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presented by
Andrei Bucur (BDM)



MET Romania - Energy Services

*EV chargers * Photovoltaic * Sub-metering * Smart Lighting * Thermography*

Implementing
INNOVATION
IN EUROPEAN ENERGY MARKETS

MET GROUP IS AN INTEGRATED EUROPEAN ENERGY COMPANY WITH SIGNIFICANT EUROPEAN PRESENCE

MET GROUP

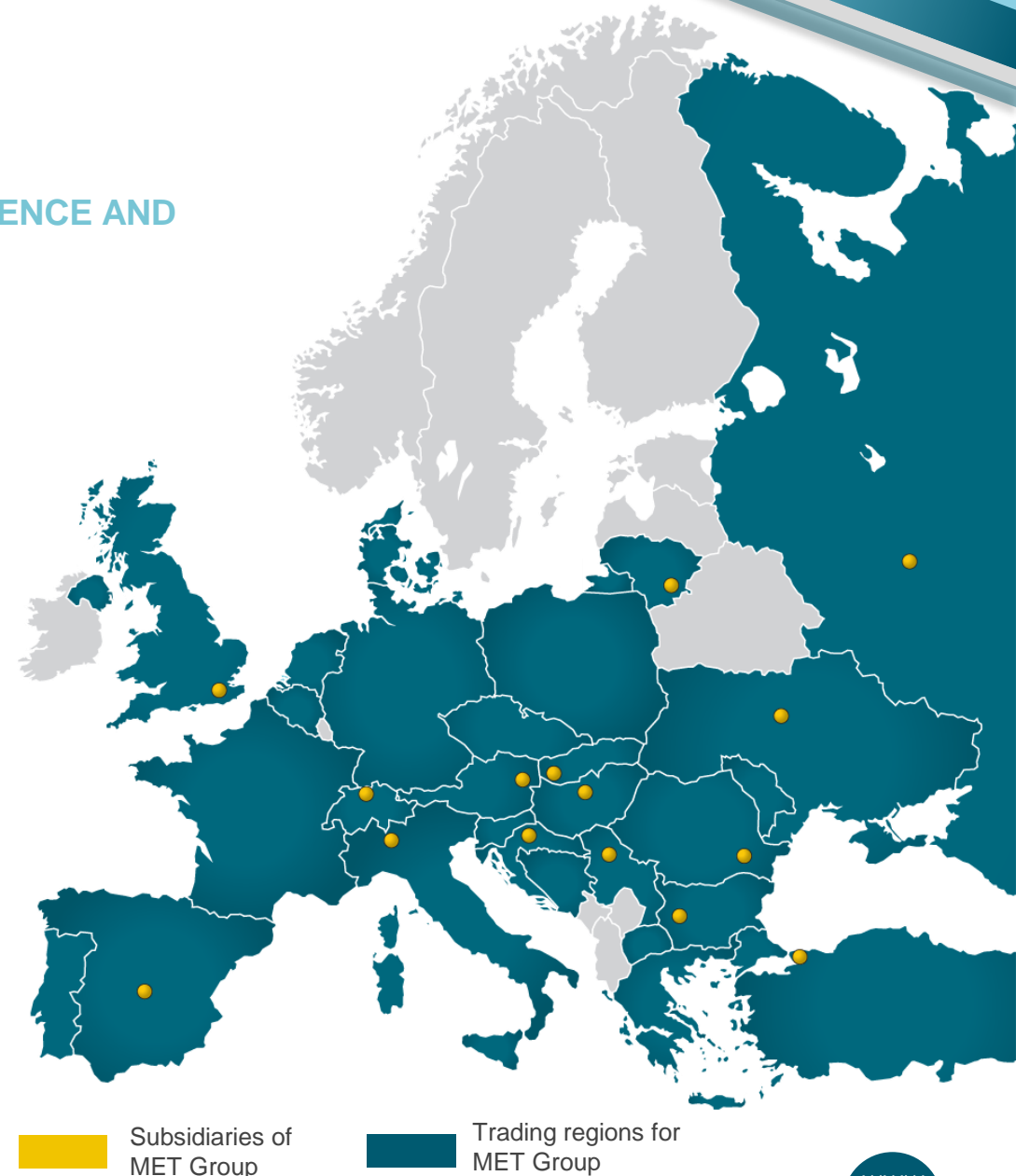
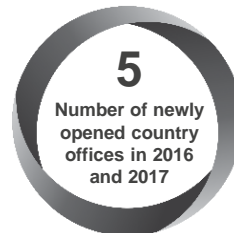
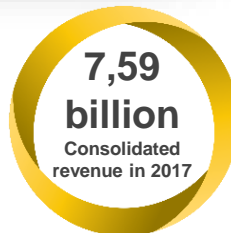
MET Group is an integrated European energy company, headquartered in Switzerland, with activities in natural gas, power and oil, focused on multi-commodity wholesale, trading and sales, as well as energy, infrastructure and industrial assets.

The success of MET is based on three pillars:

- talented and highly motivated people,
- an integrated risk management model and
- running businesses more efficiently than the peers with strong market position and reliable access to financing.

MET Group's mission is to become a leading market player by implementing innovation in the traditional European energy market.

STRONG INTERNATIONAL PRESENCE AND UNIQUE POSITION IN THE CEE



REMOTE CONTROL AND AUTOMATIZATION

- **Lighting system** (sensors, rollers/ curtains)
- **Acclimatization** (temperature sensors, + rules - priorities)
- **Safety** (video surveilling, smoke/ door/ windows sensors etc.)
- **Metering** (all utilities, on grid/ off grid PVs)
- **Storage system** (from grid or renewable sources)

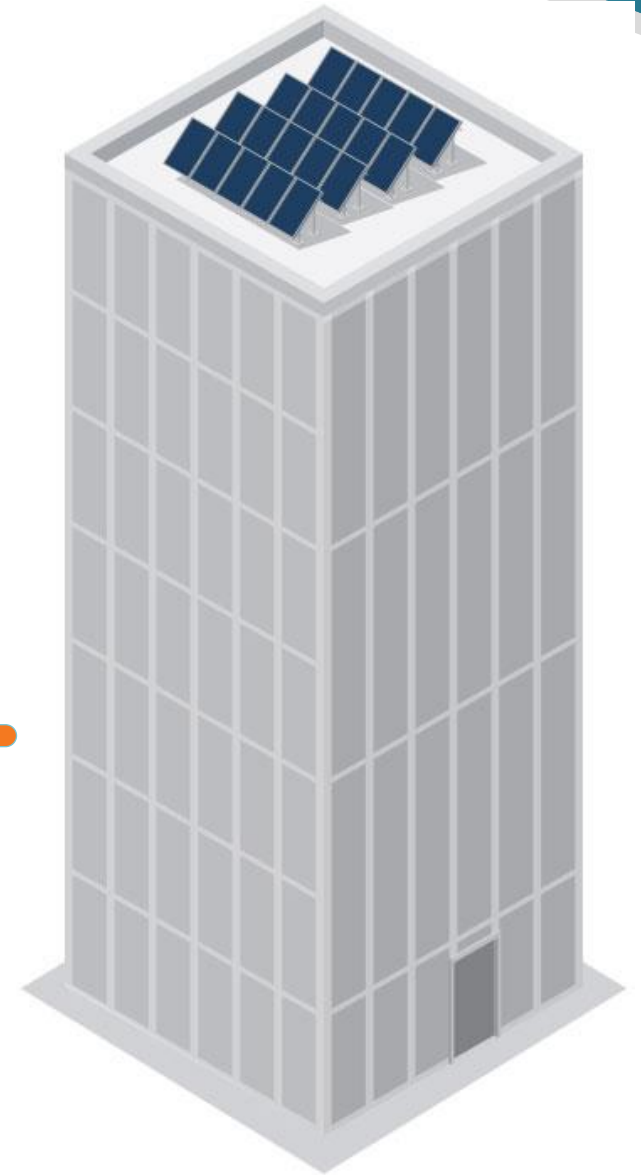
Management system for consumption and safety!

ECO Friendly

- EV chargers



**The FUTURE
has arrived!**



POPASULUI

— residence —

CARTIER INTELIGENT

CASĂ INTELIGENTĂ

sistemul de casă inteligentă a fost integrat cu succes la nivelul întregului complex popasului residence. acesta este menit să ușureze viața utilizatorului și în același timp să eficientizeze consumul de energie al locuinței.

Panouri Fotovoltaice

fiecare casă din complex este dotată cu panouri fotovoltaice ce garantează un aport semnificativ la încălzirea locuinței tale și un cost redus la factura de întreținere.

EV CHARGERS ARE SUITABLE FOR MANY PLACES

MET Romania is coming with a full package of services for setting up an EV infrastructure.

We are able to offer all type of services, as following:

- Electricity supply
- EV chargers of all types (AC or DC)
- Installation, maintenance and service
- Software application (authentication and charging info)
- Charging (payment) system
- Certified project by EU regulation

Increasing the EV charging network is a key aspect of ensuring that the technology can become mainstream. Automotive manufacturers are developing their ranges of electric vehicles in an effort to reduce the CO2 output of their fleets or face heavy fines if targets are not met by 2021



PHOTOVOLTAIC SYSTEMS COULD BE ON GRID OR OFF GRID + HYBRID

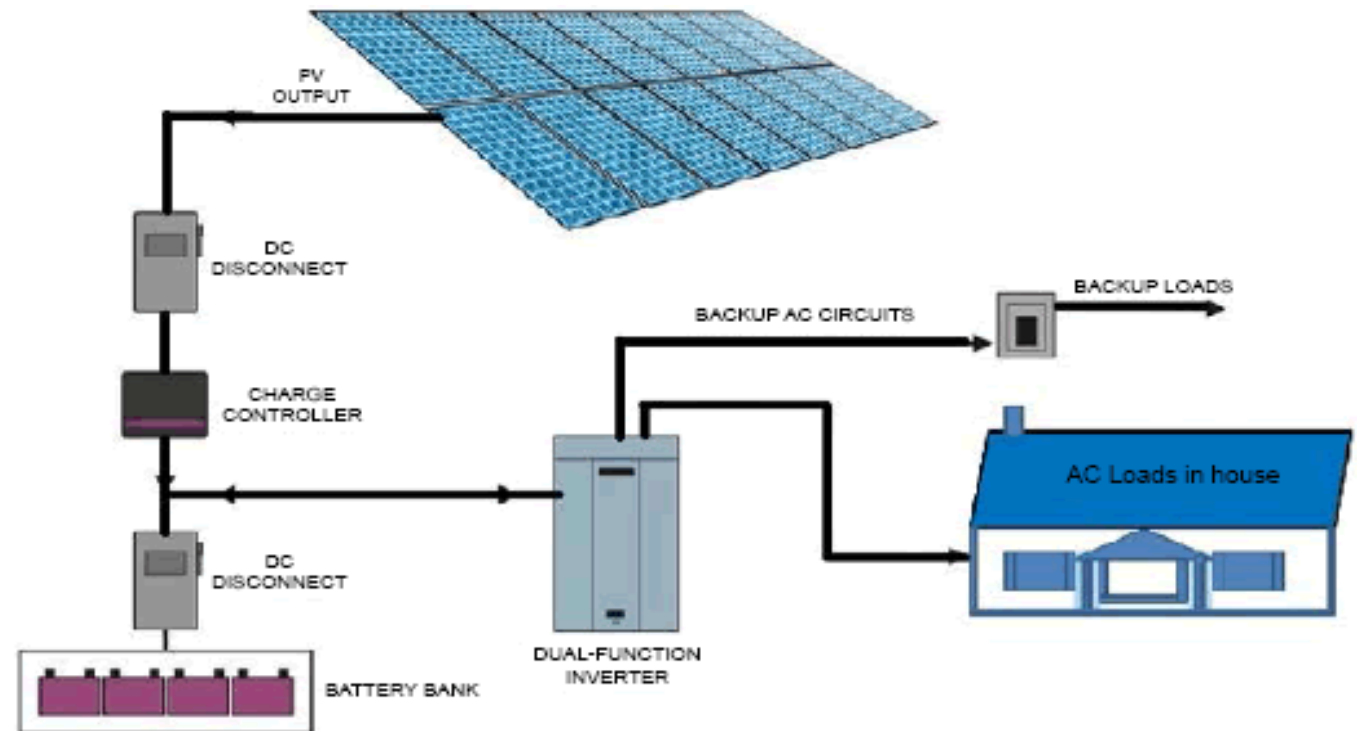
Short description

On the basis of present world energy scenario, there is possibility that renewable (non-conventional) sources of energy may partially supplement fossil fuel (conventional sources) energy

MET Romania can design a proper Photovoltaic system solution, based on the client activity and his goals.

Each solution is certified and in line with the EU regulation.

Example of a **Hybrid** solution



TYPICAL USES



SMART CITY



IOT

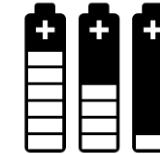


INDUSTRY 4.0

CLIENTS BENEFITS

- Energy churn decreased by up to 10% by smart buying
- Cut infrastructure preventive & corrective maintenance cost
- Improved prediction of consumed energy / circuit & location
- Instant view into infrastructure consumption status

SMART METERING. HOW IT IS WORKING? MET ROMANIA IS OFFERING A TURN KEY SOLUTION



SYSTEM CAPABILITIES

- Can interconnect and control actual measurements systems
- Allow integration of new management systems based on IoT
- Is using certified and metrology equipment
- **Real time readings** – notifications and alerts if happenings appear
- Data transmission is via GSM/ GPRS, LORA, 5G



ACTION AREA

- HVAC installations
- Lighting systems
- Common areas
- Elevators, automatic stairs, parking places etc.
- Security systems
- Aggregation of existing/ new meters of gas, water, energy

MET CLOUD CAN PROVIDE MANY ADVANTAGES

How can you access the data?

- Data are centralized and stored with access from anyplace & anytime, through your account
- Data are secured and safely stored
- No third parties will be able to access your energy usage data without your consent

What kind of data do you get?

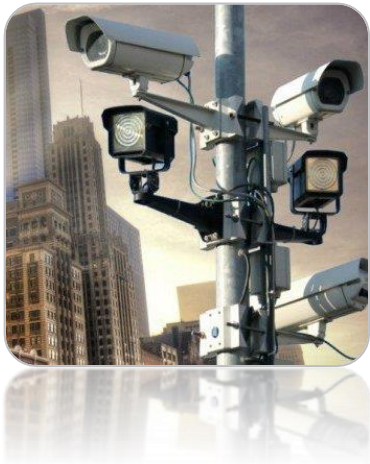
- Graphics and reports (*many formats*)
- Notifications by email or SMS
- Environmental impact by calculating the CO2 emissions associated with electricity consumption
- User management per location per measured circuits, etc.



LIGHTING REMOTE MANAGEMENT SYSTEM, FROM MET ROMANIA

Smart lighting is able to provide many advantages

- Lighting operates autonomously, using smart scheduling algorithms based on astrological calendar, light level sensors or motion detectors – for any lamps with electronic or electromagnetic ballasts and also architectural lighting
- As ADD-ONS, you can use your actual outdoor lighting system during the daylight for other purposes, as different sensors, surveilling cams or even EV chargers, without making any other cabling/ digging works that is effort, time consuming and is generating extra costs.



SERVICES SUMMARY

EV chargers – *Wall mounted or standalone (AC & DC)*

Photovoltaic systems – *On Grid/ Off Grid + Hybrid*

Smart Metering – *IoT system that can measure your circuits*

Smart Lighting – *indoor and outdoor lighting control*

Thermography – *checking electric circuits status for RISKS*



Thank you for
your attention!



Company Profile

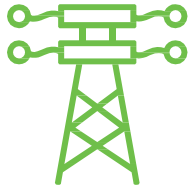


| Who we are

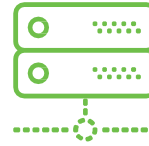
- Stratum Enclosures, is the Leading **ODM enclosures** manufacturer and integrator of cabinets for the Telecom sector, power solutions, Energy storage and data centers.
- Acquired and Modernized by IPI Group Holding in 2011, the Romanian Enclosure Manufacturing facility takes pride in its international ISO certifications and in its dedicated team exceeding the **120** professionals and delivering the most versatile projects in **Europe, Middle East, Africa and South East Asia**.
- More than 4000 employees within the group.



| Our Strategical Sectors



**Telecom
Sector**



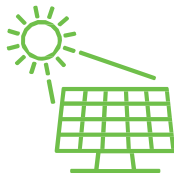
**Data
Centers**



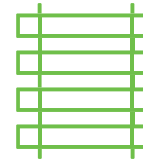
Infrastructures



Industrial



**Renewable
Energy**



Railways

| Our Factory



State of the art production facility

| Our Organizational Structure



- Design Department
- Production Department
- Customer Care Department
- After-Sales Department
- Technical Support

20-20-20 targets

The climate and energy package is a set of binding legislation which aims to ensure the European Union meets its ambitious climate and energy targets for 2020.

In STRATUM ENCLOSURES factory we are promoting **"GREEN"** and we achieve a part of the objective sets

- **51.09% from the energy used in the Manufacturing Process of STRATUM ENCLOSURES comes from renewable energy production(Wind turbines)**

These targets, known as the "20-20-20" targets, set three key objectives for 2020:

- A 20% reduction in EU greenhouse gas emissions from 1990 levels;
- Raising the share of EU energy consumption produced from renewable resources to 20%;
- A 20% improvement in the EU's energy efficiency.



Our Projects

Energy storage



MULTIPURPOSE FIBER-OPTIC CABINET MFOC



The latest street cabinet revolutionized by IPT PowerTech Group, embeds a Fiber optic cabinet and a modular EV charging station.

MFOC is designed to respond to the raising needs for faster internet connection while accommodating the ideal charging interface of the EV future cars.

MODULAR
3 compartments :



EXPANDABLE:
Batteries can be extended as needed



EASILY DEPLOYABLE:
Optimized footprint

FIBER OPTIC CABINET Main Features

- Energy counter compartment independently accessible
- Power Redundancy through Emergency Socket
- Built-in Power System of 2400W
- Li-Ion Batteries of 40Ah extendable to 200Ah
- 10U space for MSAN equipment's and ODFs'
- Up to 600 pairs of Connection ports in a separate compartment
- Smart heat dissipation

EV CHARGING STATION Main Features

- AC & DC Charging
- Safe, fast and flexible
- Fast charging down to 20 minutes
- Control & monitoring of charging process.
- Standardized charging types for USA/Japan, Europe, GB/China.
- Built-in POS payment.
- Independent energy counter for separate invoicing

Advantages

- Easy deployable due to its plug and play feature.
- Small foot-print all in one compartment using edge technologies in energy density.
- Easy expandable/upgradable module design that allows expansion and upgrade any time during operation.
- Light stock management one cabinet fits all installation scenarios along with the upgrade/expansion kits.
- Camouflage option due to a painting that makes the cabinet blind in its surroundings.
- Anti-graffiti option due to a special painting that prevent graffiti paint from bonding to surfaces.



TRION DCG

CABINETIZED ENERGY SYSTEM



is IPT PowerTech Group latest innovation for grid connected sites with unstable mains featuring the benefits of both; Lithium-Ion batteries' efficiency along with the generator effectiveness, all enclosed in a cabinetized solution.

Trion DCG Cab ES houses space for telecom equipment, remote monitoring, solar system connection, high density generating sets and battery system. Also, the system can be camouflaged to blend with the environment when needed.

TRION DCG Cabinetized Energy System
is an ideal risk-free solution for the latest generation of urban deployments.

Applications

- Unstable and unpredictable grid.
- Critical sites: this solution provides up to 3 levels of power redundancy can act as:
 - Hybrid solution have a storage energy autonomy with range between 2 hours till 10 hours including one genset power supply.
 - Continuous power solution equipped with two genset running sequentially with backup battery system for emergency case.
- Sites with high fuel theft

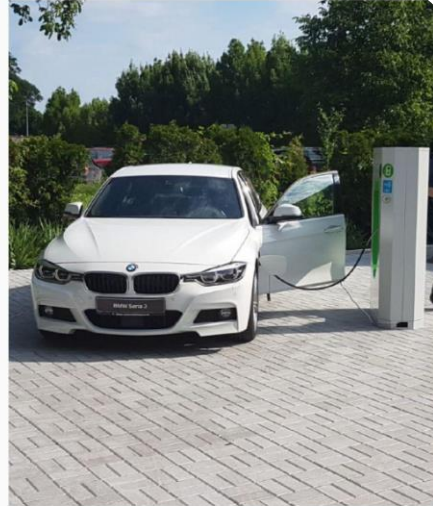


EV-Charging CHARGING



EV-Charging

CHARGING SITES



EV-Charging

CHARGING SITES



EV-Charging

CHARGING SITES



EV SUPERCHARGER

stratum
Supercharger,
The Best Choice!

Supercharging with up to
80
Ampere in AC

Supercharging with up to
200
Ampere in DC



EV-Charging

CHARGING SITES

Available options

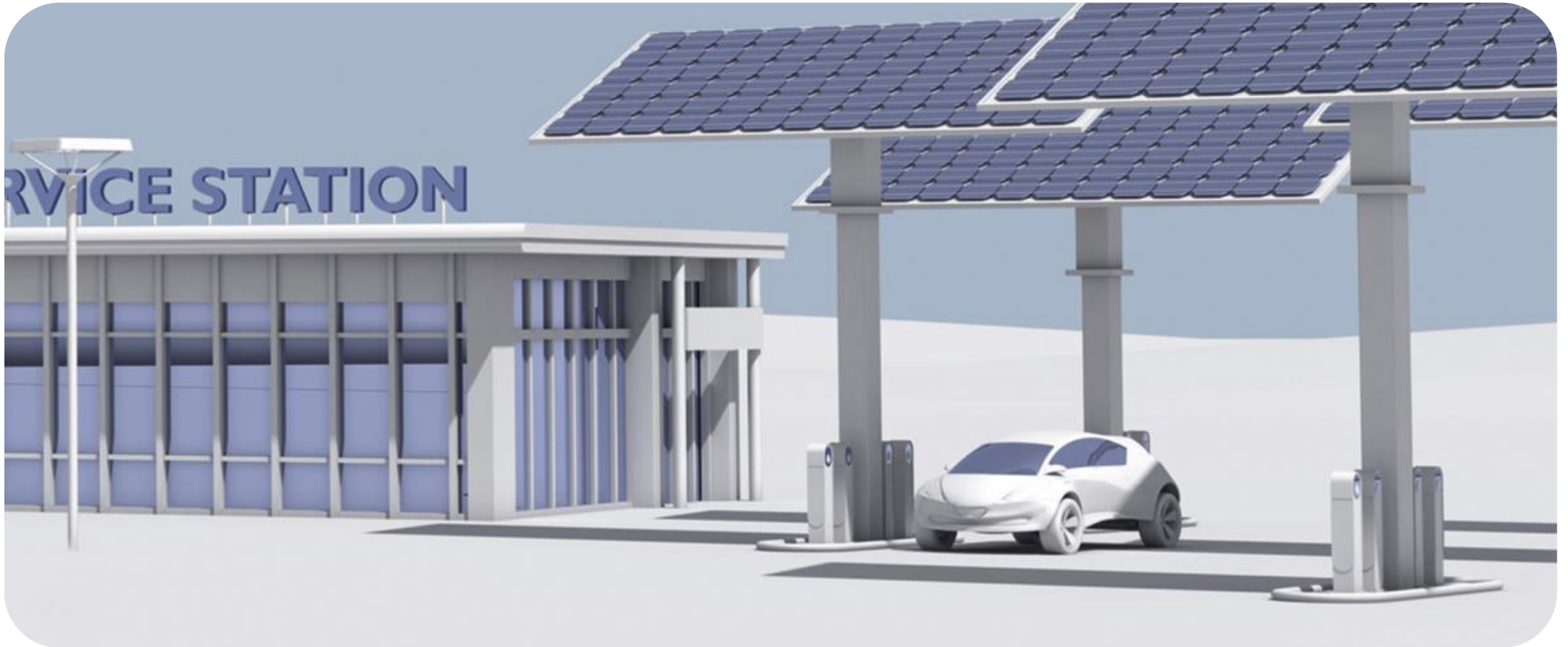
Number of Charge Points	DC out Plug configuration	AC out configuration	Standard power configuration	Communication
3 (2x DC, 1x AC)	CCS and CHAdeMO	Type 2 plug	50 kW	LAN
4 (2x DC, 2x AC)	2 x CCS	Type 2 socket	100 kW	Wireless GPRS / 3G
6 (4x DC, 2x AC)	2 x CHAdeMO	Type 2 plug and Type 2 socket No AC	150 kW	Tosibox (WLAN + 3G)

Customized configurations on request



EV-Charging

CHARGING SITES



| Our Projects

Energy storage



| Our Projects

Energy storage



Our Projects

Nigeria-energy storage



Our Projects

South Africa-energy storage



stratum

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READY TO ASSIST YOU

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