

# NEWSLETTER

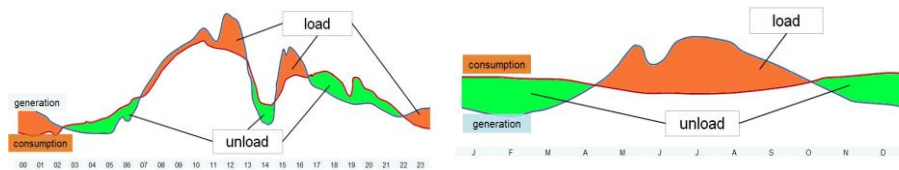
November 2012 - n. 1



Energy Storages for the Alpine Space



Sun, water and biomass are a natural capital of the Alpine Space. It is a must to use them for the production of energy. Besides intelligent grids, storage systems will be key enablers for a future mostly renewable energy supply. Electric vehicles (EV) will be integral elements of the future energy system. Their batteries can be charged with excessive power from intermittent energy sources and electricity can be fed into the grid to meet peak demand. Beyond short term balancing with EVs, stationary batteries can serve long term balancing needs. They can give EV batteries a "second life" and improve overall economy of electric mobility. Other media such as gas or compressed air will add more choices.



## Our Challenge

The Alpine Space (AS) is predestined for multifaceted decentralised generation of power from renewable energy sources (RES). Many of those are intermittent and power usage must better adapt to generation. While demand side management offers limited potential, intelligent storage technologies can provide for cost effective buffering in metropolitan as well as scattered habitats. The extension of pumped hydro storages meets natural and societal barriers. Other technologies can bring added value to homes, towns and regions. Electric vehicles can provide short time balancing. Mobile storage must be combined with stationary storage (battery, gas, hydrogen). In the mobility sector gas vehicles will compete with battery electric traction systems.



Dear reader,  
prosperity of the Alpine Space depends on the availability of energies. While energy provision can

be achieved with local resources such as water, wind and sun, storages are necessary to bridge times of low generation.

We need short term as well as long term storages. Some must be available all the time, others such as the batteries of electric vehicles may be disconnected from the power grid for a while.

In AlpStore, 19 partners from all 7 Alpine countries investigate the short, medium and long term requirements for both stationary and mobile energy storages. They will be pioneers in implementing pilot applications and share their experiences with technicians, decision makers and academia.

Let me invite you to follow the progress of the project. This quarterly newsletter may give you easy to grasp insight in the processes and results.

Ludwig Karg  
Project Responsible

For more information about the project and the partnership please visit the AlpStore website

www.alpstore.info



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## The AlpStore Partnership

19 partners out of the seven Alpine Space countries have started their work on July 1st and will create master plans for the deployment of storages. Pilot tests will show the feasibility of mobile and stationary storage in public infrastructure, business parks, enterprises and smart homes.

Considered technologies will be power-to-gas, chemical storages, compressed air storage, pump storages, fly wheels, storage of biogas as well as mobile and stationary batteries.

AlpStore tackles the challenge of a low carbon future. Transnational subconsortia cooperate to develop and test respective solutions in the fields of battery electric mobility, stationary battery storage, gas and hydrogen for vehicle traction and storage. The goal is a generic model that fits the needs of all AS countries. Mobile storage solutions must consider cross border applications (e. g. economic aggregation of charging flexibility). Academic partners and practitioners in the AlpStore Consortium will cross check the master- and implementation concepts so they can provide blueprints for decision making processes in all AS regions.



The **STORM concept** (STORM stands for "smart storage and mobility") will give guidance to local and regional decision makers to select the appropriate technology. It will take into account societal, geographic and climatological characteristics of all areas of the AS. The development with a transnational team for the entire AS guarantees acceptability for such a preferred model in all countries. The solutions will take into account short and long term storage needs.

### Lead Partner

B.A.U.M. Consult GmbH Munich, Germany

### Italian Partners from Lombardy and Aosta Valley

A.L.O.T. s.c.ar.l. Agency of East Lombardy for Transport and Logistics; AGIRE Local Energy Agency of the province of Mantova; Autonomous Region of Valle d'Aosta; Euroimpresa Legnano s.c.r.l.

### Austrian Partners from Vorarlberg and Burgenland

Vorarlberger Elektroautomobil Planungs- und Beratungs GmbH; European Centre for Renewable Energy

### French Partners from Alsace and Franche-Comté

Freshmile; University of Technology of Belfort-Montbéliard, Laboratoire IRTES-SET

### German Partners from Allgäu and Upper Bavaria

P+M Rothmoser GmbH&Co. KG; Public Power Utility Allgäu; energy and environmental centre allgaeu; Research Center for Energy Economics

### Slovenian Partners

Business support centre Kranj, University of Ljubljana, Faculty of Electrical Engineering; Municipality Jezersko

### Swiss Partners from Ticino and Espace Mittelland

University of Lugano, Advanced Learning Research Institute; Kraftwerke Oberhasli AG / Battery Consult GmbH

### Liechtenstein Partners

University of Liechtenstein, Chair for Sustainable Spatial Development

# ALPSTORE



Energy Storages for the Alpine Space

## Upcoming events

### 19<sup>th</sup> November 2012

Working Meeting WP 7: Evaluation  
Brescia, Lombardy, Italy



### 25<sup>th</sup> / 26<sup>th</sup> February 2013

AlpStore Kick Off Conference  
Grafing bei München, Bavaria, Germany



Source: City of Grafing

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