

PVs in BLOOM

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Agenda



Project presentation

- PVs in Bloom and it's goals (handout)
- Marginal areas (Strategic Vision Document)
- Best practice from Germany (Ronneburg)

Technology (Technical Handbook)

- PV grid-connected systems basics
- Estimating the annual produced energy
- Sizing PV grid-connected systems
- Matching PVPP typologies to specific terrains
- Economic assessment on PV grid-connected systems
- Main technical and contractual points to be checked when examining a proposal

Financing

- Financial solutions for the realisation of PV plant
- Best practice for from Austria (Mureck)
- Supporting institutions in Slovenia
- Possibilities for future cooperation

PVs in BLOOM



Farming photovoltaic flowers: A new challenge for land valorisation
within a strategic eco-sustainable approach to local development

Partners



- Unioncamere del Veneto (Italy)
- Energy Agency of the Province of Sassari (Italy)
- Development Company of the Municipality of Milies (Greece)
- University of Jaén (Spain)
- Chamber of Commerce, Industry and Shipping of Valencia (Spain)
- Institute of Physics of the Lublin University of Technology (Poland)
- Innovation Region Styria (Austria)
- Italian-Slovak Chamber of Commerce (Slovakia)

The aim of the project



Support of the installation of ground photovoltaic plants by

public investors

private investors (companies, landowners, farmers)

on marginal terrains

Result

Valorisation of the land and local development in an
eco-sustainable way

Outputs of the project



- Strategic Vision Document
- Technical Handbook (soon available as download, too)
- Administrative Handbook (in process)
- Guide “How to implement a small scale PVPP” (in process)

All documents and further information are / will be available

www.pvsinbloom.eu

Examples for marginal terrains



Quarries and mines

Garbage dumps and landfills

Industrial sites

Brownfields near dangerous industrial sites

Former military sites and airports

Buffer zones (along highways, railways, long distance power lines etc.)

Best practice – Ronneburg (Thuringa, Germany) Former mining area



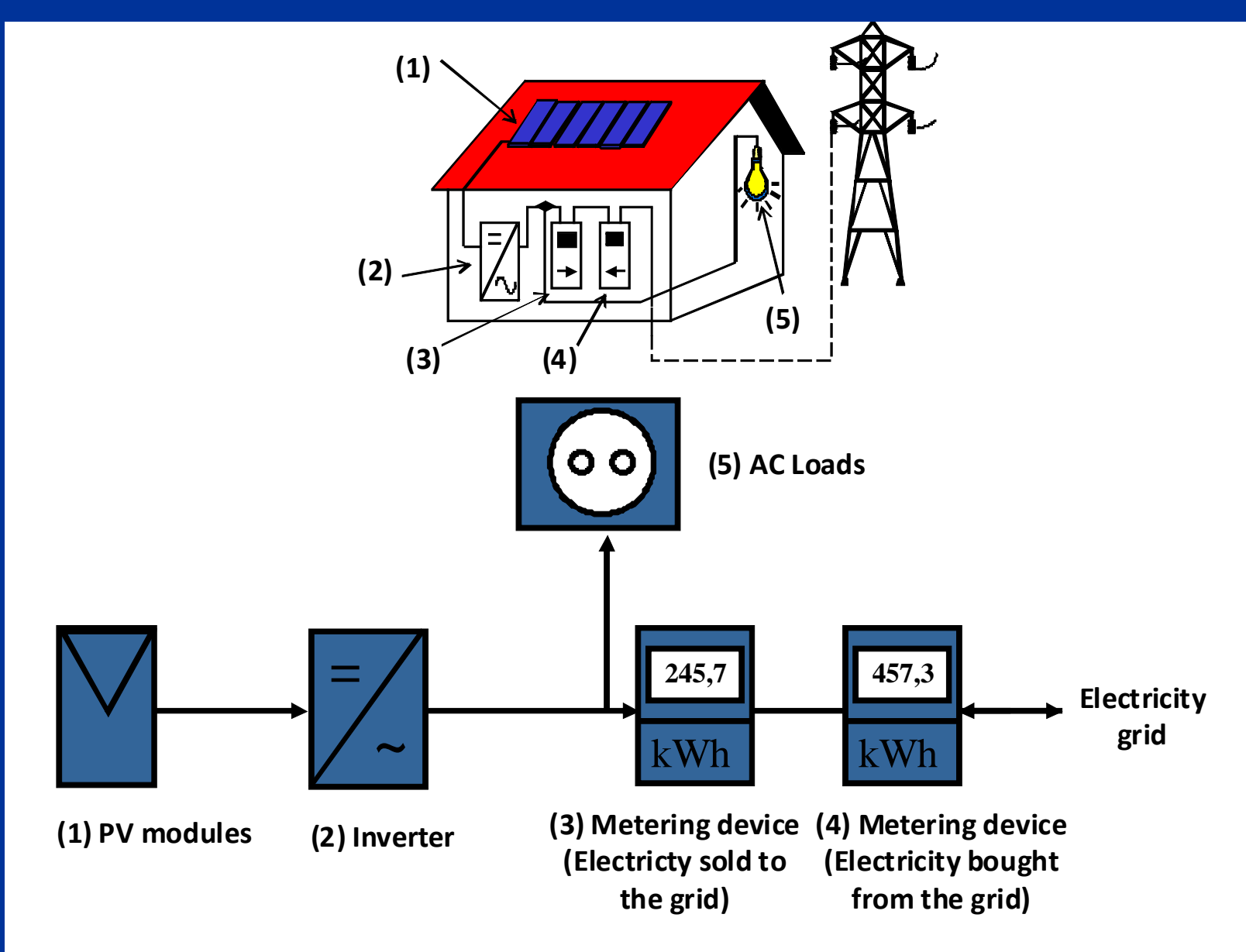
Area is

- former uranium mining area for nuclear weapons
- redeveloped by the WISMUT GmbH
(decontamination of radioactive toxic waste)
- Owners: GLS Energie AG/GLS Solarenergie GmbH
- Capacity: 4,45 MWp
- Size of the site: ~ 260,000 m²
- Solar panels: ~ 50,000 panels with thin-layer module technologie
- Power output: ~ 4,023,000 kWh/y
- Savings of CO₂ emission: 2,7 t/y
- Project costs: 11,6 Mio €
- In operation since: 2009

Technology (Technical Handbook)



simplified layout of a grid-connected PV system



Example – Mureck (Styria, Austria) Citizen financed PV plant



- Owner / Management: SEBA Mureck GmbH
- Investors: Citizens and communities of the small region Mureck
- Capacity planned: 2 MWp (1st part: 1,050 kWp start-up spring 2011;
2nd part: 950 kWp planned start-up in 2012)

Example – Mureck (Styria, Austria) Guidelines of the project



Socially compatible model:

- 1 share = 1kWp = 1.000 €
- Shares per person / company / community: min. 2, max. 10
- Payment in rates possible
- Back payment of the capital to the share holders within 20 years

Mureck – Back payment and output

Example of calculation for 2 kWp/year



Back payment of the equity capital (2.000 €) within 20 years 80 % of the equity capital (1.600 €)	80,00 €/year
Output from your energy production from sun approx.	100,00 €/year
Total sum for 2 kWp approx.	180,00 €/year

Mureck – Integrated concept of the Energy Park



- PV-Citizen-Plant
- Biogas and green electricity with raw materials from the region
- Local district heating from wood and waste for the town Mureck
- Biodiesel from used cooking oil and rapeseed oil from the region

Financing / constructing a PV power plant in Slovenia



Supporting institutions in Slovenia:

- Ministry of Economy www.mg.gov.si
- Ministry of Environment and Spatial Planning www.mop.gov.si
- Slovenian Environmental Public Fund www.ekosklad.si

Optional:

- Government Office for Local Self-Government and Regional Policy
www.svlr.gov.si

Possibilities for current + future cooperation



Current projects: e.g. MOVE, REGIOLAB

Future opportunities: e.g. IEE, LIFE+, LIFELONG LEARNING, FP7

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