

Guest lecture in context of the lecture “Renewable Energies – Resources, Technologies and Economics”

Date: 09.01.2015

Time: 16:15-17:45

Location: Building 10.81, room 093

Presenter: Dr. Florian Klumpp, Consultant, Department Renewable Energies and Environment, FICHTNER GmbH & Co. KG

Topic: Energy storage technologies for the energy transition: requirements, techno-economic specifications and comparisons

Contents:

1. Introduction: the current and future requirements for energy storage in the German context:
 - a. Requirements (“What are the key requirements of energy storages?”)
 - b. Key challenges (“Why do we need storages?”)
 - c. Revenues (“How do storages earn revenues?”)
2. Types of storage technologies:
 - a. pumped storage hydropower
 - b. compressed air energy storage (CAES),
 - c. hydrogen storage (including “Power-to-Gas”)
 - d. battery storage systems
3. Techno-economic assessment of different technologies
4. Summary and outlook