

Field Trip on July 10, 2026, to the Bruchsal Solar Park

Led by Prof. Powalla and in collaboration with ENBW, the LTI hosted an interesting field trip to the Bruchsal-Untergrombach Solar Park.

This modern solar park is particularly notable for its integrated battery storage system and medium-voltage grid connection. The trip allowed the students to gain insights into the technical implementation of an industrial-scale photovoltaic system at an active facility and to deepen their understanding of feeding renewable energy into the power grid.

Technical Data of the Bruchsal-Untergrombach Solar Park

Technische Informationen	
Inbetriebnahme	Dezember 2023
Flächenkategorie	Landwirtschaftliche Fläche
Flächengröße	3,76 Hektar
Installierte Anlagenleistung	4 MWp und 3,5 MWh Batteriespeicher
Modultyp	7.488 St. monokristalline bifaziale Glas-Glas-Module
Jährlicher Stromertrag	4,2 Mio. kWh
Jährliche Stromversorgung für	1.535 Haushalte mit Ø 2.900 kWh Verbrauch/Jahr
CO ₂ -Vermeidung pro Jahr	ca. 2.877 Tonnen
Projektentwickler	EnBW Solar GmbH

An ENBW employee led the group on a tour of the site. There, the students were able to inspect the photovoltaic modules, the inverter stations, and the transfer station.

Medium-Voltage Grid Connection

Another important component of the system is the medium-voltage grid connection.

After the inverters convert the electricity to alternating current, a transformer steps up the voltage to medium voltage. This allows the generated electricity to be safely fed into the power grid directly on-site.



Battery Storage

A particular focus of the field trip was the battery storage system. Battery storage can balance out fluctuations in power generation and reduce peak loads. In addition, the generated electricity can be

fed into the grid more flexibly and spread out over the course of the day. This increases the overall efficiency of the solar park compared to a system without storage.



Overall, the combination of these technologies ensures efficient use of the solar energy generated and contributes to the stability of the power grid.

Landscape Management

Instead of being mowed several times a year as is customary, the grassy areas beneath the solar modules are grazed by a flock of sheep. This ensures dual use of the land. The grass is kept short, and the meadows are naturally fertilized. Side effect: Sheep operate with (almost) zero emissions.



The field trip provided a comprehensive insight into the structure and operation of a modern solar park.