



Solar Energy

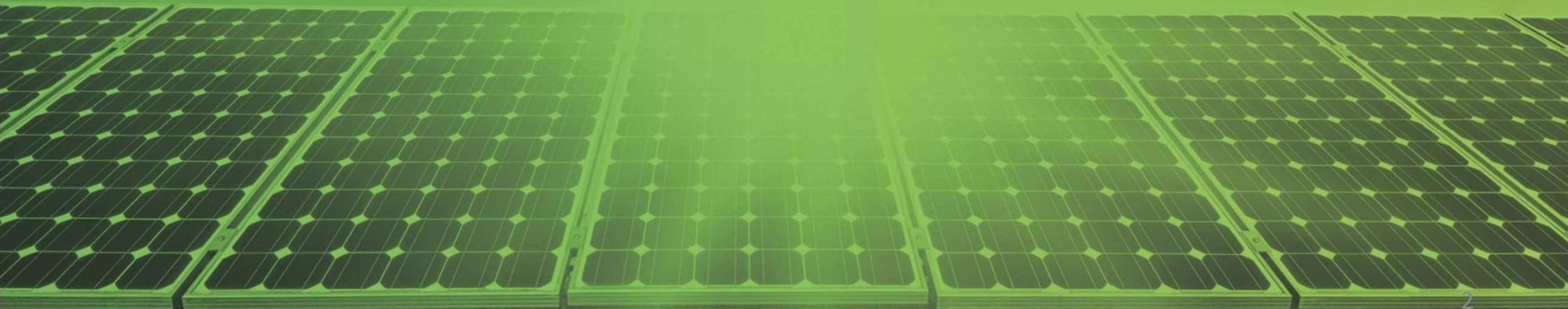
Alternative in electricity and **lots** of economy



Sunergia

Presentation

Photovoltaic technology is a very economical, advanced, globally disseminated and now commercially consolidated alternative in Brazil. Every year, the sun emits about thousands of times more energy onto our planet than all the energy consumed by humankind. Harnessing this energy results in significant savings, while also preserving the environment and ensuring the future of all. It is an 100% clean and inexhaustible energy source.



The Solar Power

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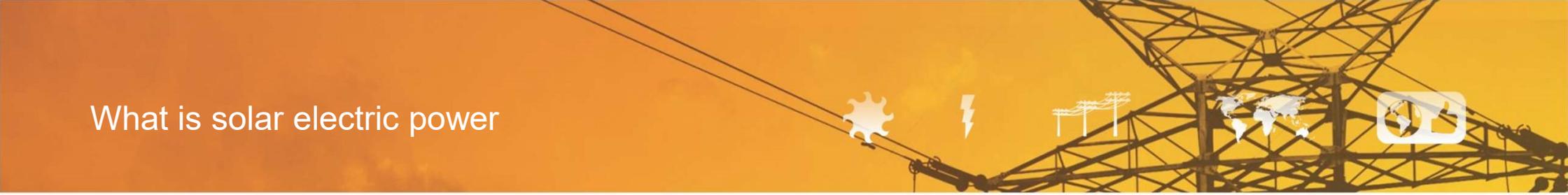
 1.391.400 km
sun diameter

 885 million
of Twh / year - Earth



What is solar electric power

What is solar electric power



Also known as 'Photovoltaic Solar Energy', this is the production of electricity for general use of companies and homes, using the light of the sun (photons) captured in photovoltaic cells.

Photovoltaic Technology is a very economical, safe, advanced and widely spread alternative around the world. Used for nearly fifty years in space stations, it is now commercially consolidated in Brazil. The partnership between Brazil and Germany, a reference in the field, enhances our quality standards.

Every year, the sun emits thousands of times more energy onto our planet than all the energy consumed by humankind. Harnessing this energy results in significant savings, while also preserving the environment and ensuring the future of all. It is an 100% clean and inexhaustible energy source.

The Photovoltaic Kit



Photovoltaic (PV) cells are silicon plates that fit in the palm of your hand. When light hits these cells, electrons in the silicon are put into motion, producing direct electrical current. The photovoltaic module (panel/plaque) is composed of a set of PV cells.

They can be installed in areas with full solar incidence, preferentially on rooftops, or in shade-free areas on the ground. The process is simple: the cells are attached with screws using small inbuilt handles. Then, connectors and wires conduct the energy to the inverter (converter), a device that transforms direct current (DC) into alternating current (AC) – a conventional form of high- or low-voltage energy.

This kit makes up the **Photovoltaic Generator**.

The Photovoltaic Kit



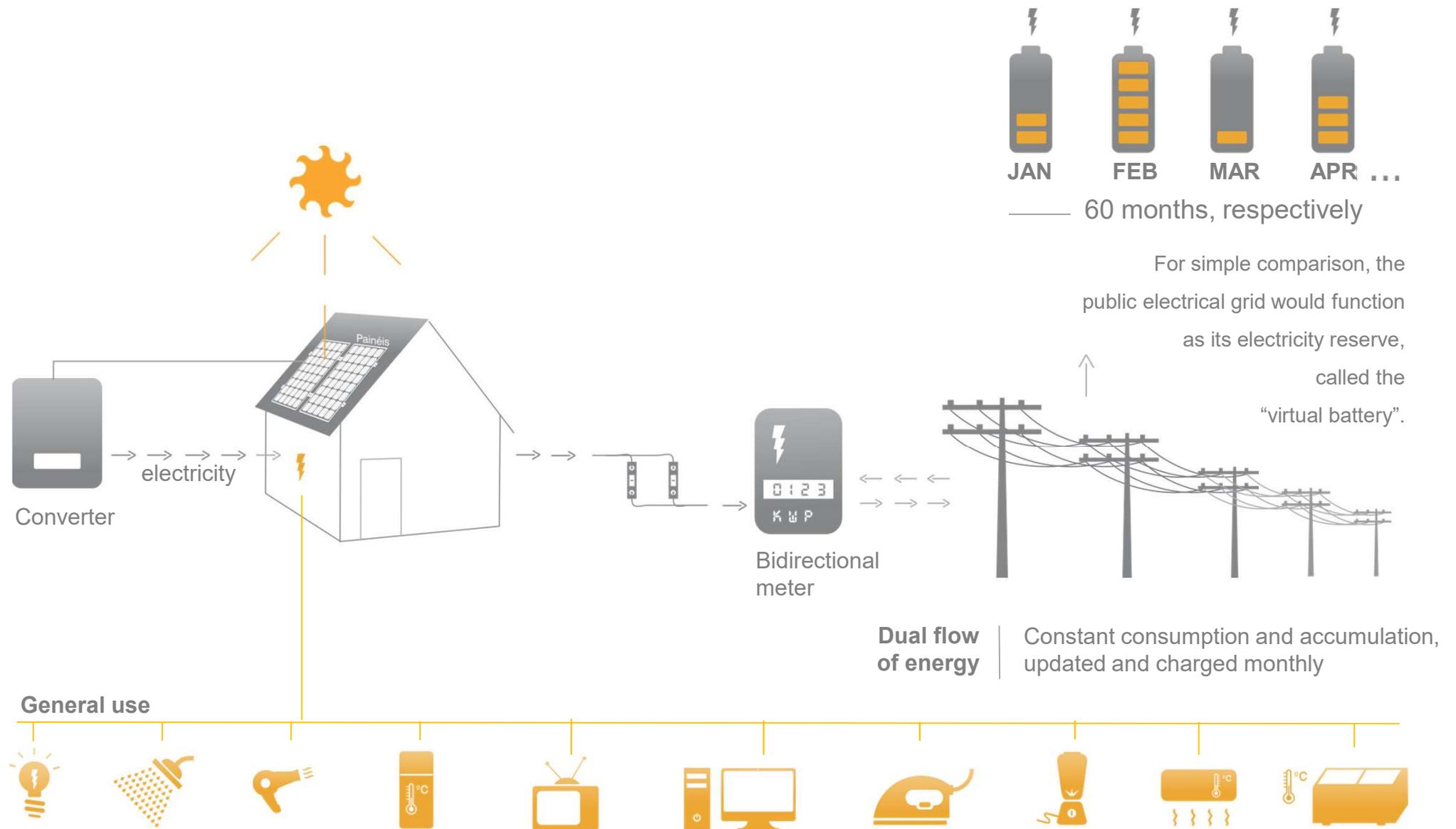
When in operation, the system meets your immediate consumption demand and any excess energy is sent to the public electrical grid and is completely reverted into electrical charge **credits** that can be consumed in the absence of solar generation. At night, the public grid supplies electricity normally.

This direct flow of energy (generation and consumption) is recorded using a bidirectional meter, a device that replaces traditional meters. By means of digital apps, you can monitor the solar energy generated and consumed in real time (more information in Distributed Generation).

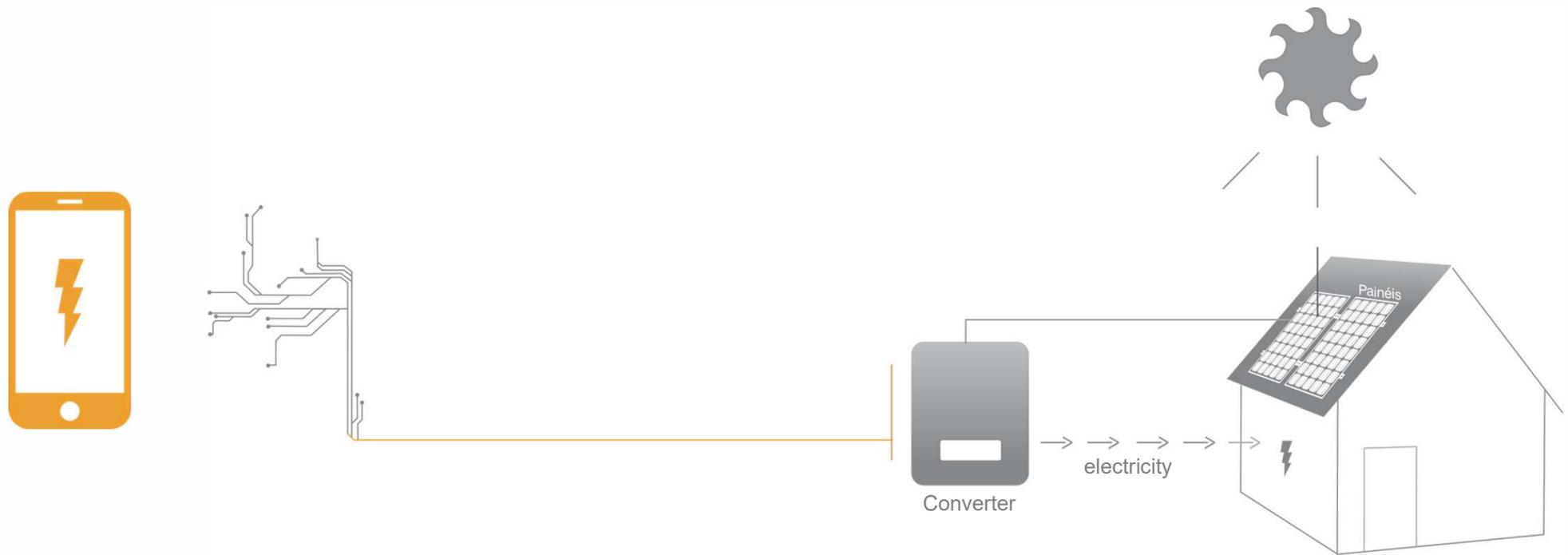
Our equipment has a long lifetime. The panels operate with over 85% productive efficiency above 25 years and have a 12-year factory warranty. The converter has a 7-year factory warranty. This is an engineering product with extremely high added value.

Maintenance is minimal, requiring only that the panel surfaces be dusted with the help of a moist cloth a few times a year, as the rain itself helps clean the panels.

The Photovoltaic Kit



The Photovoltaic Kit

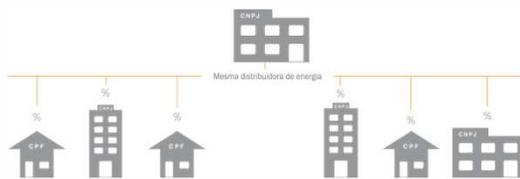


You can monitor the energy generated and consumed in real time via mobile phone using the app provided by the manufacturer. The converter also sends information via the internet, and you can consult how many credits have accumulated per month.

Distributed Generation —> Compensation System

The process of generating your own electricity (self-generation), consuming only what you need and sending excess energy to the public grid is called **distributed generation**, established by *REN no. 482/2012, of ANEEL, which in turn establishes the **Power Compensation System**, in which the total energy sent back to the public grid and not consumed during the month are calculated as electrical charge credits that are immediately charged on the following bills, in cases where self-generation does not meet the total monthly demand. Credits are valid for 60 months.

According to this system, within a region supplied by the same distributor (for example, Eletropaulo in the state of São Paulo/Brazil), three complementary conditions are possible:



Shared self-generation;



Remote self-consumption :

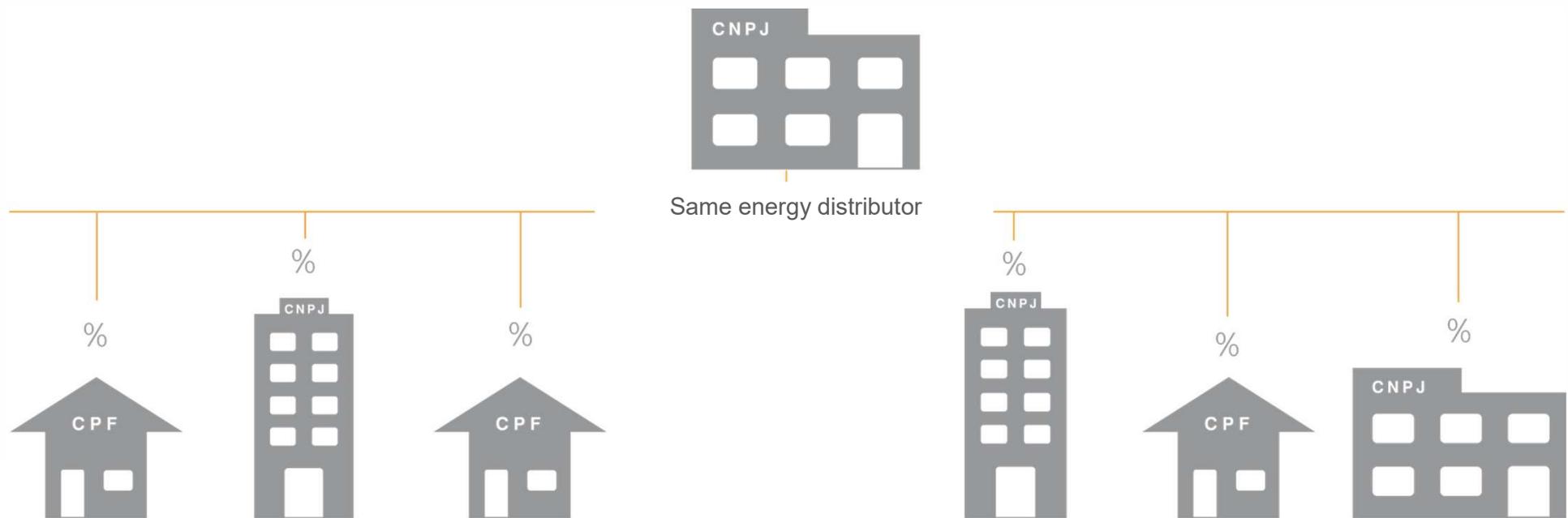


Undertakings with multiple consumer units :

* REN: Normative Resolution | ANEEL: Brazilian Electricity Regulatory Agency

Distributed Generation → Compensation System

Shared Self-generation; One or more individuals or companies establish an agreement and each of the consumer units (company or household) receives a previously determined percentage of the energy produced by one of the partners.



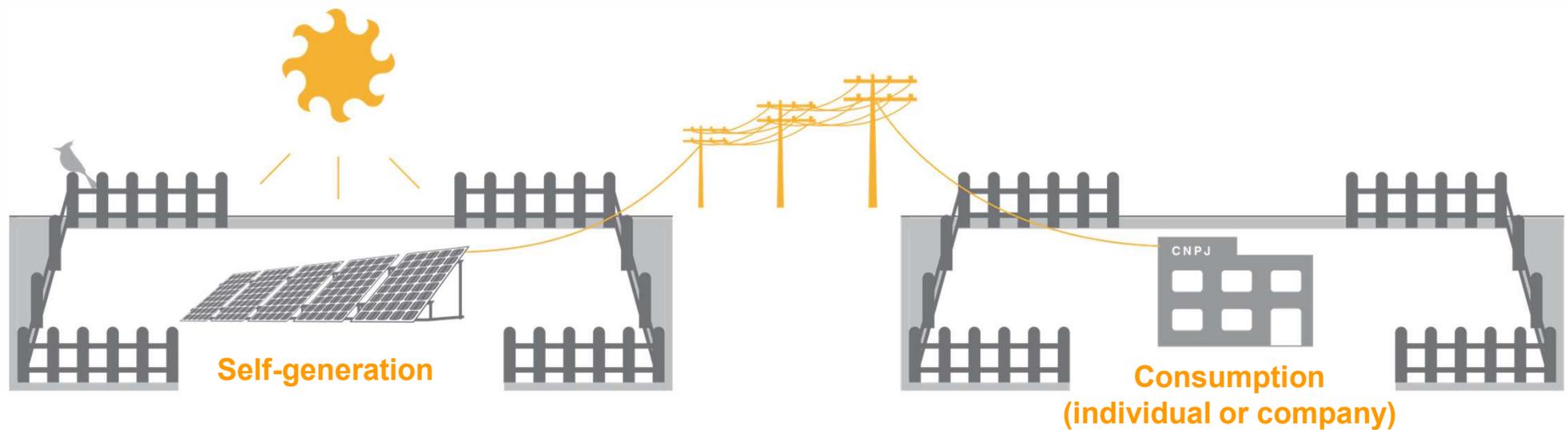
*CNPJ= Company

*CPF= Individual

Images merely illustrative

Distributed Generation → Compensation System

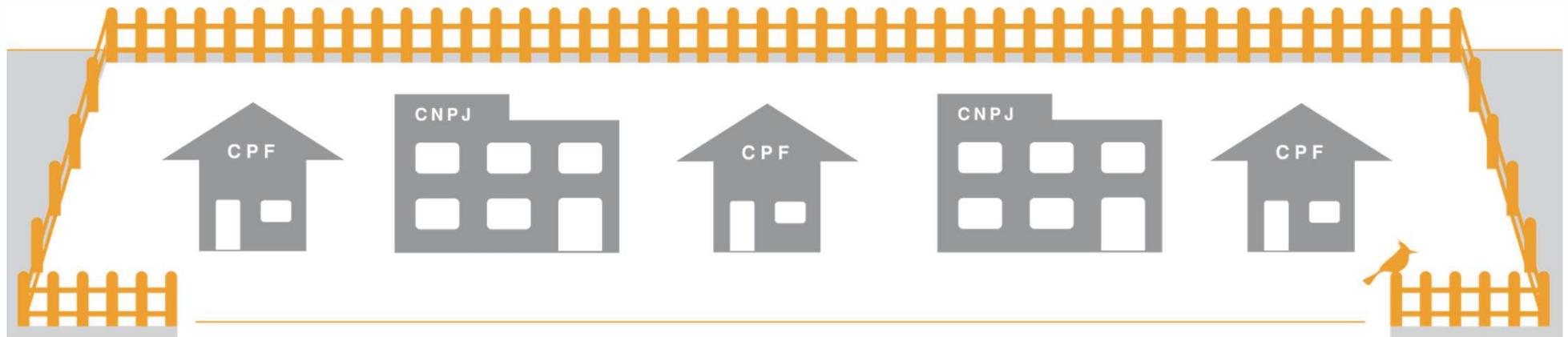
Remote Self-consumption; The energy is produced in one place and consumed in another. All it takes is for both electricity contracts (your bills) to be under the same individual's or company name, which can even be located in different cities, as long as supplied by the same distributor.



→ Different locations, same power distributor

Distributed Generation → Compensation System

Undertakings With Multiple Consumer Units: This works similarly to Shared Self-Generation, however, the percentage of energy consumption occurs at the same location (address) and is divided among several points of consumption (condominiums or cooperatives).



Economy

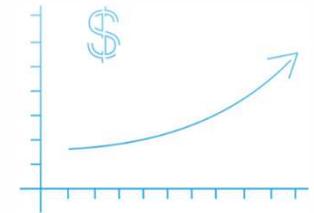


investments and deadlines



Save On Your Electric Bill

The price of electrical energy is subject to yearly increases that can exceed 40%. With self-generation, your electricity expenses are greatly reduced, yielding great cumulative savings for more than 25 years. Your electric bill does not reach zero cost, because there are still distributor fees, but savings can exceed 90%, depending on the chosen project.



How Much Should You Invest?

The necessary investment varies according to energy consumption, which will be analyzed in advance, and the location's energy demand and physical infrastructure. Next, a specific project is designed, which defines the installed production power, the necessary equipment, and the scaling of the complete service.



Bank Loans

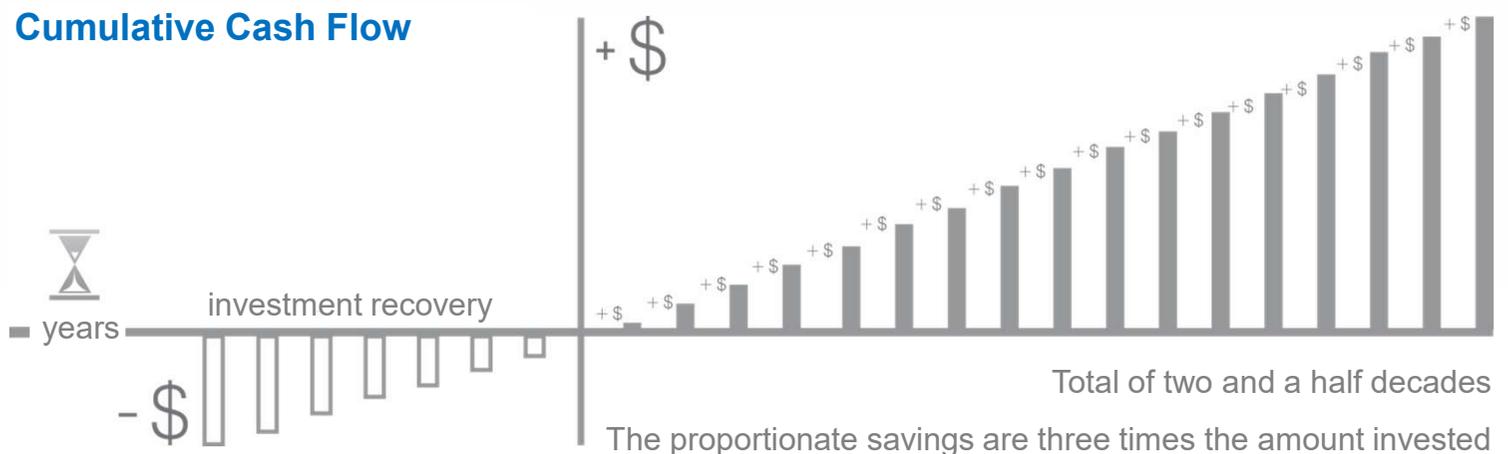
Currently, several public and private banks offer specific lines of credit and loan conditions for investment in solar energy. Clients are responsible for contracting bank loans, all the while with the support and monitoring of Sunergia.



Cumulative Cash Flow – Investment And Recovery

Payback time varies depending on the project. If a bank loan was taken out, your monthly cost may be equal to the amount discounted from your **electricity bill until the loan is paid back, as long as the system is in operation and ratified by the distributor.** From then on, savings are cumulative.

An illustrated example of this flow.

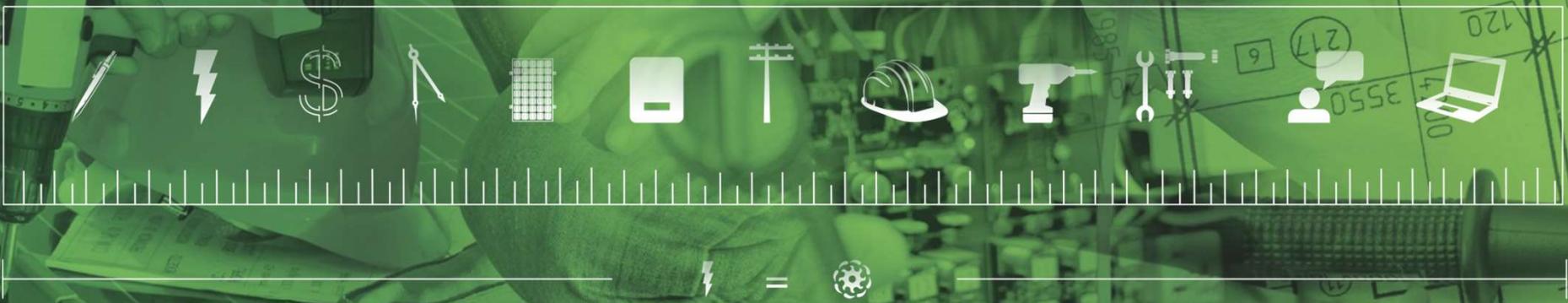


Proposal

Turn Key

Design and procedures

100%



Turn key Proposal – Project And Procedures

Sunergia is a **turnkey solar solution** provider, offering solar energy solutions from start to finish:

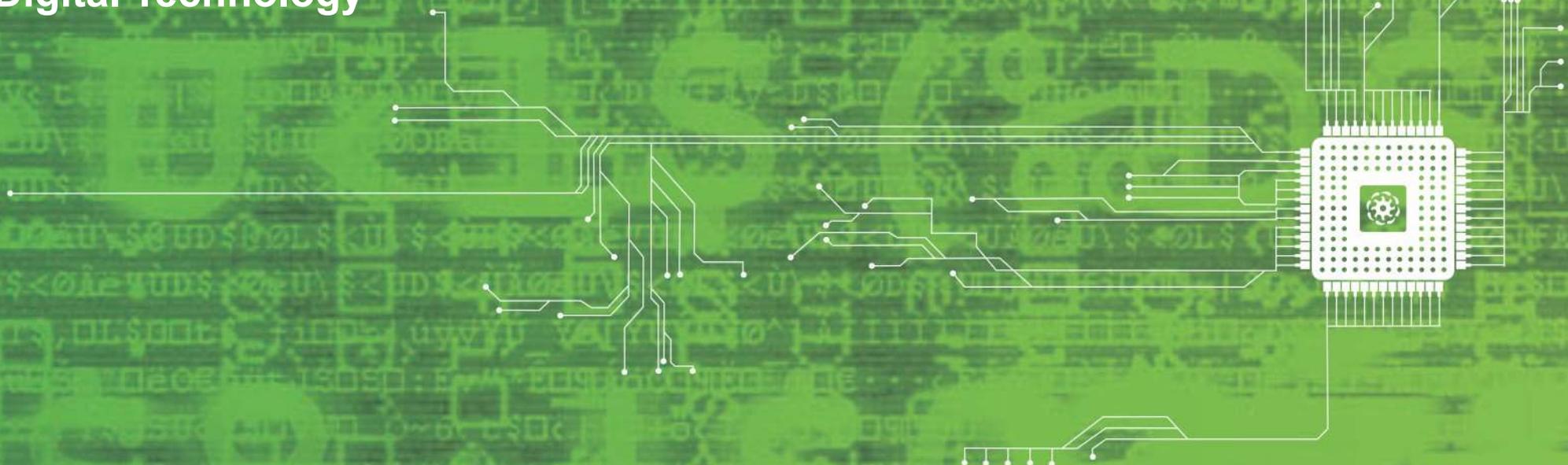
- ⊗ Study of electrical demand
- ⊗ Calculation of power generation capacity
- ⊗ Cash flow (investment/return)
- ⊗ Technical design
- ⊗ Material acquisition and logistics
- ⊗ Access to energy distributor
- ⊗ Installation
- ⊗ Activation
- ⊗ Orientation
- ⊗ Technical support

On presenting the project and quote, we will show you all of the product's technical features, manufacturers and brands, warranty period, and other information.

On contracting our services, a service provision agreement is established with Sunergia, which is also responsible for billing and issuing invoices separately. Product manufacturers issue invoices directly to you (direct invoicing).

We provide nonbinding technical assessments and quotes.

Digital Technology

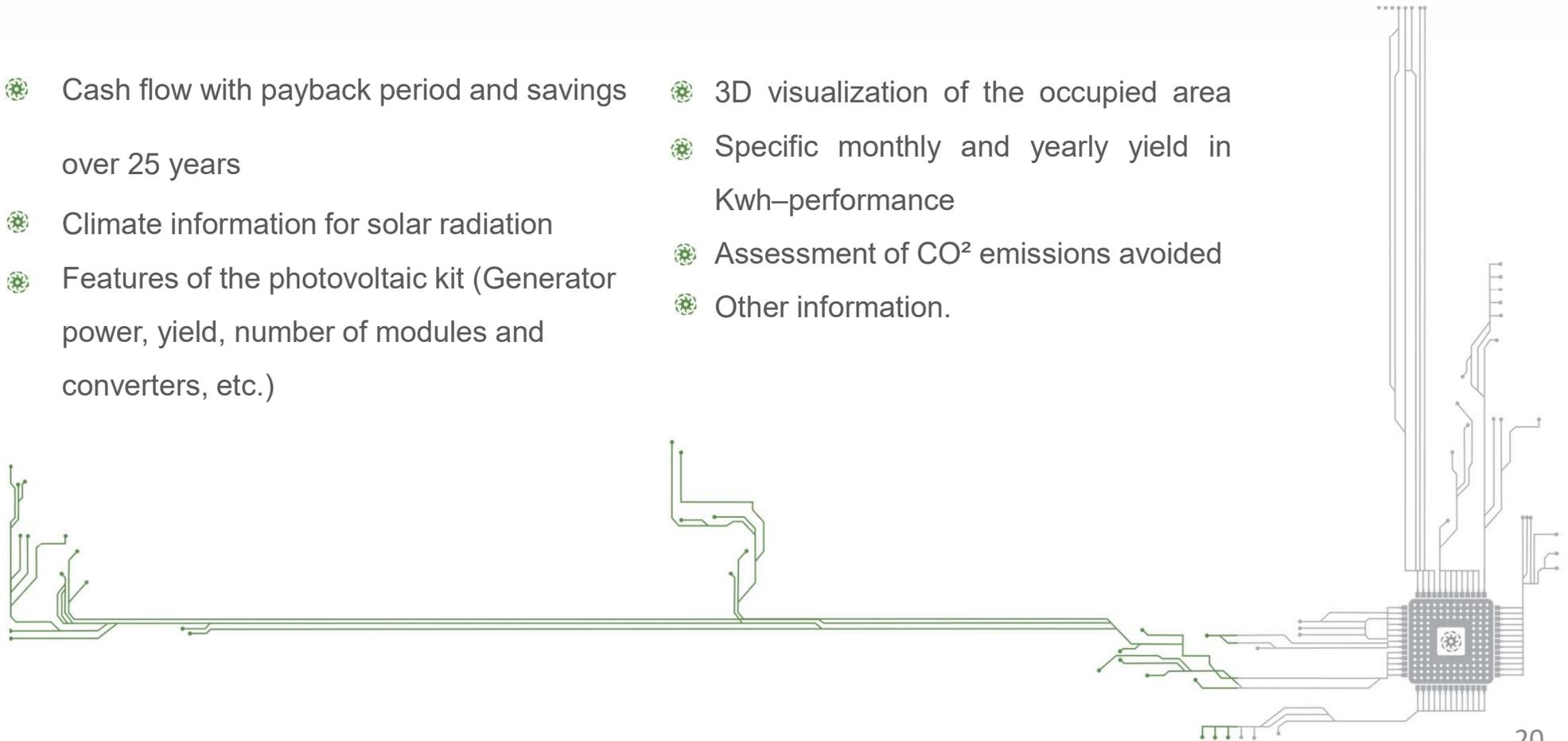


PV SOL Software

PV SOL Software

When analyzing each project, our engineers use **PV SOL**, a German software that serves as an advanced digital tool that helps compose a thorough, detailed and complete report with the data for each specific project, allowing clients to visualize all of its technical dimensions. This report includes information such as:

- ☼ Cash flow with payback period and savings over 25 years
- ☼ Climate information for solar radiation
- ☼ Features of the photovoltaic kit (Generator power, yield, number of modules and converters, etc.)
- ☼ 3D visualization of the occupied area
- ☼ Specific monthly and yearly yield in Kwh–performance
- ☼ Assessment of CO² emissions avoided
- ☼ Other information.



Institutional





Sunergia is an engineering company specializing in solar energy projects. We provide the market with complete service and support for the needs of electrical self-generation, from the planning to the final activation of the system, respecting the environment and allowing for financial optimization, always with transparency, and establishing rigorous quality control in all processes and installations.

Our installation team is composed of engineers, technicians, and trained assistants, always abiding by corresponding regulatory norms, while using safe equipment and high-quality and performance tools.

Mission To enable the sustainable economy through innovation and technology..

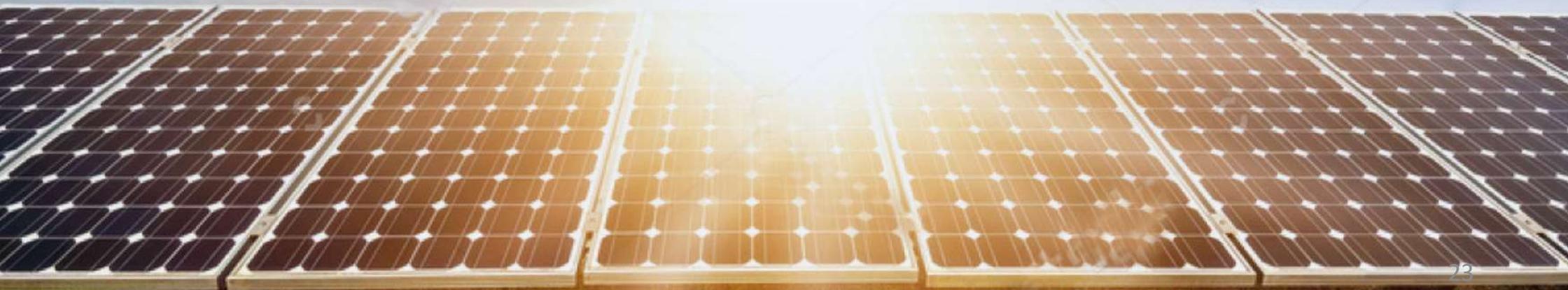
Vision To be a reference in clean electric energy.

Our values: Sustainability, Integrity, Efficiency and Aesthetics.



Our operating philosophy is to use well-rounded technical knowledge to carry out procedures in an organized, complete and cross-sectional manner, integrating all aspects of the project, in search of constant improvement.

With Sun everything is better





www.sunergia.com.br

contato@sunergia.com.br

 Phone: + 55 11 3172-1990

Lloyd Tower Business Building
Itapura Street, 300, Conjunct 602
Tatuapé, São Paulo-SP
Zip Code: 03310-000

Social Networks

