

ESCAD
ENERGY



ENERGY

speed. evolution. trust.



ESCAD

ENERGY

ESCAD AG

- Leading international supplier of innovative products, technologies and services
- 650 highly qualified engineers
- 10 national and 3 international locations
- 4 energy centres in Germany

The philosophy of ESCAD AG is based on the following fundamental principles:

SPEED

Flat hierarchies enable fast, dynamic reactions to customer and market requirements. With specific promotion of training and further training, we prepare our employees for the new requirements and create a solid foundation.

EVOLUTION

Continual investment in the future by opening up new markets, sectors and technologies. Development into a technological corporation through pioneering, innovative product solutions in various industries.

TRUST

Creation of long-term strategic partnerships through fair cooperation and flexibility, respect and regard for our customers and employees. Creativity and commitment to our work to achieve the common goals.

ESCAD ENERGY VISION

The age of the energy revolution has begun. Regenerative energies are our new power source.

- Unlimited availability!
- Economically viable!
- Usable without catastrophic long-term effects!

Let us seize this opportunity for reorientation together.

ESCAD ENERGY MISSION

We are working energetically with our wealth of our expertise and the background of over 650 employees

- on the expansion of decentralised regenerative energies worldwide
- on the intelligent combination of solar power, solar thermal energy, wind energy, thermal power stations and appropriate storage technologies
- on the use of intelligent energy management systems

ESCAD
GROUP AG

ESCAD
ENGINEERING

ESCAD
MEDICAL

ESCAD
AUTOMATION

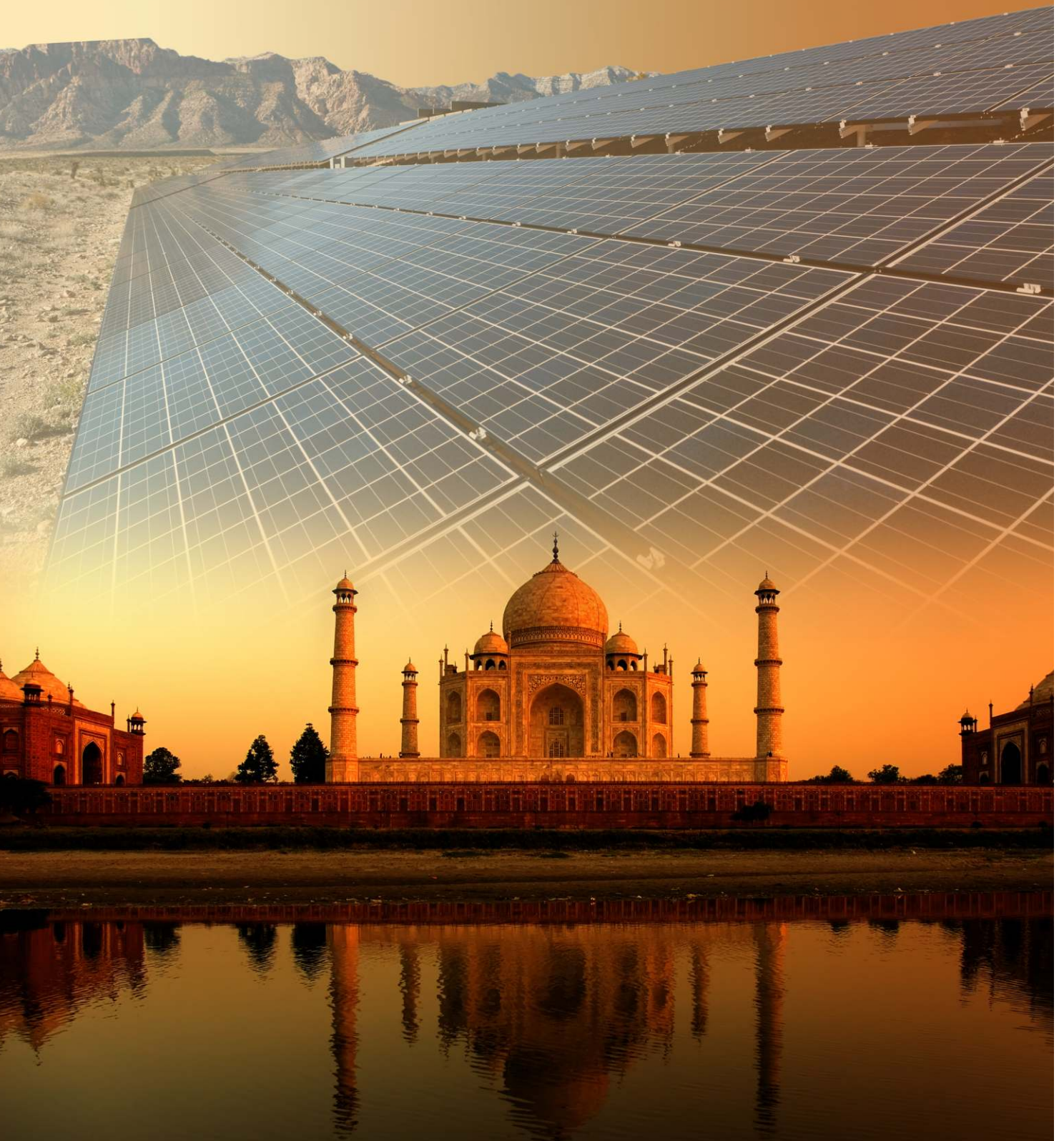
ESCAD
ENERGY



VISION OF THE PROJECTS

India is a country in which large projects have a long tradition.

Implement the historic projects of tomorrow with us!



WE ARE YOUR **RELIABLE PARTNER**

for large national and international
projects in the regenerative energy industry

Invest in our solar systems

- Safe return on investment with low risk
- Long-term returns
- Future-proof
- Ecological

The best decisions in my life
are characterised by long-term
sustainability.

My whole family will benefit from
this today and tomorrow.

Concept one

We plan, project, produce and service **your solar systems** for you.

Planning

- Acquisition of land and roof areas
- Concept development
- Approval procedures, building permit
- Technical system planning
- Structural design

Implementation

- General contractors
- Invitations to tender and submissions
- Financing and insurance concepts
- Construction management and construction supervision, commissioning

Management

- Technical management
- 24 hour system supervision
- Local inspections
- Troubleshooting
- Production of a "curriculum vitae" for every system
- Production optimisation
- Commercial management
- Settling of accounts with the energy supplier
- Auditing of accounts
- Processing of insurance claims

Concept two

As an **investor**, you invest in **solar systems** at home and abroad.

- Future projects at locations with a guarantee of sun and investment security.



Dual axis solar trackers



Large roof areas



Car Park Roofing

OUR PHOTOVOLTAIC PRODUCTS

Products of Tested Quality

- Solar Modules
- Solar Inverters
- Assembly Systems
- On-line Monitoring
- PV Planning Software
- ESCAD Energy 3D Powerplan
- Solar Carports / Car Park Roofing

- High cell efficiency ensures the the modules' performance and reliability
- Compliance with international standards by quality inspections
- Translucent low-iron glass of improved rigidity and impact strength

- Frame design of high stability for easy installation
- Multi-layer laminated film as a protection against environmental effects
- Excellent electric output even at high temperatures and poor solar radiation



Qualified, IEC 61215
Safety tested IEC 61730
Periodic Inspection



Photovoltaic modules are the most important components of a system.

With a percentage of about 60% to 75% of the investment costs, photovoltaic modules are of great importance from an economic point of view.

Due to the long period that a PV plant remains installed on the roof and is to generate energy efficiently even after years, a high quality and the durability of the modules used are particularly important.

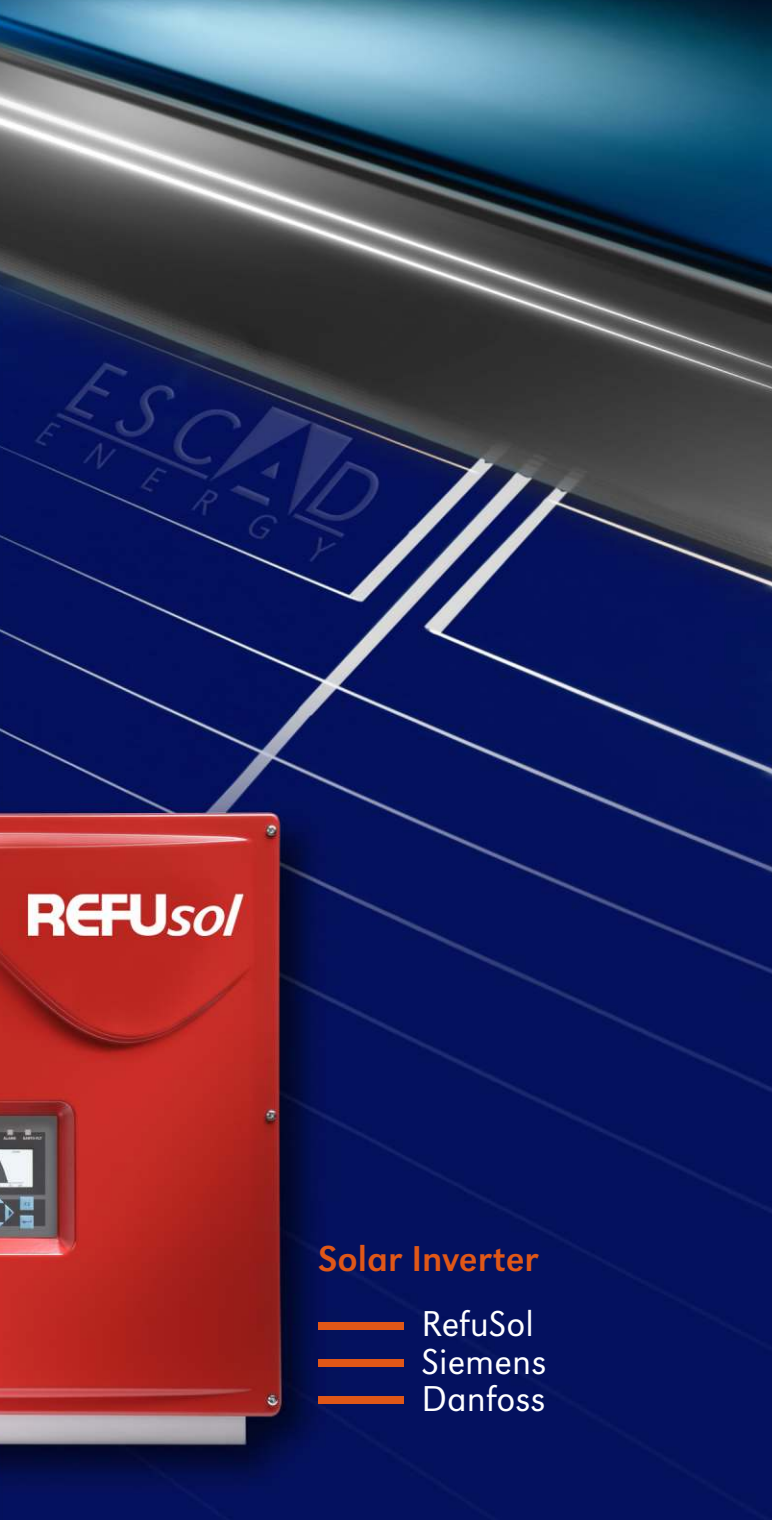


PV Planning Software ESCAD Energy 3D Powerplan

Fast and professional system planning, module planning, string planning, interconnection planning, shadowing calculation, assembly planning, evaluation of economic efficiency and offer preparation

Remote Monitoring On-line Monitoring

- Meteo Control Safer'Sun
- RefuSol: RefuLog



Solar Inverter

- RefuSol
- Siemens
- Danfoss



IN-HOUSE QUALITY SYSTEM

Protects your investment in the long term thanks to certified quality made in Germany

100% fully automatic electro-luminescence inspection system for high precision, efficiency and speed in mass production.

ESCAD
AUTOMATION

— Solar Module Inspection
— Solar Cell Inspection

- Low Efficiency Defect
- Shunt Defect
- Finger Interruptions Defect
- μ -Crack Defect
- Crack Defect



WIND POWER

Our strength is project management where we bring together different interests such that all parties involved will derive benefit therefrom.

The wind is a sound and low-risk investment that is available free of charge and at any time, irrespective of economic fluctuations.

In addition, the feed-in remuneration ensures secure earnings over the entire validity period.

We will take care of the matter if you intend to lease your farmland or forestry areas or, as a municipality or enterprise, to cover your power consumption from regenerative energy sources. Thus, we will accompany you without delay in all your steps.

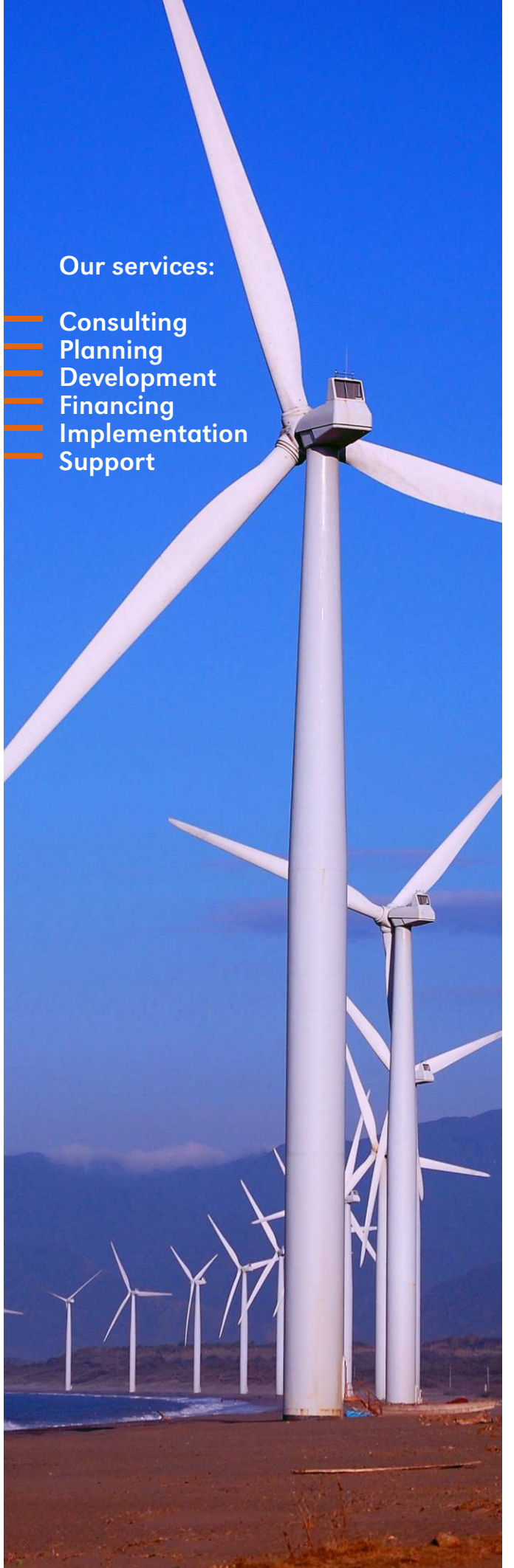
We look for the optimal locations for your wind turbines and examine the locations for their wind conditions, for topographic circumstances, mains connection variants, and ecologic issues. For this purpose, we bring experts and partners together in order to assess the planning bases, obtain energy yield appraisals, and to determine compensatory measures, if appropriate.

After completion of the planning phase, areas are secured, buildings permits obtained, and wind power plants purchased. Based on the local conditions, the number, size, and exact wind turbine positions are determined. In addition, we plan the time-frame as well as the logistics for the construction of the plants. We plan the entire financing on your behalf and enter into negotiations with financial institutions. Moreover, we look for domestic and foreign investors, or we cooperate with regional public utilities. ESCAD Energy GmbH coordinates all activities during the construction stage of the project. We take care of all plants during their operation over a contract period of 20 years via remote control and on-site inspections. In addition, we keep continuous track of the project profitability by balancing revenues against expenditures.

Project Development and Project Management for Large Wind Power Stations Worldwide

Our services:

- Consulting
- Planning
- Development
- Financing
- Implementation
- Support



SMART HOME

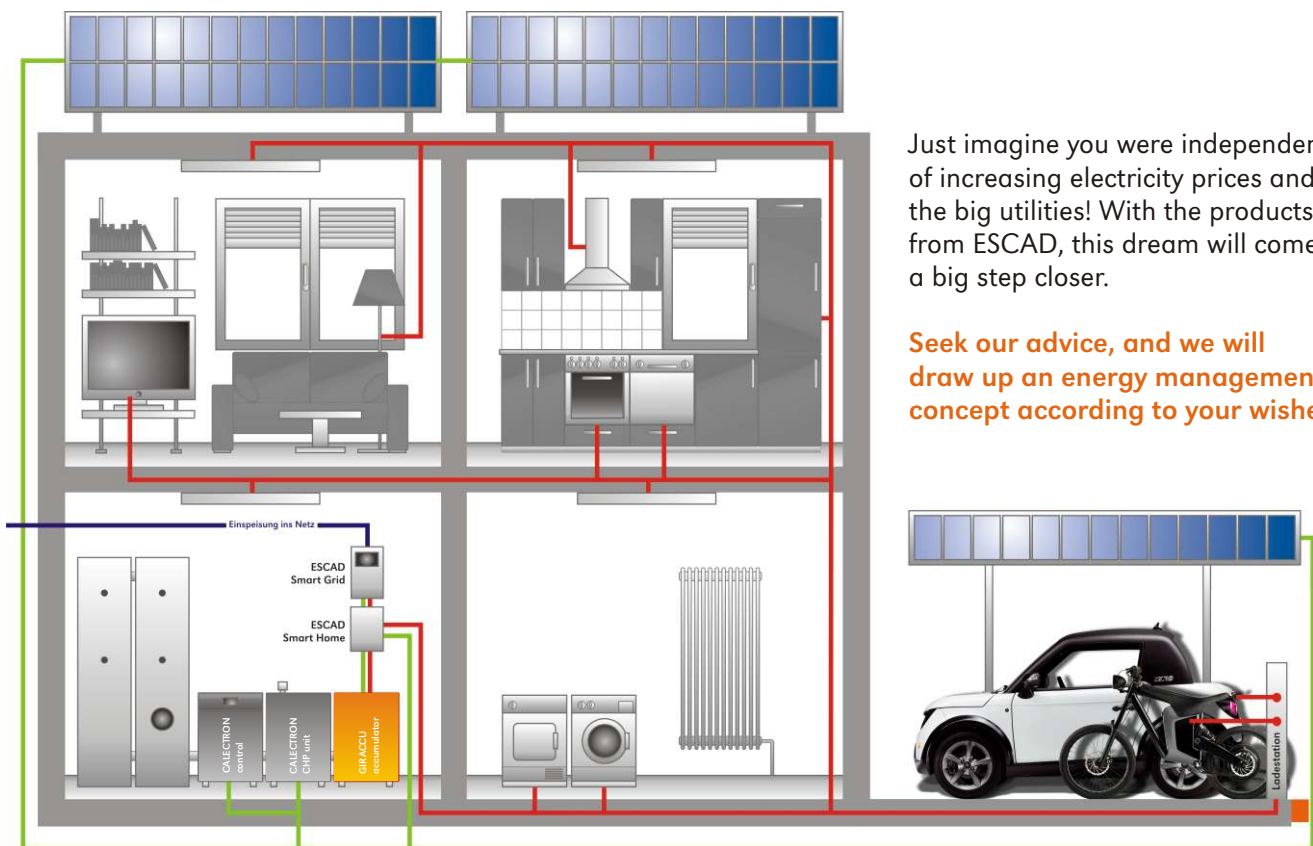
The GIRACCU electric power accumulator from ESCAD is the ideal addition to ESCAD SMART Home, the intelligent home control from ESCAD.

Monitor and control your loads and electric power generators fully automatically by means of ESCAD SMART Home.

Feed in the power generated by a photovoltaic plant or a CALECTRON combined heating and power (CHP) unit only into a public supply network when the GIRACCU accumulator and the electric car are fully charged, no load needs the electric power, or else if the electricity price at the energy exchange is particularly profitable.

Increase the consumption of the self-generated power from your photovoltaic plant and take advantage of extra proceeds due to the intelligent control of power generator and loads - because the own consumption pays off already from the first kilowatt-hour compared to the feed-in.

ESCAD SMART Home detects whether the power generation suffices for the operation of the flexible devices and whether the GIRACCU accumulator may serve as an aid.



Just imagine you were independent of increasing electricity prices and the big utilities! With the products from ESCAD, this dream will come a big step closer.

Seek our advice, and we will draw up an energy management concept according to your wishes!

Our Services:

Consulting
Planning
Financing
Implementation

— Energy consumers
— Energy generators
— Connection to mains

STAND-ALONE SOLAR POWER

Safe, stand-alone solar energy supply for

village communities

businesses

hospitals

schools

in regions

without a

reliable energy supply



Once installed, the ESCAD Energy SLM system works completely autonomously. As soon as the sun rises, the SLM is powered up from stand-by mode. The battery is immediately tested. If no technical fault is diagnosed and the battery is not fully charged, the charging process begins. When the sun goes down or if the energy fed in is too weak for the charging process or if the battery is fully charged, the charging process is ended and the system goes into energy-saving mode. The inverter with its connected consumers can be connected completely independently of this. If the daily consumption of energy does not exceed the recharged quantity of energy from the PV panels, the system will work for years without interruption. However, if energy is taken from the battery faster than it can be recharged, the inverter with its connected consumers is switched off. This ensures that the battery is not damaged.

Safe energy for my future...



- Solar Power
- Thermal Solar
- Electric Car
- Wind Power
- Block unit power plant
- Energy storages
- Smart Home

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