GREEN ENERGY

Electromobility | Photovoltaics | Energy Supply Systems

Renewable Energy Sources

When planning for a safe future, we must keep the environment in mind. By exploring the renewable energy sector and introducing innovative solutions to the market, it is possible to gradually change the way energy is produced, stored and transmitted.

Obtaining energy from clean sources reduces fossil fuel consumption and greenhouse gas emissions. The increased use of renewable energy sources leads to a higher return on investment and dynamic growth of the industry.

The European Union wants to accelerate the use of renewable energy to contribute to the goal of reducing the net greenhouse gas emissions by at least 55% until 2030.

IN HARMONY WITH NATURE

Generating energy by using the forces of nature and using generation technologies, that do not harm the ecosystem.

HYDROPOWER PLANT

It converts the kinetic energy (the flow of water) into electricity.

WIND TURBINE

It converts the kinetic energy (the movement of air) into electricity.

PHOTOVOLTAIC SYSTEM

It converts the energy from solar radiation into electricity.

Transmission of Electricity

The efficiency of converting and transmitting electricity while maintaining the quality parameters required for the proper operation of end devices is a key issue.

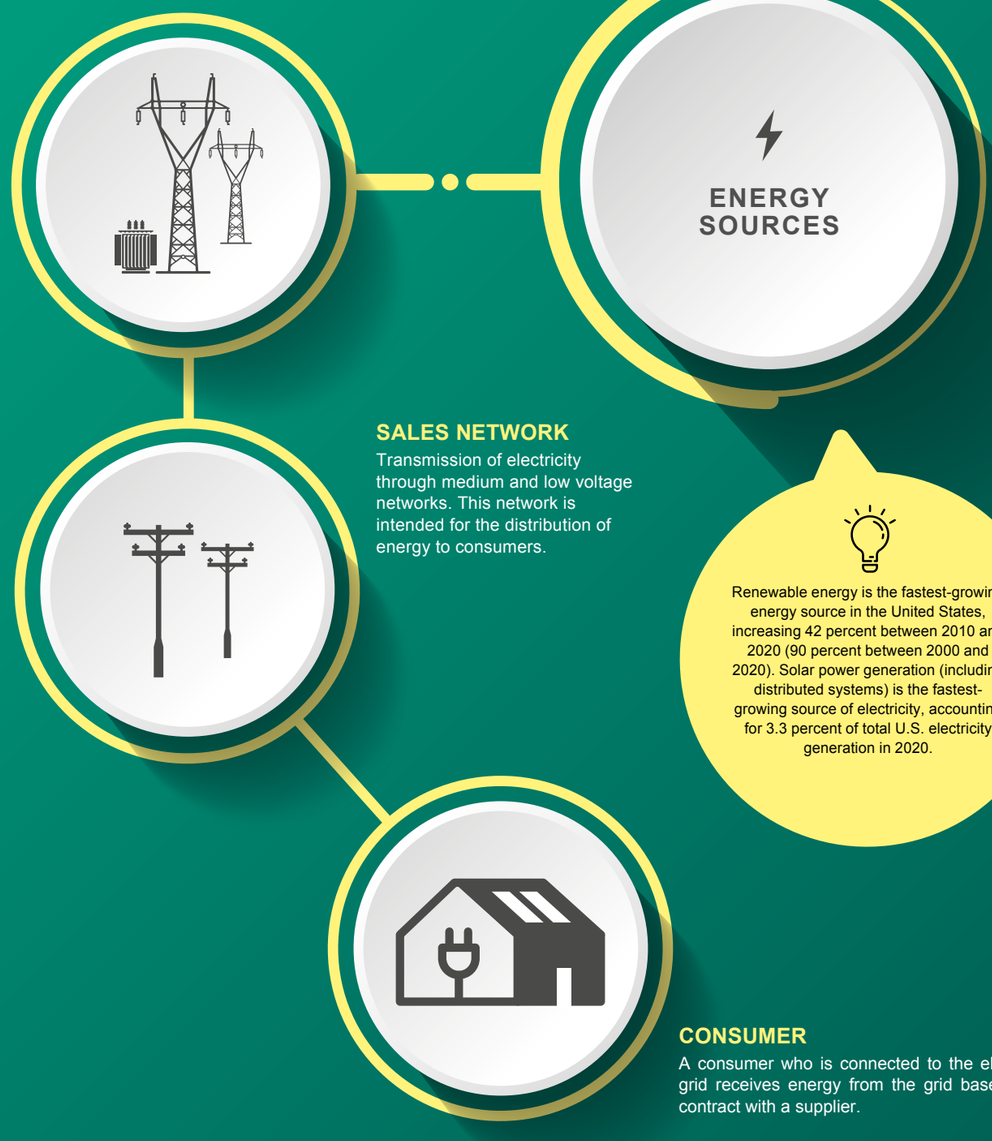
Supporting the control of this process, preventing errors and ensuring security are the main objectives of our mission.
From the source to the consumer.

PRODUCTION

The electricity generated is fed into the power grid, which is designed for optimal transmission and distribution of electricity.

TRANSMISSION NETWORK

Transmission of electricity through high and extra-high voltage networks. This network is used to transmit energy over long distances.



SALES NETWORK

Transmission of electricity through medium and low voltage networks. This network is intended for the distribution of energy to consumers.

Renewable energy is the fastest-growing energy source in the United States, increasing 42 percent between 2010 and 2020 (90 percent between 2000 and 2020). Solar power generation (including distributed systems) is the fastest-growing source of electricity, accounting for 3.3 percent of total U.S. electricity generation in 2020.

CONSUMER

A consumer who is connected to the electricity grid receives energy from the grid based on a contract with a supplier.

Electromobility

EVSE (Electric Vehicle Supply Equipment) charging stations are increasingly becoming a part of the landscape of our cities, homes, workplaces and public spaces. The philosophy that shapes our products is to ensure maximum user safety during their operation. It is also important to ensure a maximize comfort and ergonomics by appropriate lighting in the loading area.

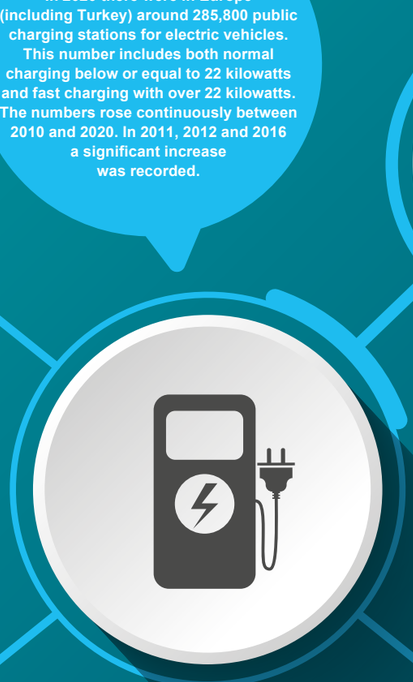
In 2020 there were in Europe (including Turkey) around 285,800 public charging stations for electric vehicles. This number includes both normal charging below or equal to 22 kilowatts and fast charging with over 22 kilowatts. The numbers rose continuously between 2010 and 2020. In 2011, 2012 and 2016 a significant increase was recorded.

MRU Series

Earth resistance and soil resistance measuring devices

APPLICATION

- Measuring ground resistance using an engineering method.
- Measurement of the charging station's lightning protection system in accordance with IEC 62305.



PQM Series

Advanced measuring devices for measuring and analyzing parameters in power networks

APPLICATION

- Impact assessment from chargers to the power grid.
- Checking the load profile.
- Monitoring of reactive power exceedance.

LXP Series

Lux meter for measurement the LED illuminance

APPLICATION

- Measuring the illuminance of the charging station.
- Intrusive light measurement.

EVSE-01 Adapter

The adapter for the MPI series measuring devices enables the measurement of AC charging stations with a type 2 plug, a socket and a fixed charging cable. Tests are available for 1 and 3 phase stations - both with and without ventilation.

Sonel MPI-540

The MPI series includes multifunctional electrical parameters designed for controlling household and industrial systems.

MZC Series

Error loop impedance meter of the LED Illuminance level

APPLICATION

- Fault protection for voltages up to 750 V and a loop impedance value of 7.2 mΩ.
- Testing the loop impedance and the short-circuit current IK up to ~100 kA as well as the effective touch voltage on conductive parts of charging stations for electric vehicles.

Photovoltaics

Photovoltaic systems are an environmentally friendly source of renewable energy. Photovoltaic cells work all year round - even in winter. The only condition for their operation is the presence of sunlight. Our equipment makes it possible to measure the parameters of these systems. We offer a range of DC and AC-side tests in accordance with EN 62446 as well as all measurements to determine the safety status of domestic electrical systems.

Sonel PVM-1020

Measuring device for photovoltaic systems

APPLICATION

- Inspection of photovoltaic systems with regard to safety in use, in accordance with IEC 62446-1 Cat. 1.

Sonel IRM-1

Solar radiation and temperature measuring device compatible with MPI-540-PV and PVM-1020

APPLICATION

- For measuring the irradiance and temperature of the photovoltaic panel and its surroundings.

PVM-1-Adapter
CP-PV Measuring clamps

Necessary accessories for measuring parameters such as current, voltage and power on the DC side of photovoltaic systems. Standard equipment of the MPI-540-PV.

Sonel MPI-540-PV

A very versatile measuring device that was developed especially for testing photovoltaic systems.

The device performs a series of tests on the DC and AC side - in accordance with the guidelines of the EN 62446 standard.

Global photovoltaic capacity has risen from around five gigawatts in 2005 to around 509.3 gigawatts in 2018. The cumulative solar PV installations in Germany alone reached around 42.4 gigawatts.

Sonel CMP-1015-PV

Digital current clamp meter for PV systems

APPLICATION

- DC high-voltage measurement (HVDC) Voltages of 1500 V
- For measuring AC and DC
- Temperature measurement.
- Measurement of current and voltage downstream of an inverter, frequency converter or in a VFD system
- Built-in recorder and communication with Sonel Multimeter Mobile Android application

MRU Series

Earth resistance and soil resistivity meters

APPLICATION

- Carry out earth resistance measurements in accordance with the IEC 61557-5 and IEC 60364-6 standards.
- Measurements of the continuity of the protective conductor in accordance with EN 61557-4 with a current of 200 mA.

KT-Series

Thermal imaging cameras for measuring the temperature of solar collectors

APPLICATION

- Detection of hot spots caused by cell damage or localised shadowing.
- Detection of overheating bypasses.
- Detection of overheated overcurrent protection devices.
- Identification of overheated cables and plugs.

Safety in every phase

As a manufacturer of measurement devices and solution provider for many industries in the energy sector, we are committed to the philosophy of improving efficiency and safety in future areas. As the energy sector moves towards low and zero carbon energy sources, we are strengthening our presence year on year by introducing advanced tools for electrical installers and metering professionals.

AutoISO Adapter

For measuring the insulation resistance of cables and multi-core wires.
The use of adapters reduces the time required for measurements between wire pairs.

Carrying out periodic inspections in electrical installations in accordance with the applicable regulations increases the safety level of the installation and its users.

MIC Series

Product line of professional high-voltage insulation resistance measuring devices with a variety of measuring functions

APPLICATION

- Maintenance and monitoring of the transmission grid, substations and generators.
- Diagnosis of the insulation quality.

PARAMETERS

- R_{ISO} = 40 TΩ, U_{ISO}=15 kV, I_{SC}=7 mA.
- DD, PI, DAR, SV, RT, PD, PDC, API, RX, R_{CONT}, C.
- Digital filters guarantee stable measurement results in areas with strong electromagnetic interference.

ENERGY SUPPLY SYSTEMS

KT Series

Temperature measuring devices that work with non-contact infrared measurement are used to determine the temperature of the object to be tested with device-dependent accuracy.

APPLICATION

- Inspection of wind turbine blades. Detection of
- overheated components in switch cabinets and transformer stations.
- Monitoring the operation of substations.
- Detection of faulty feeders, insulators, fuses, disconnectors and circuit-breakers.
- Inspection of rotating machines, dust pipes and hoppers

LKZ Series

Locating devices for cables and underground infrastructure

APPLICATION

Localisation makes it possible to determine the actual position of the underground system and the right place to start work. This reduces the possibility of dangerous accidents and damage to the objects being searched for.

UV-260

Corona-Camera

APPLICATION

Detection and monitoring of corona, arc and surface discharges in the energy industry.

MMR Series

Micro-Ohm-Meter

APPLICATION

- Ensuring the proper quality of the electrical wiring.
- One device for measuring the HV circuit breaker and the transformer.
- A current of up to 200 A and a high-performance source enable the measurement of HV circuit breaker contacts with an accuracy of 0.25 %.

MZC Series

Error loop impedance meter

APPLICATION

- Fault protection for voltages up to 750 V and a loop impedance value of 7.2 mΩ.
- Quick check of loop impedance and short-circuit current IK up to ~100 kA as well as the effective touch voltage.

MRU Series

Earth resistance and soil resistivity meters

APPLICATION

- The MRU-200 and MRU-200-GPS measuring devices enable pulse measurements of the earthing resistance of lightning protection systems in accordance with the requirements of IEC 62305.
- Measurement of the resistance of earthing conductors and protective conductors in accordance with the IEC 61557-4 standard.
- Measurement of the earthing resistance of transformers and the earthing network of substations.
- Measurement of the earthing resistance of transmission masts using the ERP-1 adapter and the impulse method.

ERP-1 Adapter

For measuring the resistance of multiple earth connections without disconnecting the test clamps. The flexible clamps with a large diameter allow earthing tests to be carried out, e.g. on electricity pylons, including lattice pylons, without having to disconnect the power line.

TDR Series

Digital fault locators

APPLICATION

Reflectometer for characterising and localising faults in power and telecommunications cables.

PQM Series

Measuring devices for measuring and analysing parameters in power grids

APPLICATION

- Assessment of the quality of the power supply in accordance with EN 50160
- Faultdiagnosis
- Monitoring the reactive power

From start-ups to large corporations:
every customer is the most important to us.

Our services:

- **Competent customer advice**
- **Calibration of measuring devices**
- **Customer visits and product demonstrations**
- **Product training**
- **Service and support from Auerbach**

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