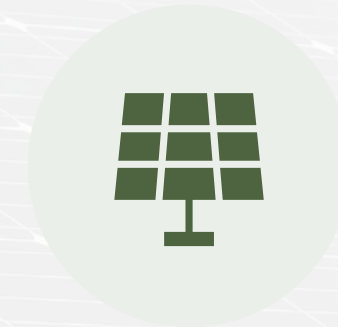
ENERGY DIAGNOSIS

With a targeted energy diagnosis, Techbau analyzes your company's KPIs (Key Performance Indicators) and identifies opportunities to reduce consumption. The result? Smarter and up-to-date energy management.



INSTRUMENTAL ANALYSIS

Using thermal cameras and certified network analyzers, **Techbau Green Energy** conducts essential instrumental studies for predictive maintenance and to prevent failures and unnecessary energy consumption.



SOLAR FOR LIFE

Techbau Green Energy guides you towards sustainable facilities powered by renewable sources, creating a path of environmental awareness through solar energy production

GREEN GENERATION

CARBON NEUTRALITY



Techbau Green Energy has successfully implemented the ILFI certification procedure, the world's first **certified Zero Carbon standard**.

The prerogatives of our projects are: **energy efficiency, implementation of renewable resources and reduction of carbon emissions.**

Our projects have always followed the major international protocols for the protection of the environment, but we do not stop believing in the future by targeting the directives from **the Paris Agreement on Climate Change of 4 November 2016, and the EU Environmental Taxonomy Introduced by REGULATION (EU) 2020/852.**

As provided for in the agreement, the EU presented its long-term strategy for reducing emissions and its updated climate plans before the end of 2020, committing to reducing its emissions by at least 55% by 2030 compared to 1990 levels. **The EU will achieve climate neutrality by 2050.**

TARGET ZERO CARBON

EXISTING PROPERTIES

Starting from an analysis of the current situation, **TBGE** develops a proposal for the implementation of a new photovoltaic system, either by adapting it to the existing structure or by modifying it with appropriate improvements, while ensuring the right and optimal installation conditions.

The implementation process remains consistent, just as in the previous case, as does the subsequent provision of energy and the management, monitoring, and maintenance of the installed system.

Techbau Green Energy's certification strategy for existing buildings begins with a detailed analysis, with a focus on the **BREEAM RFO** protocol and **CRREM** analysis.

TBGE's intervention is structured around four main improvement categories, which include:

BUILDING ENVELOPE
CENTRAL SYSTEMS
PLANT TERMINALS
INTERIOR DESIGN

This approach ensures a comprehensive and holistic enhancement of existing buildings, aligning with sustainable and energy-efficient standards.



NEWLY BUILT PROPERTIES

Techbau Green Energy offers a comprehensive solution for photovoltaic system implementation:

01 INSTALLATION OF PHOTOVOLTAIC SYSTEM:

We install a photovoltaic system on the customer's property, followed by its leasing to TBGE. We guarantee a fixed yield to the customer throughout the system's lifespan.

02 ADMINISTRATIVE HANDLING:

We take care of all administrative procedures related to the photovoltaic system with the relevant authorities.

03 ENERGY SUPPLY:

We provide on-site energy supply from Renewable Energy Sources (FER) to the premises at an agreed and favorable rate compared to market conditions.

04 MAINTENANCE:

TBGE takes full responsibility for both regular and extraordinary maintenance of the photovoltaic system.

05 MONITORING:

We monitor the energy parameters of the systems and provide periodic reports to the customer-consumer for analyzing system efficiency and consumption.

FOR NEW CONSTRUCTION BUILDINGS, TECHBAU GREEN ENERGY'S APPROACH IS CENTERED ON INNOVATION AND SUSTAINABILITY RIGHT FROM THE BEGINNING. WE ADOPT VARIOUS CERTIFICATION PROTOCOLS TO ENSURE THAT NEW BUILDINGS ADHERE TO THE HIGHEST STANDARDS OF ENERGY EFFICIENCY AND ENVIRONMENTAL SUSTAINABILITY.

CRREM ANALYSIS

The **Carbon Risk Real Estate Monitor (CRREM)** is a European research and innovation project under Horizon 2020. Its aim is to assess whether a specific building complies with the standards set by Paris regarding CO2 emissions into the atmosphere. The ambitious goal of this agreement is to strive to limit global warming of the planet to between 2°C and 1.5°C.

Real estate properties are increasingly exposed to climate risk. The **CRREM's** objective is to accelerate decarbonization and enhance resilience to climate change within the real estate sector. It provides scientifically-based pathways for carbon reduction at the individual building, property, portfolio, and company levels.

The risk assessment tool developed by **CRREM** identifies the risk of asset stranding, which means exceeding the maximum allowable emissions level. It is designed to communicate these risks in one's real estate portfolio to asset owners and investors.



GREEN THINKING

Techbu Green Energy adheres to the top international environmental certification mechanisms such as **USGBC LEED** and **BREEAM**, providing LEED AP, BREEAM Assessors, Energy Managers and SQE Qualified Renewable Energy and Environment Engineers from within its organisation. So not energy saving alone but also water saving, emissions reduction and a focus on the site and its potentials and peculiarities. **Techbau Green Energy** is also very aware of the issues of reducing land use, increasing comfort for occupants and raising the concepts of recycling and recyclability with regard to the choice of building materials to extremes. **Techbau Green Energy** adopts tools such as **LIFECYCLE ASSESSMENT, CARBON FOOTPRINT ANALYSIS** and landscaping for compensation and redevelopment purposes.



USGBC
MEMBER

BREEAM®

SOLAR PANELS



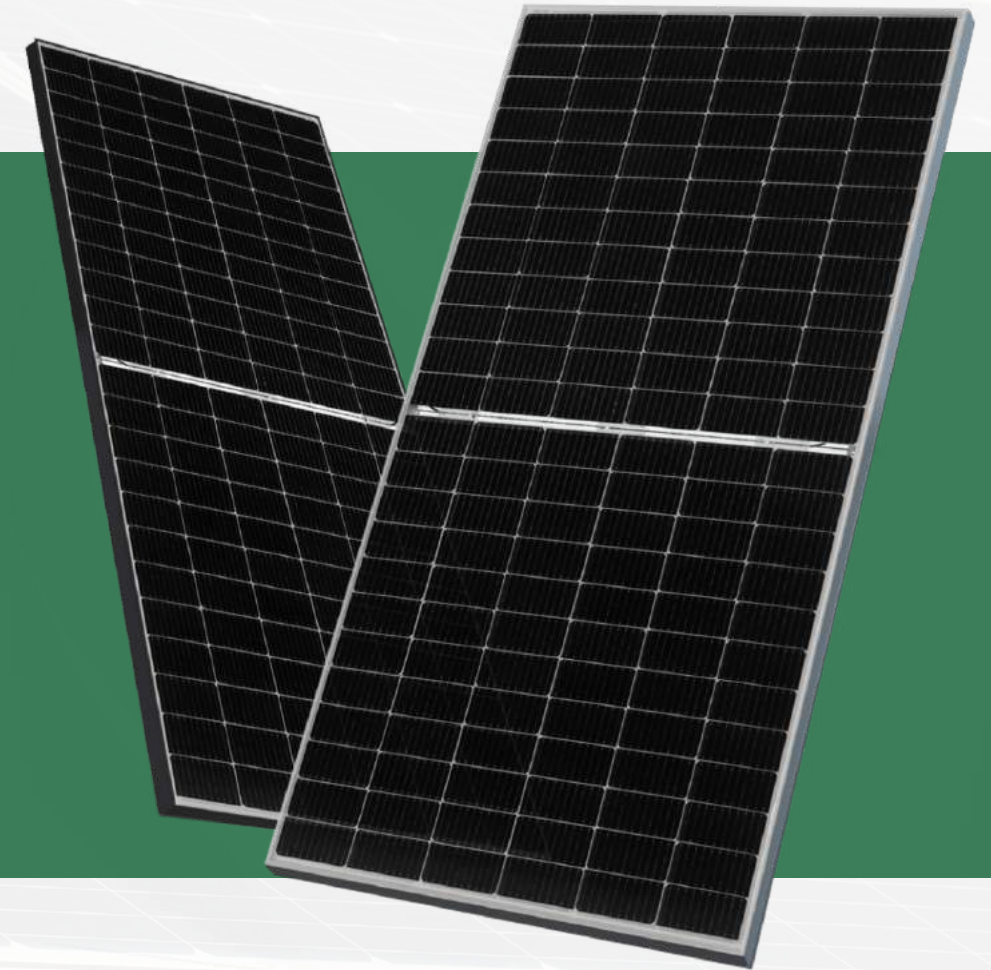
The photovoltaic modules used by TBGE, in addition to being classified as TIER 1, are also certified as Class 1 according to UNI 8457 for fire reaction classification and material approval for fire prevention purposes.



Each module weighs no more than 23 kg and occupies an area of 2 m², making it adaptable to various load-bearing conditions on rooftops.



The choice of our solar panels is based on the **Bankability Pyramid at the start of 2022**



They comply with international approval requirements such as IEC 61215 (2016) and IEC 61730 (2016). Furthermore, these photovoltaic modules are produced in accordance with the highest quality standards guaranteed by ISO 9001. They also adhere to environmentally responsible management systems as per ISO 14001 and ensure personnel safety in alignment with ISO 45001.

INVERTER



Our inverters allow for control and monitoring through a digital platform that combines data from all relevant energy sectors. This enables effective management of the entire photovoltaic field, optimizing efficiency and effectiveness, including predictive maintenance. At the core of the system is the Plant Control Center (CCI), which provides an adaptive interface with state-of-the-art digital remote control systems.



The inverter warranty extends for 12 years, and it encompasses all the international certifications and approvals required by applicable regulations.

The inverters we use feature a compact design that provides maximum power density per device, resulting in optimal performance and lightweight construction. This leads to reduced costs and greater ease of installation. When combined with specific field cabinets, the photovoltaic generator can be oversized by up to 200%. The Data Manager complements the system, ensuring compliance with all grid management requirements.

FACILITY MANAGEMENT

Techbau Green Energy operates with innovative technologies installed on purpose-built drones in order to monitor and make the plant more efficient, with a targeted and automated cleaning without the intervention of personnel. The monitoring through a remotely piloted aircraft certifies the individual cell status of each panel with the use of instruments to detect multiple quantities simultaneously (temperatures, current intensity, electrical discontinuities, cleaning status etc.).

With continuous monitoring, routine maintenance becomes predictive: action is taken when necessary, always ensuring maximum efficiency. There is also provision for a video surveillance system that communicates to the aircraft the need for intervention.

WASHING THROUGH REMOTELY PILOTED AIRCRAFT ALLOWS TO REACH ANY CELL WITHIN THE PLANT AND ENSURES THE DEEP CLEANING AND DRYING OF THE PANELS IN ORDER TO KEEP THE PLANT CONSTANTLY EFFICIENT.



QUALITY ASSURANCE

Techbau firmly believes that a robust Quality System forms the foundation for enhancing the quality of deliverables.

Quality principles are ingrained in our DNA, fueled by our passion for:

Attentively listening to our clients' and all stakeholders' needs. **01**

Operating through lean and agile processes. **02**

Continuously measuring our performance to excel and create value. **03**

The Quality System lies at the heart of our ongoing improvement agenda, driving innovation in our expertise while effectively mitigating operational risks, reducing costs, and maximizing returns on investment for our clients.

WE CARE

HSE



Techbau Green Energy is actively dedicated to adhering to all pertinent environmental and safety regulations. Our goal is to consistently enhance our performance by implementing appropriate programs, controls, resource allocation, and workforce training.

Safety, environmental protection, and occupational health are fundamental aspects of Techbau's operations. We recognize their significance not only within the construction industry but also for the well-being of the community at large.

Our commitment extends to the establishment and maintenance of a Safety and Environment Management System (SEMS). This system outlines the procedures for defining responsibilities, processes, and resources within our organization. It is designed to ensure the realization of our corporate prevention policy in accordance with current health, safety, and environmental regulations. We are unwavering in our dedication to monitor and continually improve our safety and environmental performance through the SEMS framework.

OUR MANAGEMENT SYSTEM IS METICULOUSLY DEFINED, DOCUMENTED, IMPLEMENTED, AND REGULARLY UPDATED TO ENSURE ITS EFFECTIVENESS AND ALIGNMENT WITH OUR CORPORATE SAFETY AND ENVIRONMENTAL OBJECTIVES. THIS DEDICATION ALSO EXTENDS TO COMPLIANCE WITH THE ISO 45001:2018 AND ISO 14001:2015 STANDARDS.

KERING

Trecate Logistics Center

Electricity production

12,6 MWp

CO2 Emission reduction

- 4.500 Tons



Techbau
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