

NEWSLETTER

February 2013 - n.2

ALPSTORE



Energy Storage for the Alpine Space



Energy Storage for the Alpine Space – AlpStore Kick-Off Conference, February, 25th and 26th, 2013

The demand for storage facilities is closely connected to the volatility of renewable energy sources. Wind and solar energy are not continuously available. Short-term peaks in energy generation and consumption have to be balanced. Additionally there is also the need to detect means and ways to bridge longer periods of little energy generation. There is a wide range of storage technologies for short-term and long-term purposes. The **AlpStore** project will lead to assessments, what kinds of storage means are reasonable to be used to different extents in different regions – from the technological as well as the economical perspective.

The 19 partners of the Alpine Space project **AlpStore** investigate the current and anticipated framework requirements of energy supply. A special focus is set on the challenges connected to planning and application of these technologies. After all, it is great importance that changes within the energy system do not endanger the security of energy supply nor lead to unacceptable increases of energy costs.

The **AlpStore** partners develop long-term master plans for their regions. Based on every master plan, short-term pilot implementations will be planned and implemented as far as possible. The local projects range from the use of storage technologies in private houses to second-life use of e-car-batteries at charging stations for e-bikes, optimized operation of biogas plants or the testing of compressed air storage facilities.



Dear reader,

on the occasion of the **AlpStore Kick-off Conference** in the city of Grafting b.München, District of Ebersberg,

the goals and first results of the EU-funded project will be presented. The conference is addressed to **public utility companies** and **regional decision makers** in particular, who aim to contribute to the local energy turnaround by implementing ambitious energy and climate protection plans. The energy turnaround will not work without proper storage technologies.

But how many storage facilities do we need, which ones and where?

These are the questions to be addressed by power suppliers, network operators and responsible decision makers from municipalities and regions. I hope you will enjoy the **AlpStore Kick-off Conference!**

*Ludwig Karg
Project Responsible*

Please find the agenda at the [AlpStore](http://alpstore.info) project website and register for the conference under alpstore.info.



Source: City of Grafting

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Pilot Project “Biogas and District Heating” in Grafing bei München (Germany)

Within the project **AlpStore** a master plan will be developed for the rural district of **Ebersberg**. **B.A.U.M. Consult** and the **Research Center for Energy Economics Munich (FfE)** will identify various suitable possibilities of energy storage. Moreover, the potentials should be investigated based on a regional concept for climate protection. The pilot implementation linked to the master plan of the district of **Ebersberg** will take place in the City of **Grafing b. München**. Since 2011, the local power supplier **P&M Rothmoser** uses biogas from a biogas plant to operate combined heat and power plants (cogeneration). The substratum used by the plant is composed of local farmers' manure, plant remains and corn grown by the biogas plant operator. Within ten days, the substratum releases biogas by fermentation. The fermentation residue can be taken back by the farmers for the fertilization of their fields. A biogas pipeline connects the biogas plant and the cogeneration plants, which supply two independent district heating networks. The **FfE**, regional partner of **P&M Rothmoser**, is considering the possibility of decoupling the power and heat generation. Various benefits can be obtained with such a decoupling, e.g. an independent electricity supply of **Grafing**, an increased portion of renewable produced energy or decreasing energy prices. Different storage technologies are also studied, such as a downhole heat exchanger, super isolated water tanks or biogas holders – according to measured and calculated load profiles.



Images Source: P+M Rothmoser



Further master plans and pilot implementations in German regions will be developed and implemented in AlpStore:

- in **Berchtesgaden** besides pump storage, the potential of salt domes for the purposes of energy storage will be examined as well as the locally added value, which storages could create for the region
- in the **Allgäu** region two approaches will be implemented. Batteries will be installed in residential buildings with photovoltaic power plants in order to optimize generation and usage of the produced electricity regarding a self-sufficient energy supply and new possible services and products. Furthermore charging stations for e-bikes and Pedelecs will be installed in order to use solar energy stored in second life batteries.

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