

## Short abstract

Cost-efficiency of ground-mounted Photovoltaic-Systems is steadily increasing. Experts predict PV-GM to become profitable and independent of financial support from the German Renewable Energy Act in five to eight years. This increase of competitive edge leads to new business models for the utilization of the cultural landscape. As a result, the pressure on rural areas is increasing with the growing demand for land. The limited availability of arable soils and an increasing demand for space will lead to new dimensions in land use competition and economic, ecologic and social conflict constellations. The Innovation Group APV-RESOLA is developing and exploring a new form of photovoltaics technology with which the agricultural land can continue to be used for growing crops as well as for generating electricity. In 1981, Adolf Goetzberger, founder of the Fraunhofer-Institute for Solar Energy Systems ISE, and Armin Zastrow were the first to propose the concept of a resource efficient dual use of arable land called Agrophotovoltaics (APV). They were addressing the ongoing discussion on the food-energy-nexus and proposed a special system-technology that optimizes the output of PV and photosynthesis. The Innovation Group APV-RESOLA is now developing and extending this technology by political, ecological and social dimensions.