About CLEMAP

CLEMAP is your partner for innovative energy data analysis and expert in the entire supply chain of the energy industry with smart services and products:

- Data collection and local load control using own energy meters

- Automated data analysis and processing as well as intermediate storage on web servers

- Visualisation and control via user-friendly energy portals

CLEMAP supports you with clever energy solutions on your way to optimising consumption by controlling devices, identifying unused savings potential and avoiding idles.

About the project

A property owner was looking for a solution to control the charging stations of electric cars in order to prevent the expansion of the main connection power. CLEMAP provided him with the optimal solution for dynamically limiting the charging stations and fully satisfied both the owner and his tenants.

- Simple installation of a single device

- Remote control via cloud

- Support of different models of electric charging stations

Dynamic load management to smooth your peak demand

The switch of some tenants to electric cars caused major challenges for the owner of a property. So a solution was sought that would prevent an overload of the electrical grid even when several electric cars were charging at the same time. CLEMAP Load Management was therefore chosen for the central control of the charging stations.

Electric vehicle charging regulation instead of expensive expansion of the main connection power

After the tenants opted for electric cars, the property owner enquired with his electrician about a suitable solution. The main connection power was not supplying enough electricity to the house to meet the demand for household electricity and electric car charging at the same time. Since upgrading the connection is tedious and involves additional grid costs, his electrician recommended the dynamic CLEMAP Load Management to him. This due to a number of advantages: it is not only cheaper, but also quicker to install. In addition, the energy monitoring included in the Load Management provides valuable information on the status and performance in real time. Another advantage is the possibility of expansion. If more charging stations are needed in the future, several can be integrated at a later date. Thanks to the high number of supported protocols, charging stations from different manufacturers can also be monitored and controlled. Above all, the dynamic CLEMAP Load Management ensures that at no time more power is drawn than the main connection can supply.

The intelligent algorithms monitor the power supply in real time and organise the charging process for the electric cars. If too many cars are connected to the grid at the same time, the system prevents the fuse from being overloaded by automatically limiting the charging process of the cars. All cars continue to be charged, but for a limited time at a lower power.

With the developed innovative products and the technologies, CLEMAP offers its customers real added value in the form of energy data analytics and is thus actively committed to protecting the environment. This contribution to climate protection has been recognised by the Swiss Climate Foundation, which is why CLEMAP has been included in its funding programme for Swiss innovation projects in 2019.

At CLEMAP, in-depth know-how of the development of innovative technologies meets many years of experience in the energy sector. This is why CLEMAP is part of the technical committee of the Smartgridready association for the interface between energy supply companies and building control systems and actively promotes the change towards environmentally friendly energy supply.

Contact

Are you interested in CLEMAP's innovative solutions? Contact us, we will be happy to advise you!

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Control of the charging stations via local network or via the cloud

To meet the different needs of CLEMAP customers, CLEMAP Load Management is offered in three versions. In option 1, the data recorded by the CLEMAP energy meter is sent to the CLEMAP Cloud for visualisation and monitoring. In option 2, the cloud also takes over the control function of the charging stations. And option 3 expands this control to a maximum of six charging stations. In this reference project, version 3 was chosen. While the installed CLEMAP energy meter took over the measurement of the purchased power, the cloud controlled the charging stations automatically.
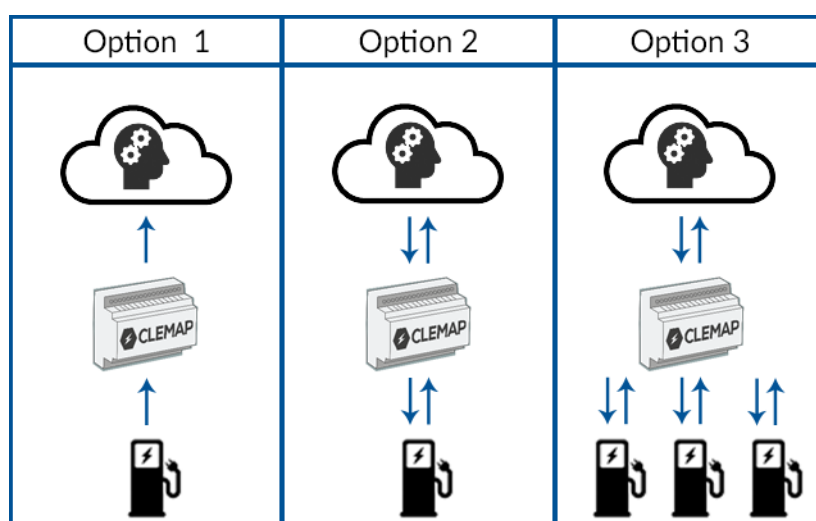
To send commands for dynamic load reduction to the charging stations, control signals via Modbus TCP were used. These were oriented to the maximum permissible amount of current and thus ensured uninterrupted charging.

For the property owner, several advantages resulted from the CLEMAP Load Management. On the one hand, the expensive and complicated expansion of the main connection power could be avoided. On the other hand, he benefited from the simple and quick installation of the CLEMAP energy management solution by his electrician. Should any questions arise on the part of the tenants, the electrician can answer them quickly thanks to the remote access to the CLEMAP energy portals, and new functionalities can be activated without having to go on site. With the dynamic CLEMAP Load Management, the property owner met the needs of the tenants and several charging stations from different providers were installed.

For more information on our smart energy meters and intuitive energy portals, visit our product portfolio at:

www.clemap.ch/en/solutions/product-portfolio