

PV Financing Best Practice: Gelbes Viertel Berlin Hellersdorf Multi Family Home (Germany)

General project Description

The project started in 2012, when Lichtblick, in cooperation with STADT UND LAND and p-vb, installed a 1.9 MWp plant on 50 apartment buildings in the east of Berlin (Hellersdorf). As it was installed, it was listed as being the single largest photovoltaic system in Germany, serving about 3000 tenants with about 1.6 GWh of generation per year. The investment costs for the project have been listed at about 3.5 million €.

The project thrives on a very specific business model that includes self-production-and-consumption and purchase of electricity from the grid. This combination allows tenants on the one hand to pay a lower price for their electricity (due to a lower production cost for the electricity generated on site) and, on the other hand, to have a guaranteed delivery of 100% green electricity.



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Business case description / economic parameters

The project is a result of a cooperation and agreement between three different parties: an electricity distributor (Lichtblick), a housing cooperative (STADT UND LAND) and a PV System operator (pv-b AG). The plant is operated by pv-b, whereas the management of the electricity distribution, including metering and accounting, is taken over by Lichtblick.

Detailed project structure

The project includes various agreements between stakeholders. pv-b rents the roof space from the building owner (the city of Berlin) and owns and operates the PV System, providing on-site generated electricity to all tenants. Lichtblick provides electricity from the grid to the tenants, to supply them with power whenever the on-site, PV-generated electricity is not available/sufficient. The tenants pay directly to Lichtblick a fee for all the electricity they use, meaning the one generated by the PV plant and the one fed from the grid. Lichtblick, in turn, takes care of all required services, such as metering and accounting, and pays to pv-b an amount corresponding to the electricity that the PV system produced, minus a fee for their metering and accounting services.

In addition, as the PV plant does not feed excess electricity into the grid, there is no feed-in tariff participation, thus the project does not rely on public support via the German EEG

The fee that tenants pay to Lichtblick results from a combination of two factors: a monthly flat-rate of 8,95€ for the electricity provided, plus 24,75 c€ for every kWh consumed. The tenants sign a non-binding contract directly with Lichtblick and remain flexible with a notice period of 4 weeks.

The project setting not only allows economic advantages to tenants and other involved stakeholders, but it also provides positive economic externalities to the community. As the PV System is not directly connected to the grid, the generated electricity does not weigh on the EEG (German PV support scheme) overall budget. This avoids an expenditure of about 225.000 € at Federal level that can be then devoted to funding other PV projects.

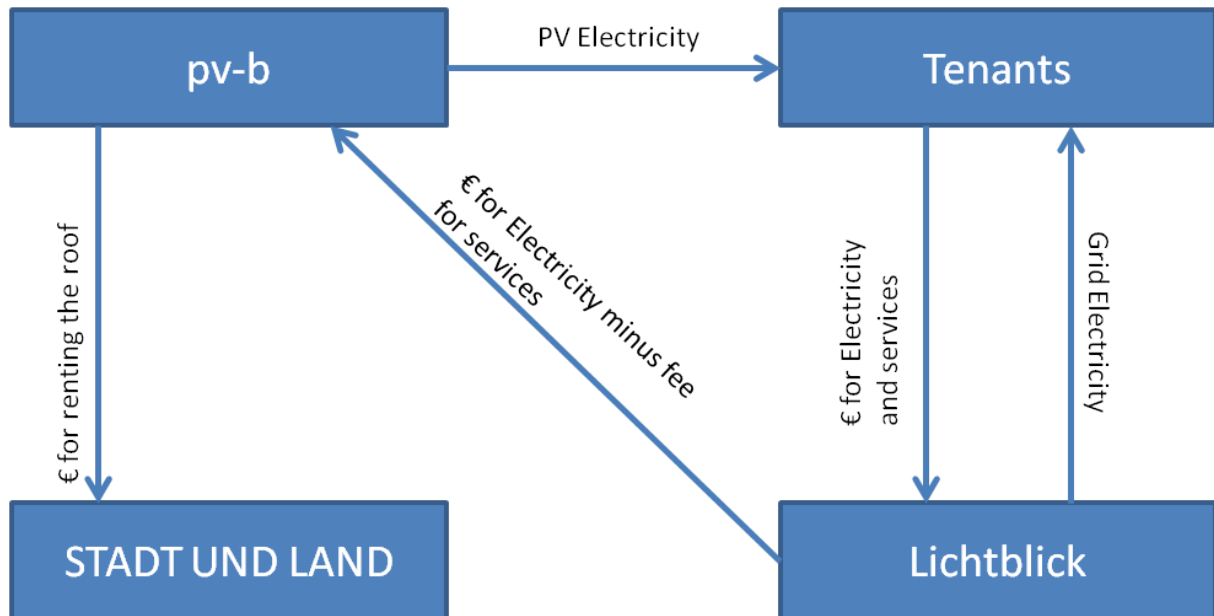
Technical project parameters

The PV Panel uses Yingli Polycrystalline Modules with a capacity of 240/250 Wp and Sunways PT 30k / PT 33k inverters.

The autarchy level for the building is about 40%.

Stakeholders / companies / PPA

There are three stakeholders involved: Lichtblick AG, pv-b AG, STADT UND LAND Wohnbauten-GmbH. The links between them are outlined in the below scheme.



Replicability / Outlook

This business model shows quite a strong replicability potential, both in other German regions / cities and in other countries, provided that a financial balance among stakeholders is met. A potential barrier to replicability in other countries is the legal framework related to the distribution of electricity to private households. This is allowed in Germany, however this is not the case in other countries (e.g. Italy). In such cases the business model could still be applicable, however it could only be applied to the electricity consumption for common areas of the building. Possibly the consumption levels would be smaller in this case and therefore the size of the PV Plant should also be reduced. Variations in terms of size and potential are however several, and a case-by-case analysis would be more appropriate.

Sources

- BSW Internal Analysis and Data
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