Pilot Implementation Grafing

Heat and Biogas storage in combination with combined heat and power and Power to Heat

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Before AlpStore: Our Challenges

1. Uncertainties on the acceptance of stores
2. Different possibilities to build central stores
3. Expected new renewables in the region
During AlpStore: Our Activities

**Masterplan Region of Ebersberg**

**Survey among Grafings inhabitants**

**Data Analysis in Grafing**

**Selection of storage options for case study in Grafing**

- **Simulation**
- **Field Test**
- **Biogas Storage**
- **Heat Storage + Power2Heat**

**Results**

- Benefit of Storages
- Show Case
- Integration of Renewable Energies

25.02.2013  AlpStore Conference - Presentation Pilot Regions
After AlpStore: Our Achievements

✓ Masterplan storages for the region of Ebersberg
✓ Survey among citizens of Grafing
✓ Simulations on future storage needs in Grafing

✓ Installation:
  ✓ Heat storage
  ✓ Power to Heat
After AlpStore: Our Recommendations

1. Power to Heat units can help to integrate fossil fuels for heating with renewables such as photovoltaics and wind. Use them when you have huge heat consumers such as district heating networks.

2. The acceptance for heat stores is quite high, therefor try to implement them when other storage options are not accepted.

3. Heat stores are relatively cheap, therefore you can use them as a first step towards stores in your region.
First Experiences with the P2H Plant

- no problems so far from a technical point of view (fast response time, no electric problems)
- many calls happen during the morning (5-11 pm)
- all calls were short (1-10 min)
- not enough calls so far to support the district heating noteworthy
- number of calls depends on auction price