



## The German Planning Process

### Legal framework

**Feed-in-Tariffs:** The German Renewable Energy Sources Act (EEG) assures a fixed feed-in-tariff for grid-connected solar electricity over a time span of 20 years. Via the feed-in-tariff (currently ca. 46 cent/kWh, depending on the kind of system) the investment in a PV-system can be recovered during its lifetime with a reasonable return on investment.

**Urban planning:** There is a legal basis for local authorities to define urban areas where solar energy should be used which is given in the following legal framework:

- EU-Directive: Plan-UP, 2001
  - demand of environmental audit concerning town planning
- EAG Bau, Europarechtsanpassungsgesetz, 2004
- Amendment BauGB, 2004:
  - environmental audit and report as new instruments for urban planning
  - Possibility to define areas with specified use of renewable energies.

It is up to the local authorities to use these legal possibilities and realise urban planning with a focus on a solar development.

### Example: 50-Solar-housing-estates in NRW

Solar urban planning projects have been realized in the framework of the project “50 solar housing estates in NorthRhine-Westphalia”, which was introduced in 1998 by several federal ministries.

Federal state undertakes:

- Promotion and dissemination
- planning guidelines, assistance with the planning process, dissemination of specific know-how

Local authority and investor undertakes:

- Determining area
- Planning and realization

Requirements of the 50 solar housing estates programme:

- passive solar coverage of heating demand > 25%
- CO<sub>2</sub>-emissions for space heating, domestic hot water and electricity below 40 (retrofit) or 33 (new building) kg/m<sup>2</sup>a
- Realisation of two out of the following options:
  - heat demand < 35 kWh/m<sup>2</sup>a (only new buildings)
  - solar thermal domestic hot water (>= 60%)
  - PV-system, at least 1 kWp per dwelling



New instrument for solar urban planning

A new instrument to evaluate the solar urban potential of various types of city area and to work out parameters that could be used to define targets has been developed by Ecofys, a consultancy firm and partner in PV UP-SCALE. The main elements are:

- Solar grading factors
- Solar urban area potential per city quarter
- Total solar urban potential

These can lead to the development of a solar urban master plan

Overview of the planning process for urban PV

The following graph gives an overview of the current situation and how the newly developed instruments for solar urban planning can fit into it.

**Current situation:**

**Developed support-mechanisms:**

Legal basis:

