Fact Sheet: 
Chemistry park "Schwarzheide" 
Conversion of a lignite-based refinery into a showcase for industrial transition 

September 2019
Description

The chemistry park "Schwarzheide" is situated between the cities Schwarzheide and Senftenberg in the central area of the Lusatian Lignite District, close to the motorway A 13 connecting the metropolis regions Berlin and Dresden. The industrial complex belongs to the BASF Schwarzheide GmbH. The BASF Schwarzheide GmbH is a subsidiary undertaking of the BASF group in Europe and one of the largest production plants of the company. Actually there are 17 production and infrastructure facilities providing 3,500 jobs on-site, thereof over 2,000 BASF core workforce - with a rising trend.

The total gross area takes 246 hectares with 180 hectares usable space for industrial and commercial settlements. The main production lines established are: polyurethane, technical plastics, foam materials, coatings, dispersions, carbon nanomaterials and different agricultural chemicals. Besides the "Chemical Company" there are 10 other manufacturing enterprises, e.g. Air Liquide GmbH, Huntsman Pigments, SDC Materials GmbH, IQ Tec Germany, Petopur GmbH, Styrolution Schwarzheide GmbH, Zeppoi Schwarzheide GmbH. In addition, there are more than 30 related service providers and logistics partners, like: BASF Business Services GmbH, DHL, Remondis Industrie Service GmbH & Co. KG, BIS Arnold GmbH, Bilfinger HSG Facilitymanagement GmbH, IMO Industrieservice, Rösberg Engineering, Waury Fördertechnik, Alfred Talke Logistic Services or Waggonwerk Brühl GmbH.

Achievements

There is a close project-based cooperation with the Brandenburg Technical University Cottbus-Senftenberg (BTUCS), Technical University Dresden (TUD), Technical University Wildau and Technical University Freiberg (BA). But also applied and extramural industrial research is present in Schwarzheide: The Fraunhofer Institute for Applied Polymer Resarch IAP / Potsdam-Golm has a branch office and processing technical centre in Schwarzheide, dealing with the development of bioplastics and biodegradable synthetics, in close cooperation with BASF and other plastics processing companies. The networking includes the following plastics and chemical cluster partners: product network of the BASF group, Kunststoffnetzwerk Brandenburg/Berlin (KuVBB), Innovationszentrum Bioplastics Lausitz, Central European Chemical Network (CeChemNet), Cluster Kunststoffe und Chemie Brandenburg, Zukunftscluster Chemie/Kunststoffe Mitteldeutschland.

Indeed, the chemistry park "Schwarzheide" is on course: Alone in 2018 the BASF company has invested 149 million EUR and is planning further investments over 150 million EUR in 2019, creating more than 100 new industrial jobs. Thereby, "Schwarzheide" is also a pioneer / testing ground for the digitalisation strategy of the whole company, looking for more smart, resource efficient and cost-saving production processes.

Challenges

The chemical park "Schwarzheide" has an excellent infrastructure and good mix of chemical and plastics industries with a high degree of smart specialisation using synergies between the enterprises and participating scientific institutions. Therefore, the innovation potential and the economic competitiveness are high. Besides, the management of the chemical park gives a strong support to the establishment of new business and development of the resident companies. However, there are some general challenges and obstacles for development of the region and the chemical park itself.

In contrast to other industrial and business parks on conversion sites of the lignite industry in the region, like "Schwarze Pumpe", "Kittlitz/Lübbenau", "Sonne/Großräschchen", "Marga/Senftenberg", "Lauchhammer" or "Jänschwalde" there is a quite consistent target setting and coordinated strategy for further industrial settlements and employment development. However, the marketing of real property and space can be improved by addressing more international investors.
Looking at the socio-economic framework conditions, the region is in a demographic still shrinking situation, with an ongoing emigration of well-educated young people. There is still missing a regional strategic assurance and organised support for specialists - rising lack of skilled labour is getting more and more a problem. Under this framework condition it is important to increase the attractiveness of the region as living environment in between the metropolis regions Berlin and Dresden. That relates to the so-called "soft" location factors, like cultural institutions, family-friendly care and shopping facilities, nurseries, high schools, etc. Especially the transport link by train within the region but notably to Berlin (120 km) and Dresden (50 km) needs to be improved. Below the line, the region needs immigration from highly qualified employees and homecomers, but it is also essential to care about the societal cohesion strengthening the regional value chains and giving work to less qualified people living already in this area.

Enabling conditions

(1) The BASF chemical park "Schwarzheide" has an easy access via the motorway A 13 Belin/Dresden and the well-developed main (federal) road B 169. Moreover, there are two railway stations. The industrial area itself has a direct rail connection with a separate freight terminal (with a depot for hazardous substances, logistic storage, block train transports once a day, etc.). The next international commercial airport Dresden is situated only 50 kilometres south.

(2) The key account management of the chemical park provides a "ready to use" concept. That means all industrial sites and real estates are developed and can be used immediately, without difficult spatial planning and approval procedures. The service provider gives technical, analytical and logistical support, and takes the complete engineering, inclusively developing construction projects. It supports new enterprises in all necessary planning and approval procedures.

(3) There is a complete set of energy supply with 20 kV electricity, connection to the supra-regional natural gas grid, drinking and process waters, multi-stage water cleaning system and access to all technical gases need for industrial and chemical production. In addition, there is a waste incineration plant for hazardous residuals on-site.

(4) The synergies of complementary production lines with their well-adjusted energy and material flows are a basic precondition for a cost saving, resource protecting and very efficient processing. That makes "Schwarzheide" very attractive for enterprises connected to the chemical sector and plastics industry.

(5) Having a such broad product portfolio, the chemical park "Schwarzheide" has growth potential, with an available space for further business and industry settlements of 95 hectares. Moreover, within close proximity there are further fully equipped industrial and commercial areas capable for development, for example: the industrial estates "Schwarzheide-Mitte" (35 ha), "Schwarzheide-Süd" (73 ha), "Misch- und Gewerbegebiet Schwarzheide Mitte" (8 ha), and the "Verarbeitungs- und Industriezentrum (VIZ) Schwarzheide" (20 ha) still having capacity for further commercial and industrial settlements.

References and further links

https://www.basf.com/global/de/who-we-are/organization/locations/europe/german-sites/Schwarzheide.html
https://www.iap.fraunhofer.de/de/Forschungsbereiche/Biopolymere/verarbeitungstechnikum.html

Authors
Dirk Knoche, Research Institute for Post-Mining Landscapes (FIB), Germany

Editors
Rita Mergner, WIP Renewable Energies, Germany
Rainer Janssen, WIP Renewable Energies, Germany
Christian Doczekal, Güssing Energy Technologies, Austria

Contact
Güssing Energy Technologies GmbH
Christian Doczekal
Email: c.doczekal@get.ac.at, Tel: +43 3322 42606 331
Wiener Straße 49
7540 Güssing, Austria
www.get.ac.at

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 836819. The sole responsibility for the content of this report lies with the authors.