

How can Austrian expertise in smart grids be strengthened?

Austrian expertise in smart grids should be strengthened by flagship projects and made visible internationally. The Technology Platform provides a running range of information or working on current and strategic smart grids questions.

What is technology platform smart grids Austria?

The Technology Platform Smart Grids Austria is an association of relevant stakeholders in the field of electrical power supply.

Can supermarkets become active components of a smart grid?

Using cooling energy as a "battery" integrated in the electricity grid provides great potential for improving integration of fluctuating renewable energy sources, such as wind power and photovoltaics. Supermarkets can therefore become active components of a smart grid scenario.

How does the smart grid work?

The voltage regulation concepts developed in the DG DemoNetz project concept show that smart grid operation using regulation and control measures in the distribution grid enables greater reserves in the existing grid infrastructure to be used.

The following main model regions focussing on different aspects and applications of the smart power infrastructure can be found in Austria:

- o Smart Community Grottschneu
- o Smart Services for Linz
- o Smart Infosystems Vöcklabruck
- o Pioneer Region for Smart Grids in Upper Austria / Experimental community Eberstalzell

Fig. 1.

Smart Grids sind intelligente Energienetze, in denen alle Akteure des Energiesystems über ein Kommunikationsnetzwerk miteinander verbunden interagieren. Sie ermöglichen es, auf Basis der Kommunikationstechnologien, ein energie- und kosteneffizientes Gleichgewicht zwischen einer Vielzahl von Stromverbrauchern, Stromerzeugern und Stromspeichern ...

Smart Grids erlauben eine effiziente und flexible Nutzung von erneuerbaren Energien. Sie ermöglichen es, dezentrale Energieerzeuger wie Solar- oder Windkraftanlagen in das Stromnetz einzubinden und deren Schwankungen in ...

smart grid projects. Each of these smaller projects focus on some specific subtasks that make them unique testing areas for smart grid applications. An overview of the geographical distribution in Figure 1 shows that not only a small region in Austria houses the flagship projects and areas but that they are distributed all over the country.

There are currently around 100,000 smart meters installed in Austria. Those are spread among six pioneer regions which function as independent projects and serve with findings in various aspects concerning the implementation of Smart Grids on a broad basis.

(additional resources) as opposed to "intelligent" grid expansion (Smart Grid). The following article examines Austrian experiences and perspectives. Due to its natural geography, the bulk of Austria's electricity demand has for decades been met by ...

This work will give an overview on the Austrian solutions and concepts for a smart energy grid. Through the increasing electricity generation from renewable energy sources the power infrastructure not only in Europe received new stimuli to find unique and novel solutions.

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4 SMART GRID PIONEERS Smart Energy Systems A key issue for the low-emission society Our economic system will have to overcome great challenges in the medium and long term. We are being confronted with increasingly scarce resources in terms of energy and space as well as climate change and the CO<sub>2</sub> problem. At the same time our energy and mobil-

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