



**Solutions for own
consumption and net
metering in the industry**

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The present situation is one of a sharp rise in the use of renewable energies in electrical energy production and constantly falling costs. The cost of the electrical energy that is generated, transported, distributed and commercialised according to the traditional model is also constantly increasing. There is a clear will to reduce the use of fossil fuels and toxic gas emissions.

This situation is reflected in EUROPEAN PARLIAMENT DIRECTIVE 2009/28/EC and in the legislation of the member states setting out

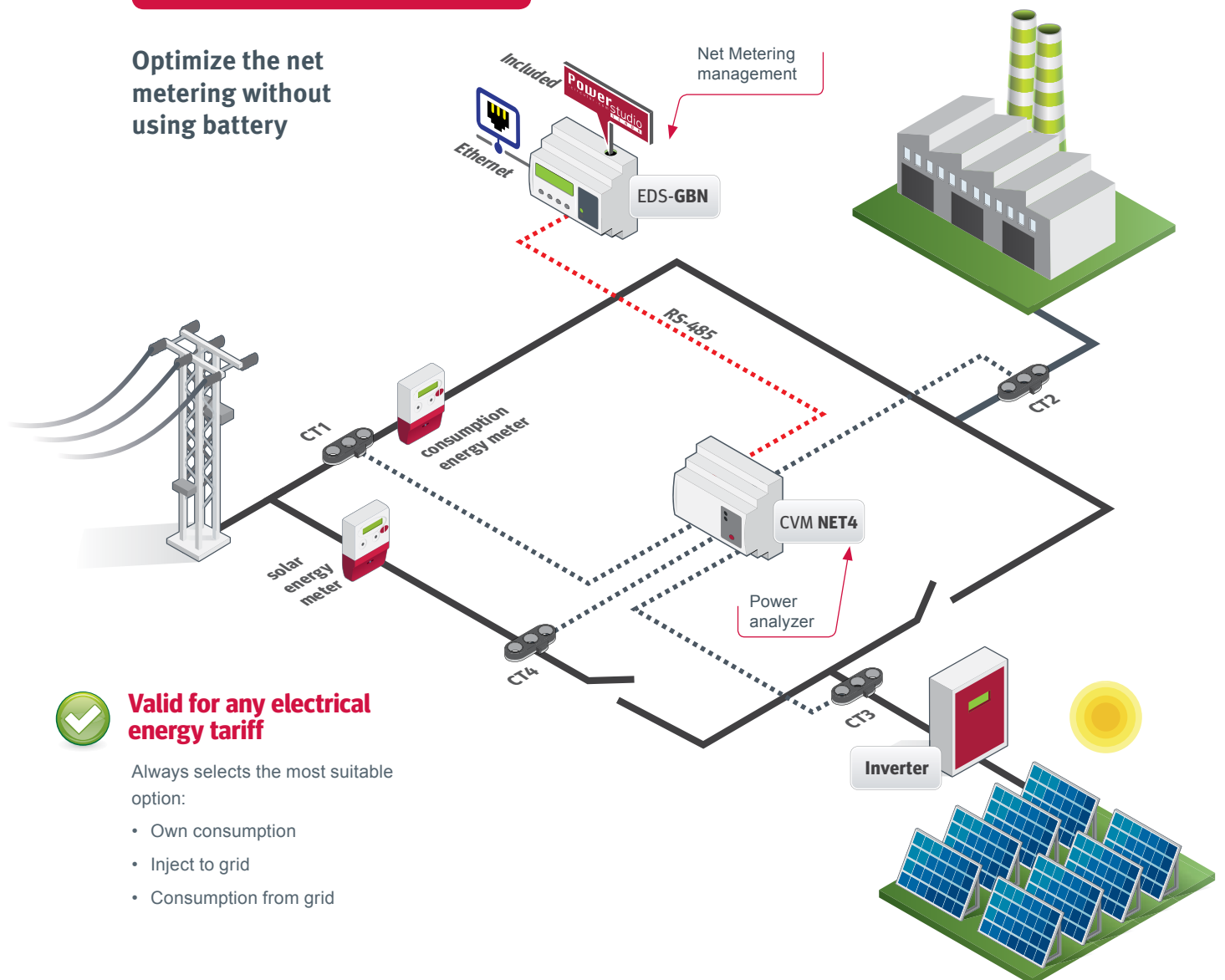
the path to reducing toxic emissions with the growing use of renewable energies through self-generation within a framework of distributed generation and own-consumption.

Let us examine a few concepts:

- **Self-generation**
The capacity to produce electrical energy using renewable sources and/or the use of industrial or other processes, especially heat.

Self-Consumption WITHOUT storage

Optimize the net metering without using battery



Valid for any electrical energy tariff

Always selects the most suitable option:

- Own consumption
- Inject to grid
- Consumption from grid

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- **Cost of Energy (LCOE)**

Cost (€/kWh) of the electrical energy produced, bearing in mind the investment, the operating costs, maintenance and financing within a certain time frame.



$$\text{LCOE} = \frac{\sum_{t=1}^n \frac{I_t + M_t}{(1+r)^t}}{\sum_{t=1}^n \frac{E_t}{(1+r)^t}}$$

LCOE Levelized Cost of Electricity

I= Investment
M=Maintenance and Operation Cost
E= Generated Energy
r= Discount rate

- **Grid Parity**

Coincidence between the costs of the electrical energy supplied according to the traditional model and the cost of electrical energy self-generated (LCOE) with one's own sources.

- **Own-consumption**

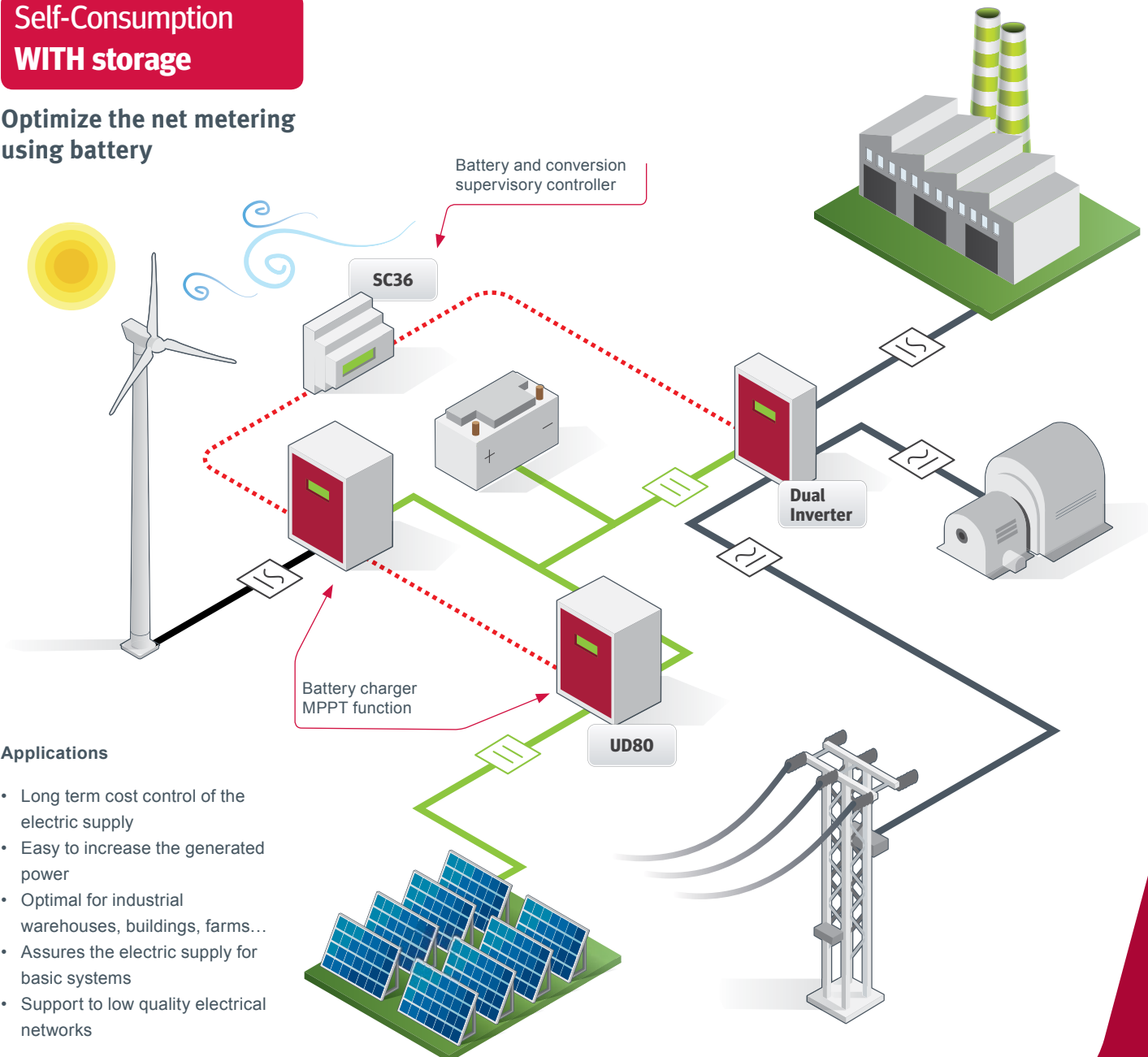
Consumption of one's own generated electrical energy and exportation of the surplus energy to the grid, or importation of all energy that might be lacking.

- **Net Metering**

The balance between the energy exported and imported in a self-generation system.

Self-Consumption WITH storage

Optimize the net metering using battery



Applications

- Long term cost control of the electric supply
- Easy to increase the generated power
- Optimal for industrial warehouses, buildings, farms...
- Assures the electric supply for basic systems
- Support to low quality electrical networks

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