



The regulatory framework and financing of photovoltaics in Germany and in the state of Brandenburg

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Overview

1. Photovoltaics (PV) in Germany and Brandenburg
2. The Regulatory Framework for PV in Germany
 - The planning permission process
 - The status of renewables in Germany
 - Financial support / subsidies for PV
3. Outlook

In balanced terms, Brandenburg is already covering its electricity needs with green power.

The state of Brandenburg – A few facts

- **an energy producing region** → historically lignite mining, today green power generation
→ **an attractive business location**, as demonstrated by the establishment of Europe's first Tesla production site in Brandenburg
- **ideal conditions for solar energy** and wind power, incl. abundant space in a sparsely populated area (2.54 million inhabitants)

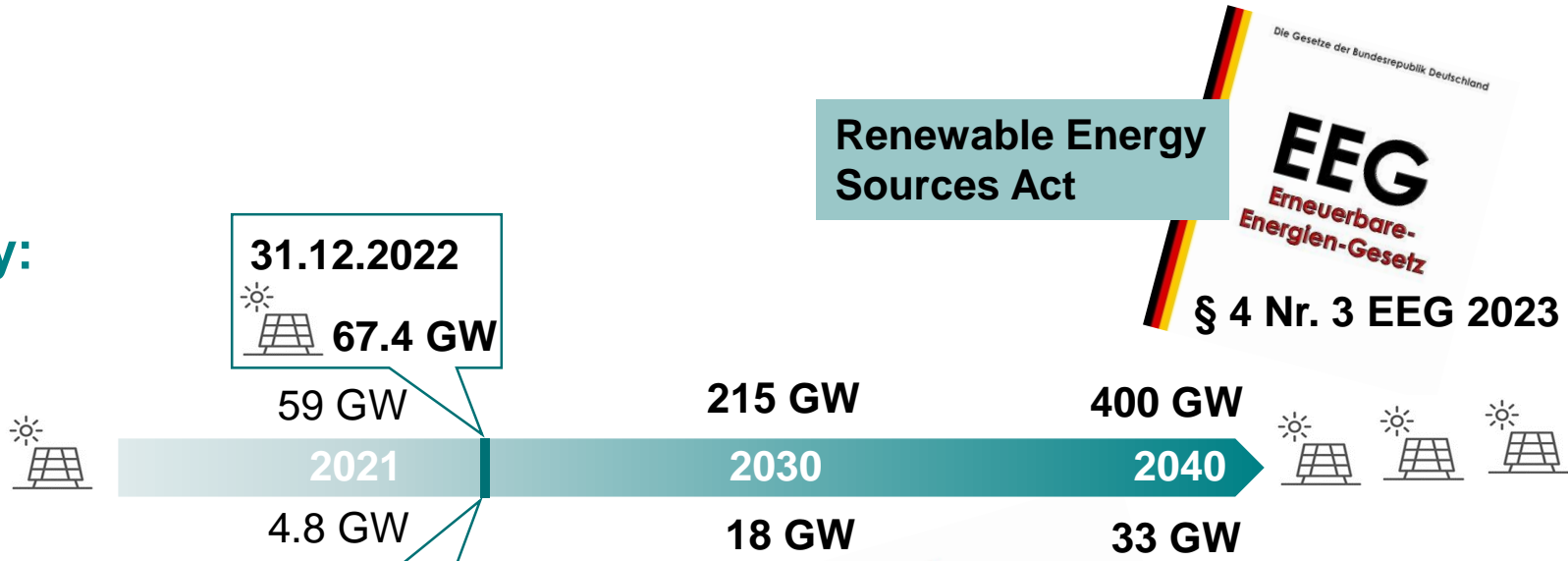


2nd place – installed
wind capacity,
4th place – installed
PV capacity

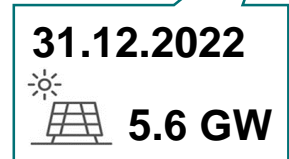
Photovoltaics in Germany and Brandenburg

Current capacity and expansion targets in...

... Germany:



... Brandenburg:



Energy Strategy 2040



The Regulatory Framework for PV in Germany

The main regulatory framework for PV is provided by...

... public building law

- regulates the planning permission process
- Main laws:
 1. **Federal Building Code**
(*Baugesetzbuch*, BauGB)
 2. **Federal Land Utilization Ordinance**
(*Baunutzungsverordnung*, BauNVO)
 3. **Building regulations of the states, e.g. Building Code of Brandenburg** (*Brandenburgische Bauordnung*, BbgBO)

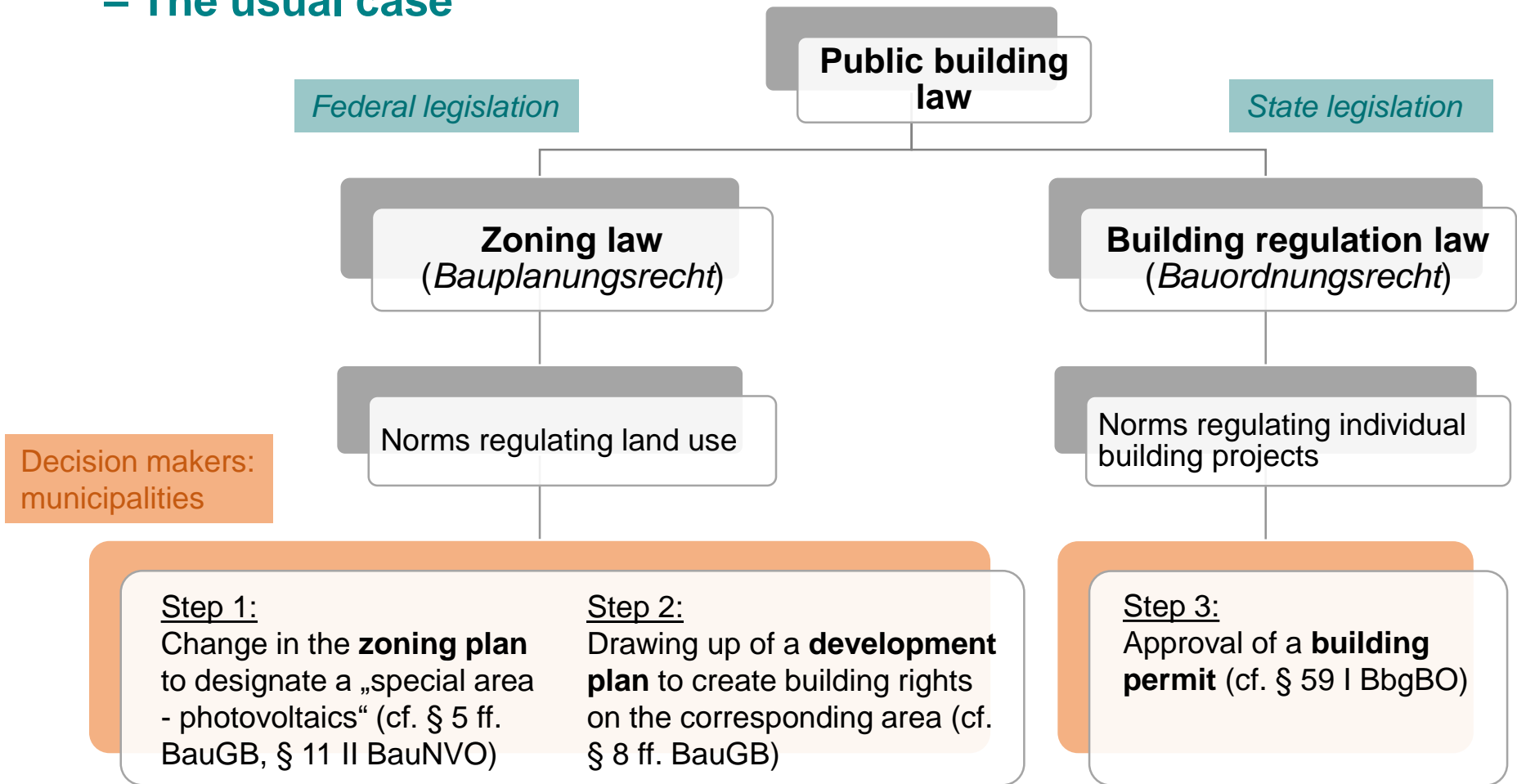
&

... energy law

- regulates financial support, i.e. financing
- Main law:
Renewable Energy Sources Act
(*Erneuerbare-Energien-Gesetz*, EEG)

The Regulatory Framework for PV in Germany

Public building law and the planning permission process for PV – The usual case



The Regulatory Framework for PV in Germany

Public building law and the planning permission process for PV – Some simplifications

Privileged building projects

§ 35 I Nr. 8 BauGB

Solar energy projects

- a) in and on roofs and exterior walls of buildings
- b) on an area of up to 200 meters along
 - aa) highways or
 - bb) railroads with at least two main tracks

Privileged building projects may be realized without a **development plan**.

(De)regulation of rooftop PV and small ground- mounted PV

*State regulation
in Brandenburg*

§ 61 I Nr. 3 BbgBO

- a) Solar installations in and on roofs and exterior walls of buildings, except for high-rise buildings
- b) building-independent solar installations with a height of up to **3 meters** and a total length of up to **9 meters**

No **building permit** is necessary for these PV systems.

The Regulatory Framework for PV in Germany

The status of renewables in the Renewable Energy Sources Act (*Erneuerbare-Energien-Gesetz, EEG*)

The amendment to the Act came into force on 01.01.2023.

Similar to Article 3 of the temporary EU emergency regulation (Council Regulation (EU) 2022/2577) but **permanent**

§ 2 EEG

The construction and operation of renewable energy systems and associated secondary systems are in the **overriding public interest** and **serve public safety**.



a significant to dominant role in the weighing among different interests

The Regulatory Framework for PV in Germany

The overriding public interest of renewable energies stipulated in § 2 of the Renewable Energy Sources Act (EEG)

Legal consequence

EXAMPLE: Case law of the Higher Administrative Court of the state of Mecklenburg-Vorpommern on the approval of a wind turbine (Az. 5 K 171/22 OVG) on 07.02.2023

*“(...) the project will not significantly affect the appearance of the historic monuments concerned (...). But **even if one assumed a considerable impairment, the project would have to be approved because an overriding public interest requires the measure.** In this respect, **§ 2 EEG defines an overriding public interest** in the construction and operation of wind turbines. The interest in the protection of historical monuments therefore has to take a back seat in the present individual case.”*

 Necessary adoption of "overriding public interest" in sectoral legislation

Current developments: Amendment of the **Brandenburg Monument Protection Act** (*Brandenburgisches Denkmalschutzgesetz, BbgDSchG*)

The Regulatory Framework for PV in Germany

Financial participation of municipalities in ground-mounted PV in the Renewable Energy Sources Act (EEG)

§ 6 I Nr. 2 EEG

“Plant operators shall provide financial participation to affected municipalities (...)”

This provision is **not mandatory**, it is a so-called "shall" provision.

§ 6 III EEG

“In the case of ground-mounted systems, amounts totaling **0.2 cents/kWh** may be offered to the municipalities (...)”

§ 6 V EEG

Operators who are **subsidized** through the EEG may be **reimbursed** for the amount paid by the grid operator.

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Financial support/subsidies for PV in the Renewable Energy Sources Act (EEG)

Market premium (§ 19 I Nr. 1 EEG)

- Competition-based determination of the market premium by way of **auctions** by the Federal Network Agency (§ 22 I EEG)
- permissible bid volume in the tenders for PV of up to **20 MW** (in 2023: 100 MW) (§ 38a I Nr. 5 lit. a EEG & § 38c III EEG)

Feed-in tariff (§ 19 I Nr. 2 EEG)

- up to 10 kW – 8.6 ct/kWh
- up to 40 kW – 7.5 ct/kWh
- up to 1 MW – 6.2 ct/kWh
- + a premium for only feeding into the grid (i.e. no self-supply) (§ 48 II, IIa EEG)

Landlord-to- tenant supply premium (§ 19 I Nr. 3 EEG)

- Determined by the Federal Network Agency (§ 48a EEG)

§ 25 I EEG: Duration of
payments - 20 years

The Regulatory Framework for PV in Germany

Volume of auctions (capacity to be installed) for the market premium

Ground-mounted PV (§ 28a II EEG)		Rooftop PV (§ 28b II EEG)	
2023	5,850 MW	2023	650 MW
2024	8,100 MW	2024	900 MW
2025-2029	9,900 MW	2025-2029	1,100 MW

The Regulatory Framework for PV in Germany

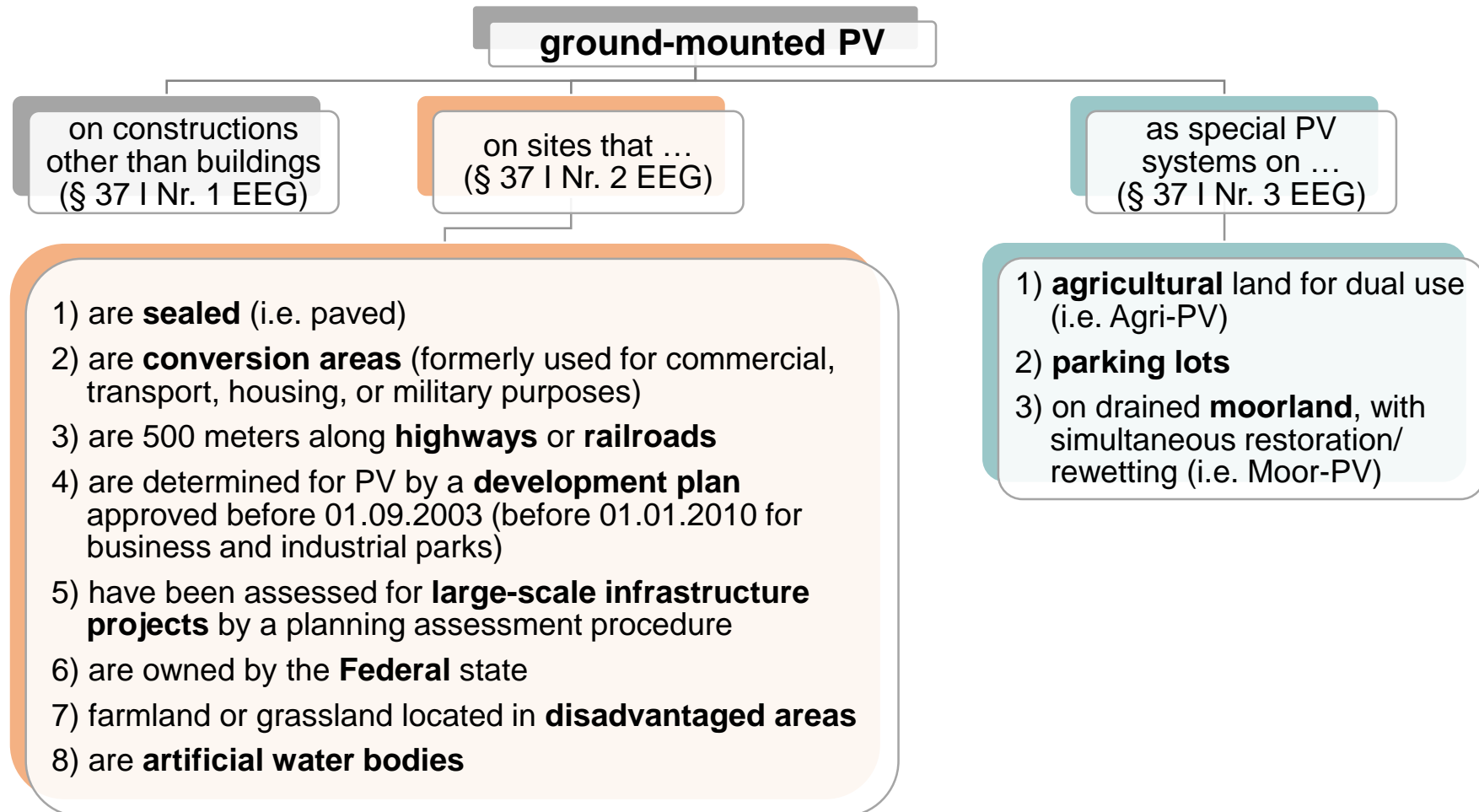
Auction results in 2022

Ground-mounted PV		Rooftop PV	
Bidding round	Bid value of the highest awarded bid (ct/kWh)	Bidding round	Bid value of the highest awarded bid (ct/kWh)
March 2022	5.55	April 2022	8.91
June 2022	5.69	August 2022	8.91
November 2022	5.90	December 2022	8.91
mean value	5.71	mean value	8.91

Source: Federal Network Agency

The Regulatory Framework for PV in Germany

Areas eligible for EEG-subsidies



The Regulatory Framework for PV in Germany summarized

Municipalities are the dominant authority regulating the building of ground-mounted photovoltaic systems.

- municipalities specify in the form of legally binding statutes, in **land use plans** and **development plans**, what use or development is permitted on an area
- development plans ensure that **all public and private interests** are democratically recorded and weighed
- municipalities approve projects via **building permits** on an individual level

Financial support for PV is regulated in the Renewable Energy Sources Act (EEG).

- financial support for PV is determined mainly by **market-based** instruments
- increasingly, **large** ground-mounted PV systems are built **without EEG-subsidization** (>20 MW (>100 MW in 2023))

The **largest solar park** of Germany, with an installed capacity of **187 MW**, is located in Brandenburg.

Brandenburg's solar potential



**29 GW on rooftops and 67 GW on EEG base areas
(and an additional 120 - 270 GW on agricultural land (for dual use))**

The **solar potential analysis**, commissioned by the MWAE and conducted by the Brandenburg Energy Agency, has been published online:



The results have been visualized in an interactive **Solar Atlas** that is freely accessible to all: <https://energieportal-brandenburg.de/cms/inhalte/tools/solaratlas-brandenburg/>





Thank you for your attention.

