Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety

INTERNATIONAL CLIMATE INITIATIVE (IKI)

Supporting decentralised solar power in Brazil

The majority of Brazil's energy supply is generated in large hydropower plants. In the past years, however, water reservoirs have experienced historically low levels. The subsequent energy bottlenecks are being compensated by natural gas and diesel powered plants which raise electricity bills by 20%. At the same time, the Brazilian middle class has grown substantially and so does its need for energy. In transitioning towards a low-carbon and climate resilient development the Brazilian government intends to increase the share of renewables – beyond hydropower – in its electricity generation mix to 20% by 2030 (appr. 9% in 2013), as announced in the Brazilian-German Joint Statement on Climate Change of August 2015. This will further help to increase Brazil's energy security and reduce the vulnerability to fluctuating rainfall patterns, while safeguarding environmental protection standards. Through the International Climate Initiative (IKI), the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) has been collaborating with Brazil towards this goal for many years.

IKI PROJECT EXAMPLE:
Solar pilot project, Florianópolis

Through a combination of technical and financial cooperation, the IKI project facilitated the deployment of solar power. On the basis of a BMUB grant amounting to EUR 3.7 million, GIZ and KfW Development Bank

supported the construction of an innovative PV plant and enabled Brazilian agencies to draft an incentive-based net-metering regulation in order to stimulate vast growth of decentralised small-scale solar power solutions.

While KfW provided co-financing to conduct a feasibility study for the PV plant, GIZ offered advice on technical issues, cooperating with the Brazilian Electricity Regulatory Agency (ANEEL) and Instituto Ideal – a non-profit institution. Activities included the development of options regarding the commercialization of the solar energy, study trips to Germany and the dissemination of information to facilitate decision-making processes.

After a successful tendering process the first large-scale and grid-connected PV plant integrated into a public building was put into operation in Brazil in May 2014. It has a one megawatt peak generating capacity and includes 1836 solar panels on the roof and 2308 solar panels on the parking lots of the energy company Eletrobras Eletrosul in Florianópolis. For marketing purposes, Eletrosul uses the Solar Label Selo Solar which GIZ and the Instituto Ideal introduced in 2011 and which is supported by the Chamber of Electric Energy Commercialization (CCEE). With this pilot project the parties involved were able to gather experience with feeding solar power into the low- and medium-voltage-grid on basis of the newly developed net-metering regulation. The new website América do Sol offers users information on how to benefit from such net-metering. The website, which includes a Solar Simulator tool to calculate the individual energy bill savings resulting from installing PV on one's property, recorded 750,000 visitors in 2015. For more information please visit: www.americadosol.org

These activities visibly strengthened the Brazilian PV market: 53 net-metering plants were registered in 2014 and another 130 plants are currently being planned. The Brazilian energy planning authority EPE expects the cumulative installed capacity from PV plants using net-metering to grow from 9,8MW in 2015 to approximately 1400MW in 2020.

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