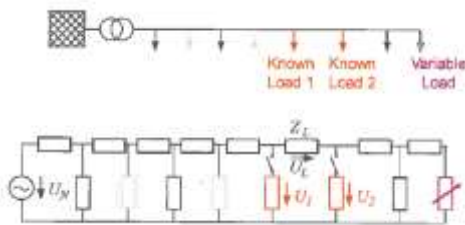


## GridMaximizer

### Electricity grid status measurements with controllable electrical consumers

#### Invention

The electrical power grid is undergoing a major transformation. Increasing numbers of decentralized feeders have been added in recent years and, in the future, there will be a large number of charging stations for electric vehicles that temporarily draw a large amount of electrical power from the power grid. In order to shorten charging times, the charging stations should charge the vehicles with the highest possible amount of power. However, overcharging jeopardizes the stability of the grid. The effect of the withdrawal of electricity on the rest of the grid must also be taken into account here, especially on those parts of the grid that are



Example of use of GridMaximizer

further away from the feed-in. GridMaximizer is a system of measuring points distributed over the grid. It uses several electrical consumers to check the state of the grid at regular intervals. To do this, the grid is loaded with different amounts of power and the grid impedance is determined from the measurement results. By exchanging the data with other measuring points, a comprehensive picture can be obtained of the current status of the electricity grid and, for example, the maximum charging power can be determined.

#### Commercial Opportunities

GridMaximizer is a system to increase grid utilization. GridMaximizer is particularly interesting for grid operators and operators of charging stations, but can also be of great use to other operators of systems with a high electricity requirement.

#### Current Status

The university is the holder of a patent application in Germany. International registrations are possible. On behalf of the Technische Hochschule Köln - University of Applied Sciences, we offer interested companies the possibility of licensing and the further development of the technology.

An invention of the Technische Hochschule Köln - University of Applied Sciences.

#### Competitive Advantages

- Increases the utilization of distribution grids
- Increases grid stability
- Optimized power for charging stations

#### Technology Readiness Level

1 2 3 4 5 6 7 8 9

Technology concept formulated

#### Industries

- Grid operators
- Energy providers
- EV charging station operators

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