

Legal framework for the development of free-field photovoltaic systems: The Saarland example

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Funding opportunities through the Renewable Energy Sources Act (EEG)

- Installations exempted from the tendering requirement
 - Without market premium
 - With market premium
- Installations subject to a tendering procedure

Funding opportunities

➤ Without market premium

Up to 100 kWp maximum

Vergütungssätze in Cent/kWh - Feste Einspeisevergütung:				
Inbetriebnahme	Wohngebäude, Lärmschutzwände und Gebäude nach § 48 Absatz 3 EEG			Sonstige Anlagen bis 100 kWp
	bis 10 kWp	bis 40 kWp	bis 100 kWp	
ab 01.01.2019 ⁴	11,47	11,15	9,96	7,93
ab 01.02.2019 ⁴	11,35	11,03	9,47	7,84
ab 01.03.2019 ⁴	11,23	10,92	8,99	7,76
ab 01.04.2019 ⁴	11,11	10,81	8,50	7,68
ab 01.05.2019 ⁴	10,95	10,65	8,38	7,57
ab 01.06.2019 ⁴	10,79	10,50	8,25	7,45
ab 01.07.2019 ⁴	10,64	10,34	8,13	7,34
ab 01.08.2019 ⁴	10,48	10,19	8,01	7,24
ab 01.09.2019 ⁴	10,33	10,04	7,89	7,13
ab 01.10.2019 ⁴	10,18	9,90	7,78	7,02
ab 01.11.2019 ⁴	10,08	9,79	7,70	6,95
ab 01.12.2019 ⁴	9,97	9,69	7,62	6,88
ab 01.01.2020 ⁴	9,87	9,59	7,54	6,80

4) Degressionsberechnung nach § 49 EEG 2017 (anzulegender Wert abzüglich 0,4 Cent/kWh nach § 53 EEG 2017)

Funding opportunities

➤ With market premium

Up to 750 kWp maximum (optionally also below 100 kWp)

Market premium model:

A large part of the electricity from photovoltaics is promoted by means of market premiums and sold by the plant operators themselves - usually with the help of direct marketing companies. Due to the increased expenditure, the market premiums are 0.4 ct higher than the fixed feed-in tariff.

Funding opportunities

➤ With market premium

Up to 750 kWp maximum (optionally also below 100 kWp)

Anzulegende Werte in Cent/kWh - Marktprämienmodell (seit 01.01.2016 ab 100 kWp verpflichtend):				
Inbetriebnahme	Wohngebäude, Lärmschutzwände und Gebäude nach § 48 Absatz 3 EEG			Sonstige Anlagen bis 750 kWp
	bis 10 kWp	bis 40 kWp	bis 750 kWp	
ab 01.01.2019	11,867346	11,549637	10,362903	8,325831
Rundung	11,87	11,55	10,36	8,33
Degression ²			1,0%	
ab 01.02.2019	11,748672	11,434141	- ³	8,242573
Rundung	11,75	11,43	9,87	8,24
Degression ²			1,0%	
ab 01.03.2019	11,631186	11,319800	- ³	8,160147
Rundung	11,63	11,32	9,39	8,16
Degression ²			1,0%	
ab 01.04.2019	11,514874	11,206602	- ³	8,078545
Rundung	11,51	11,21	8,90	8,08
Degression ²			1,4%	
ab 01.05.2019	11,353666	11,049709	8,775400	7,965446
Rundung	11,35	11,05	8,78	7,97
Degression ²			1,4%	
ab 01.06.2019	11,194714	10,895013	8,652544	7,853929
Rundung	11,19	10,90	8,65	7,85
Degression ²			1,4%	
ab 01.07.2019	11,037988	10,742483	8,531409	7,743974
Rundung	11,04	10,74	8,53	7,74
Degression ²			1,4%	
ab 01.08.2019	10,883456	10,592088	8,411969	7,635559
Rundung	10,88	10,59	8,41	7,64
Degression ²			1,4%	
ab 01.09.2019	10,731088	10,443799	8,294201	7,528661
Rundung	10,73	10,44	8,29	7,53
Degression ²			1,4%	
ab 01.10.2019	10,580853	10,297586	8,178083	7,423260
Rundung	10,58	10,30	8,18	7,42
Degression ²			1,0%	
ab 01.11.2019	10,475044	10,194610	8,096302	7,349027
Rundung	10,48	10,19	8,10	7,35
Degression ²			1,0%	
ab 01.12.2019	10,370294	10,092664	8,015339	7,275537
Rundung	10,37	10,09	8,02	7,28
Degression ²			1,0%	
ab 01.01.2020	10,266591	9,991737	7,935185	7,202782
Rundung	10,27	9,99	7,94	7,20

Funding opportunities

- Determination of the monthly feed-in tariff (Base market premium model)

initial values 2018:

<= 10 kWp:	12,70 ct/kWh
<= 40 kWp:	12,36 ct/kWh
<= 750 kWp:	9,97 ct/kWh

Monthly reduction of 0.5 %/kWh with annual expansion of **1900 MWp/a**; < 2900 1%; > 2900 1,4 %; > 3900 1,8 %; > 4900 2,2 %; > 5900 2,5%; > 6900 2,8 %

If the value falls **below 1900 MWp/a**:

< 1700 MWp 0,25 %; < 1500 0 %; < 1100 **-1,5 %** for the quarter, < 700 **-3,0%** for the quarter

Funding opportunities

➤ Example of calculation - the current situation

Bestimmung der anzulegenden Werte für Solaranlagen § 49 EEG 2017 für die Kalendermonate November 2019, Dezember 2019 und Januar 2020

1. Neu installierte Leistung geförderter PV-Anlagen:

Monat	Leistung (kWp) ¹
April 2019	231.322
Mai 2019	203.122
Juni 2019	237.748
Juli 2019	276.310
August 2019	230.213
September 2019	260.049
Summe	1.438.764

1) Diese Werte wurde folgendermaßen ermittelt:

- **April bis September 2019:** Hierfür wurden die Meldungen im Marktstammdatenregister mit Datenstand 29.10.2019 herangezogen.

Nach Neufassung des § 49 Abs. 1 EEG 2017 im Rahmen des Energiesammelgesetzes werden nur noch PV-Anlagen, deren anzulegender Wert gesetzlich bestimmt worden ist, im Summenwert der Degressionsberechnung berücksichtigt.

2. Zubau im Bezugszeitraum laut § 49 Absatz 1 EEG 2017 auf ein Jahr hochgerechnet

Zubau Bezugszeitraum * 2 = **2.877.529** kWp

Der Zubau im Bemessungszeitraum der Degressionsberechnung liegt um bis zu 1.000 MW über dem Zubaukorridor von 1.900 MW.

Die monatliche Absenkung nach § 49 Abs. 2 Nr. 1 EEG beträgt daher **1,0** Prozent jeweils zum 1. November 2019, 1. Dezember 2019 und 1. Januar 2020.

Funding opportunities

➤ Installations subject to a tendering procedure

- All installations **from a size of 750 kWp** that want to obtain a subsidy according to the Renewable Energy Sources Act (EEG) are **subject to a tender procedure**.
- The location of the planned and later erected solar plant must be **in Germany**.
- Bids submitted for **ground-mounted systems** must **not exceed a bid volume of 10 megawatts**.
- Bids submitted for **plants on construction sites** are **not subject to a maximum size limit**.
- The **electricity** produced in the solar plants may **not be used for self-sufficiency** during the entire subsidy period. This must also be taken into account in the event of a later transfer by the new owner of the system.

Funding opportunities

➤ Categories by tender (all > 750 kWp):

- Roof systems
- Installations in a strip of 110m along motorways and railways
- Installations on conversion sites and (former) industrial estates
- If the Länder adopt corresponding regulations, bidders may continue to bid for projects on land whose parcels were used as arable land or grassland at the time of the decision establishing or amending the development plan and which were located in a "less-favoured area" (agricultural areas with natural handicaps under Directive 75/268/EEC) and which do not fall under any of the other land categories.

Funding opportunities

➤ Tender procedure

- Bids contain the value to be invested in ct/kWh (bid value) and the plant capacity in kWp.
- Bids on open spaces must be accompanied by a copy of municipal construction plans.
- The lowest bids will receive a surcharge until the volume of the respective bid date is reached.
- There are three regular bid dates per year (1 February, 1 June, 1 October) with a total of 450 MWp of tender quantity.
- In 2019 there will be additional special tenders with a volume of 1000 MWp, 1400 MWp in 2020 and 1600 MWp in 2021.
- The next special invitation to tender will take place on 2 December 2019 and the maximum bid value will be 7.5 ct/kWh.
- Each bid is subject to a fee of 586 Euro and a security payment of 5 Euro/kWp.
- Successful bids must deposit an additional security of 45 Euro/kWp as a pledge for the realisation, if a development plan has been agreed 20 Euro/kWp.

Country models and quotas for the implementation of photovoltaics on land in agriculturally disadvantaged areas

Bids on arable land and grassland in less-favoured areas shall be admissible on the bid date of December 2019 to the following extent

Federal State	Regulation	Quota still to be allocated
Baden-Württemberg	Opening Ordinance of the State of Baden-Württemberg: Bids per calendar year on arable and grassland areas up to 100 MW, with the last bid still being surcharged in full.	88.440 kW
Bavaria	Bavarian Opening Ordinance, whose amendment came into force on 12 June 2019: 70 bids for arable and grassland areas can be surcharged per calendar year. However, the bids may not be submitted if the areas are located in NATURA 2000 areas or in legally protected biotopes	21 Surcharges
Hessen	<u>Hessische Öffnungsverordnung</u> : Bids per calendar year for arable and grassland areas up to a volume of 35 MW, with the last bid still being fully surcharged. However, the bids may not be submitted if the areas are located in NATURA 2000 areas or in legally protected biotopes.	30.965 kW
Rhineland-Palatinate	Ordinance (GVBl. Rh.-Pfl. 2018, p. 384): Bids per calendar year on grassland areas up to 50 MW, with the last bid still being surcharged in full.	25.610 kW
Saarland	Ordinance on the Construction of Photovoltaics on Agricultural Land: Until 31.12.2022 bids on certain arable and grassland areas up to 100 MW, with the last bid still being fully surcharged. The exact area is published in the Saarland Geoportal.	90.000 kW



Photovoltaics Ordinance of the Saarland

➤ The Saarland

The Saarland has a total area of 257,000 ha, of which approx. 87,000 ha is agricultural land. 8,300 ha were designated as a area under the ordinance.

Various framework conditions were taken into account in order to keep possible obstacles to the actual realisation of a PV open space to a minimum.

Photovoltaics Ordinance of the Saarland

➤ The framework conditions in detail

1. A sufficient amount of space should be available for project developers in order to be able to offer competitive offers in the course of the detailed investigation to be able to project. The designated areas should have a minimum size of 2 ha and the total area on offer should be at least five times larger than the maximum area to be cultivated, which is 200 ha net.

Photovoltaics Ordinance of the Saarland

➤ The framework conditions in detail

2. Priority should be given to using less valuable agricultural land and excluding priority areas for agriculture. A maximum capacity of 100 MW is to be implemented within the next four years. This corresponds to a net area requirement of maximum 200 ha.

Photovoltaics Ordinance of the Saarland

➤ The framework conditions in detail

3. The concerns of nature conservation are to be addressed by excluding nature conservation, FFH and bird protection areas, core areas of the large-scale nature conservation project "Landscape of Industrial Culture North", core and maintenance zone of the Bliesgau Biosphere Reserve, areas of high and very high importance for nature conservation as described in the Saarland Landscape Programme, Landscape conservation areas, forests and other areas worthy of protection according to current data for reasons of species and biotope protection, areas which are home to rare wild herb societies, appropriate consideration is given to areas with habitat types listed in Annex I of the Habitats Directive and protected landscape features.

Photovoltaics Ordinance of the Saarland

➤ The area

After intersection of the disadvantaged agricultural areas (approx. 55,000 ha) with the areas mentioned under 3., a area of 8,300 ha remained, which can be used until 31.12.2022 for the realisation of 100 MWp photovoltaic capacity.

The areas are visible in the Saarland Geoportal:

<http://geoportal.saarland.de/portal/de/fachanwendungen/pv-auf-agrarflaechen.html>

The ordinance is also published here.

The final decision on the actual implementation remains with the responsible municipalities within the framework of urban land-use planning.

Plant types

Conventional model - south orientation



Plant types

Conventional model - east-west orientation



Plant types

Agrophotovoltaics - High stands



Plant types

Agrophotovoltaics - Vertical support, bifacial, east-west orientation



Thank you very much!

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