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Lieberose Solar Power Plant: an ecological and economic lighthouse project for the protection of climate and nature

13-10-2009

The photovoltaic power plant on the former exercise terrain for troops, Lieberose, to the north of Cottbus (Brandenburg) is the largest solar power plant in Germany since 20 August 2009. With the joint assembly of the 560 000 solar modules the Federal Minister Wolfgang Tiefensee, commissioned by the Federal Government for the new Federal states, as well as the Minister-President of Brandenburg Matthias Platzeck made this plant to be the largest photovoltaic park in Germany. In Turnow-Preilack, the juwi Group – project developers for regenerative power plants – together with First Solar – manufacturers of advanced thin-layer modules – are currently realising a photovoltaic power plant with an output of 53 MW on an area of 162 ha that is to be fully connected to the grid by the end of this year. Solarserver hereby presents the second largest photovoltaic plant worldwide and Germany's No. 1 as Solar System of the Month October 2009.

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Production of solar energy on the scale of power plants: Lieberose Solar Power Plant in Brandenburg. Source: juwi Group



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700 000 Thin-layer modules and 38 inverter stations

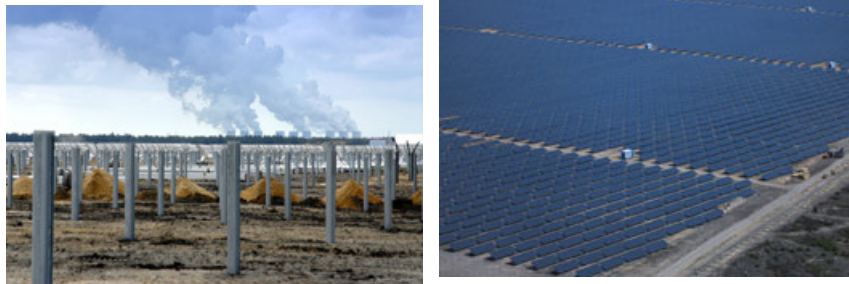
The solar power plant between the towns of Lieberose and Turnow-Preilack in the regional district Spree-Neiße has an annual output of approximately 53 million kWh of clean power, which corresponds to about 15 000 households, i.e. to the electricity consumption of a small town. The surface area on which the modules and the inverter stations were erected corresponds to the size of over 210 football fields. Solar power production allows for around 35 000 t of the greenhouse gas carbon dioxide (CO₂) being saved. The approximately 700 000 thin-layer modules by First Solar (FS 272-277 etc) were mostly manufactured in Frankfurt/Oder and combine to form an overall module area of approximately 500 000 m². The 38 inverter stations were supplied by SMA Solar Technologie AG (Niestetal). 37 central inverter stations of the make "SMA SC 1250 MW" and one station of the make "SMA SC 900 MV" are used. The sub-construction was provided by Leichtmetallbau Schletter GmbH from the upper-Bavarian town of Haag.



Lieberose is not only a milestone in the history of photovoltaics and a model project on the restoration of military premises encumbered with military weaponry that shines far beyond the borders of Germany; but this solar park also sets a clear sign in our current times of financial and economic crises that even large-scale photovoltaic projects can be financed and that it is in any event worthwhile investing into renewable energies.

Successful financing in difficult times

For the purposes of realising the project juwi and First Solar developed and implemented a complex financing concept: the outside capital that constituted approximately 80 % of the investment volume came from a consortium of banks made up of KfW IPEX Bank, Bremer Landesbank, DZ Bank, Landesbank Hessen-Thüringen (Helaba) and NordLB, that in turn were refinanced by two development banks. The own capital funds are initially financed by juwi and First Solar through Mezzanine loans. In total the PV park that is to be sold to an investor upon its completion constitutes an investment volume exceeding 160 million euro. The juwi Group anticipates continued investor interest in completed or construction-ready energy parks in the solar as well as the wind sector, since investments in wind and solar parks are very secure and thus very attractive. "Amidst the biggest financial crisis since World War II we accomplished financing of the second-largest solar park worldwide. Thus, we see that large-scale projects can still be financed," press speaker Ralf Heidenreich emphasises. Long-term, trusting and solid business relationships with investors, banks and the suppliers are an important factor for ensuring the implementation of future projects, juwi emphasises. Juwi enjoys an excellent reputation with banks and investors on the basis of its co-operation that is characterised by reliability.



Increased need for co-ordination in financing large-scale projects

“The drop-out rate of our projects is nil; this, too, creates trust. We are an owner-run, down-to-earth company – and not listed with the stock exchange. The high degree of volatility and nervousness of stock exchanges thus has no impact on us. We can act on the basis of long-term and sustainable projects and do not depend on mood changes of the capital markets,” Heidenreich continues. Zartina Ecker, Cleantech expert of the investment bank Jefferies, is quoted in the Capital Magazine in a juwi portrait, “juwi has established itself as a premium brand. Banks prefer financing projects if they know that they carry the name of juwi.” However, the larger the plant, the more challenging its financing becomes. Banks continue to be willing to finance large-scale projects, as the Lieberose Solar Park proves. But credit institutions are clearly more cautious and hesitant, and even more distrustful towards other banks, so that juwi partially had to assume the co-ordination of financing. Furthermore, more banks are involved in financing large-scale projects than was the case in the past; this also leads to a need in increased communication and co-ordination. “Until financing had been secured, juwi colleagues of the finance department worked till late at night for many months,” Heidenreich reports.



Dangerous weaponry makes way for greener electricity production

As far as the protection of the environment is concerned, Lieberose also sets an example. The solar park not only generates clean energy but also ensured that dangerous ammunition was removed from the property. Lieberose is thus a superb example of the successful combination of climate protection, high-tech and active protection of our environment. The state of Brandenburg leases this property of about 300 ha to the operator of plant, thereby ensuring that this area can be used for the production of solar energy for a period of over 20 years. A once-off payment and the lease of the land financed the removal of weaponry.



Weaponry that was removed before the erection of the solar park. Source: juwi Group

After completion of solar utilisation the PV system will be dismantled and a heathland free from weaponry will be available to realise the goals of environmental protection and to be sustained in the long-term. The state of Brandenburg lends its full support to the solar park. "Projects such as this help us in healing the wounds of the Cold War and also in reaching our ambitious goals in the field of renewable energies," Minister-President Platzeck praises this project.



Large-scale photovoltaic parks planned in the USA

"After US President Barack Obama introduced the energy turn, the market offers immense opportunities for renewable energies. juwi will utilise these opportunities; we have many projects in the making," juwi Chairperson Matthias Willenbacher reports. In summer 2009 juwi Solar signed electricity purchasing agreements for photovoltaic parks and secured the project rights: in Ohio a 12 MW plant is to be erected, in Florida a 15 MW park is envisaged. Overall, juwi plans to connect wind and solar power plants with a total output of over 1 000 MW to the grid in the coming years. The USA will thus become one of the most important markets for juwi. Besides the MW wind parks juwi also has numerous large-scale photovoltaic projects in the making, the output of which will exceed 10 MW each.

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