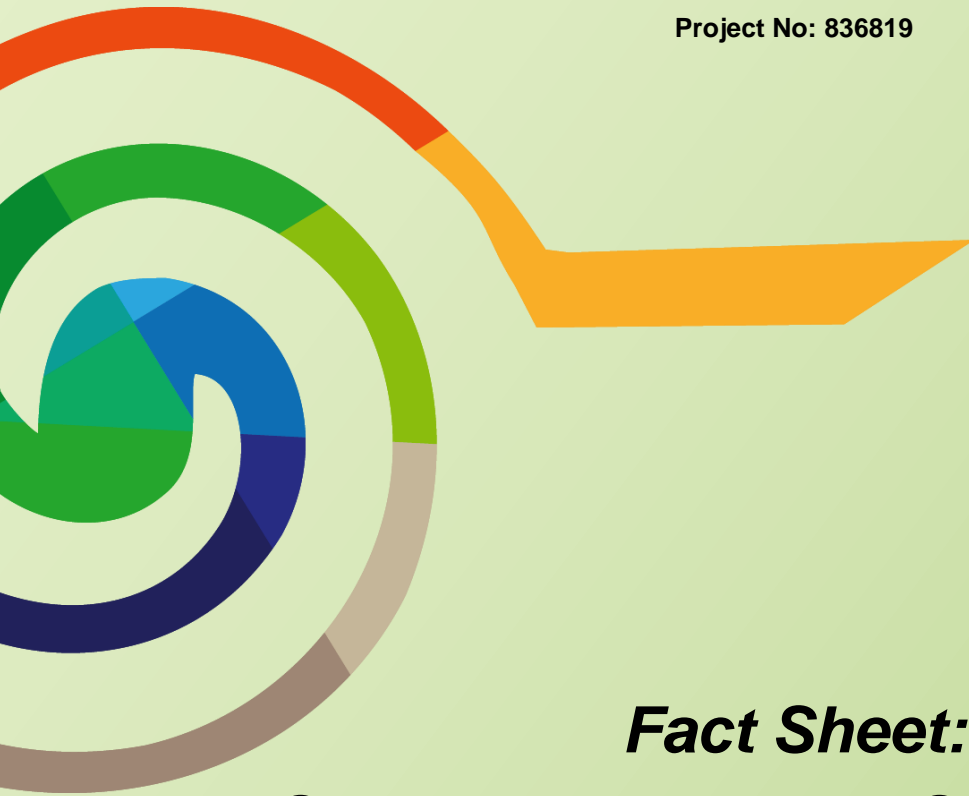


Smart strategies for the transition in coal intensive regions

Project No: 836819



***Fact Sheet:  
Solar park complex "Senftenberg"***

September 2019



GET

## Description

The solar park complex "Senftenberg" covering 500 hectares is located on agricultural reclaimed sites of the former lignite opencast mine Meuro (operating period 1958 to 1999) in the Lusatian Lignite District nearby the communities city of Senftenberg, Schipkau and Meuro (Southern Brandenburg, Lower Lusatia, county: Oberspreewald-Lausitz / DE40B).

The photovoltaic complex includes the solar parks Schipkau, Senftenberg I - III with in total 246 MW<sub>p</sub>. With 380 hectares the largest share of the surface is owned by the agricultural enterprise Agrargenossenschaft Großräschen e.G. Operating companies of the solar fields are the Saferay GmbH and GP Joule GmbH.

## Achievements

When going into operation in 2011 the solar complex "Senftenberg" had 636,000 solar panels (Canadian Solar Inc.) - at that time the largest solar system in Germany, from then on producing electricity for 50,000 households. This trendsetting pioneer project stimulates other investments in solar energy on reclaimed mine sites in the region - a contribution to climate protection from the coal region in transition.

Besides contributing to the national and federal energy and climate protection targets, the solar network offers a good example for the solarisation of otherwise low-yielding, economically marginal and underutilised agricultural land on new post-mining ground with its developing and quite sensitive raw soils.

In addition, the solar complex is an economical win-win-situation for the region: creating additional tax revenues for the communities and leasing plus land management income to the landowners and other service providers. Moreover, such projects are stimulating the regional economy: Most of the orders for installation and operating are going to local enterprises, thus promoting especially SME and contributing to the restructuring of the economy after lignite mining.

## Challenges

An essential precondition for installing photovoltaic systems on lignite reclamation sites in the Lusatian Lignite District is the geomechanical stability of the dumps. Any mine site reclamation and post-mining land use in the region will fail into the long term, unless the physical stability is not assured under natural extreme events or other disruptive forces. Notably in the Lusatian lignite mining area quite commonly sandy overburden material is dumped in a loose layering and small scale alternation of substrates. Under this geomechanical presetting, raising post-mining groundwater and heavy precipitation events can trigger sudden liquefaction. These hazardous granular spoils need a basic ground improvement by modifying their physical properties before they are going into the post-mining land use for renewables. Actually, 206 km<sup>2</sup> are affected by structural instabilities with 45 km<sup>2</sup> agricultural land, from with 17 km<sup>2</sup> are "off-limits" blocked for green energy production in the long term.

## Enabling conditions

The investment was initiated by the regional project developer Unlimited Energy GmbH / Berlin and financed by three German banks, among them the HSH Nordbank. Besides establishing the legal frameworks for the investment a special focus laid on nature protection issues, right from the beginning in the concept phase. In the end there are established 24 hectares of ecological compensation areas, outside the actual operating area. Moreover, the solar panels are embedded into windbreakers and ecological valuable shelterbelts with site-adapted native trees and bushes. They provide habitats for endangered species. When looking at the management of green areas between the solar panels nature conservation aspects are

considered, that means an extensive care of the pastureland. For example, the mowing is late in the vegetation period to save ground-nesting birds.

### References and further links

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