



Federal Ministry
for Economic Affairs
and Energy

2017 revision of the Renewable Energy Sources Act

Key points of the decision by the German Bundestag of 8 July 2016

Objective of the revision

We are switching the funding for renewable energy from prices fixed by government to prices set by **competitive auctions**.



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Guiding principles

The revision is based on the following **three principles**:

1. Future RES expansion will be **cost-efficient**.
2. All stakeholders will have a fair chance in the auctions.
Stakeholder diversity will be maintained.
3. The **deployment corridor** for renewable energy will be **adhered to**.

RES technologies up for auction

- From 2017, funding will be **auctioned** for:
 - onshore wind energy
 - offshore wind energy
 - photovoltaics (pilot auctions for ground-mounted PV installations have already taken place)
 - biomass
- **Exempted:** installations ≤ 750 kW (biomass: ≤ 150 kW).
- Auctions will cover **80% of newbuild**.

1. Deployment corridor – onshore wind energy

- In **2017, 2018 and 2019, 2,800 MW** and **from 2020, 2,900 MW (gross)** will be **auctioned each year.**
- Installations authorised before the end of 2016 and coming on stream in 2017 or 2018 can still receive the statutory feed-in tariff (transitional provision under the 2014 Renewable Energy Sources Act).
- In order to prevent investment from being brought forward during the transitional period, special funding cuts of 1.05 per cent per month will be implemented between March and August 2017.
- Should the target figure of 2,500 MW be exceeded, additional funding cuts of up to 2.4 % per quarter will be imposed from the fourth quarter of 2017 onwards.

1. Deployment corridor – offshore wind energy

- The existing **offshore targets** will remain **unchanged**.
- Up to **2030**, offshore wind farms will be installed with a total capacity of **15,000 MW**.
- Between **2021 and 2022**, **500 MW** of capacity are to be added **per year**, and between **2023 and 2025**, this will be brought up to **700 MW per year**.
- In 2021 – due to bottlenecks in the grid – only wind farms located in the Baltic Sea will be awarded funding.
- **From 2026, 840 MW** of offshore capacity will be added **per year**.

1. Deployment corridor – photovoltaics

- **600 MW** will be auctioned each year. PV installations of the following categories with output > **750 kW** are eligible to bid:
 - **ground-mounted installations,**
 - **rooftop installations** and
 - **installations on other physical structures,** e.g. landfills.
- The '**52 GW ceiling**' will not apply to installations bidding in auctions.

1. Deployment corridor – biomass

- In **2017, 2018 and 2019, 150 MW** will be auctioned each year, and in **2020, 2021 and 2022, 200 MW** each year (**gross**).
- **Installations generating 150 kW or more** can bid.
- **Existing installations** (including those < 150 kW) can take part in the auctions in order to receive **10-year follow-up funding**, provided that they generate electricity in a flexible and demand-based manner.

2. Cost efficiency – dovetailing RES and grid expansion

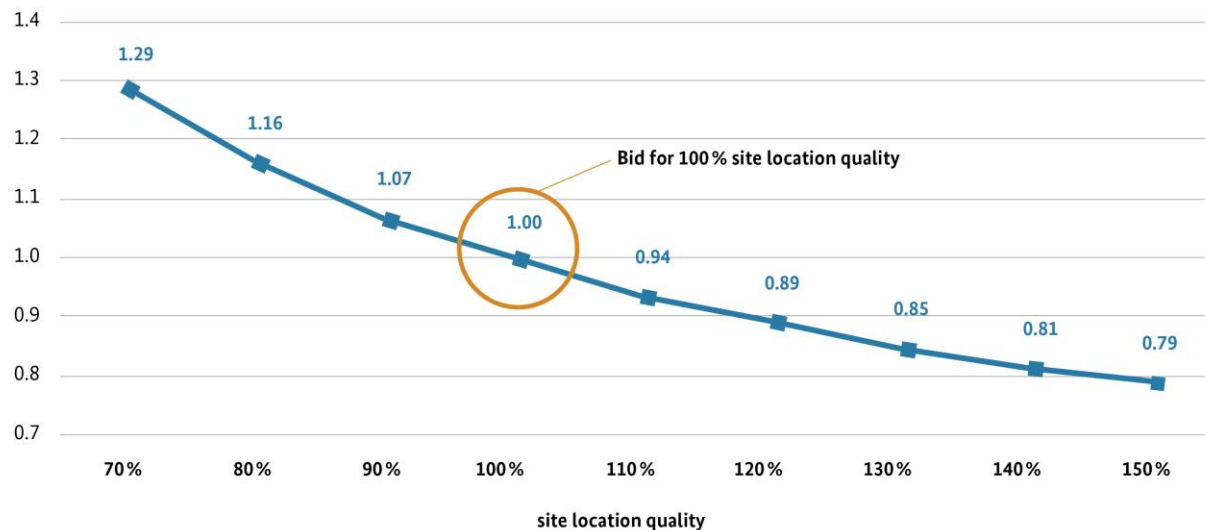
Until the necessary transmission grid capacity is in place, **3 measures** will be taken to limit re-dispatch costs:

1. In order to reduce curtailment, an instrument to **use electricity in the heat sector** as an interruptible load will be introduced.
2. **Restriction of onshore wind newbuild in areas with grid bottlenecks**
 - The Federal Network Agency defines areas with grid bottlenecks as **grid expansion areas**.
 - In the grid expansion area, the amount of onshore wind newbuild is restricted to **58% of the average newbuild between 2013 and 2015**.
 - The compensation rules for feed-in management remain unchanged.
3. **Controlling offshore wind newbuild**
 - In 2021, 500 MW will be added in the Baltic Sea; in 2022, 500 MW will be added in the North and Baltic Sea combined
 - Between 2023 and 2025, 700 MW will be added annually; from 2026, 840 MW will be added each year in the North and Baltic Sea combined

2. Cost efficiency - reference revenue model

A **single-tier reference revenue model** is introduced for **onshore wind**:

- A uniform feed-in tariff lasting 20 years is determined by competition. This simplifies the system and has a direct cost-cutting effect.
- **Comparable competitive conditions** are established nation-wide. New installations will be built on a nation-wide basis. Incentives to build efficient installations at windier sites will be provided:



2. Cost efficiency - reference revenue model

- Bids are made based on a reference revenue value of 100%. A corrective factor is used in order to ensure a level playing field across all German regions.

Examples of funding levels

	Amount of funding									
Award value in %	60	70	80	90	100	110	120	130	140	150
Corrective factor	1.29	1.29	1.16	1.07	1	0.94	0.89	0.85	0.81	0.79
Examples of feed-in tariffs in ct/kWh	7.74	7.74	6.96	6.42	6.00	5.64	5.34	5.10	4.86	4.74
	8.39	8.39	7.54	6.96	6.50	6.11	5.79	5.53	5.27	5.14
	9.03	9.03	8.12	7.49	7.00	6.58	6.23	5.95	5.67	5.53

2. Cost efficiency – auctions for offshore wind energy

The **central ‘Danish’ target model** will be introduced for **offshore wind**:

- Government examines in advance the sites to be auctioned for wind farms. This ensures optimal dovetailing with the grid connections.
- In every other model, a stock of grid connections would have to be built. Otherwise there would be no competition. This would entail massive extra costs.
- Until the new model is introduced in 2026, auctions will take place on a transitional basis amongst the wind farms already in planning. It will be ensured that there is no sudden interruption to the development of the industry after 2020.

2. Cost efficiency – larger sites will be permitted for PV

In order to achieve more competition and thus greater cost efficiency in the auctions, a '**Länder opening clause**' will be introduced for PV sites.

This means that the *Länder* decide whether they want to authorise the **use of arable and grass land for installing PV installations in certain regions** (disadvantaged regions under the EU definition).

2. Cost efficiency – biomass

- Biomass: **new and existing installations from 150 kW up** that have been granted follow-up funding will be subject to **flexibility rules**, so that electricity can be generated in line with demand. This will bring down the cost of the electricity system.
- Biogas plants will only be granted funding for half of the hours of a year. This is to encourage these plants to generate electricity at times when the wholesale price is high as little wind and sun is available and demand is high.

3. Stakeholder diversity

- Objective: Maintaining a **high level of stakeholder diversity**
- This is the intention behind the **750 kW de minimis threshold**:
 - This mainly exempts small and medium-sized PV installations from the obligation to take part in auctions.
- This is also the aim of the **simple and transparent auction design**.
- The Federal Government will also be providing **advisory and support services** for smaller players.
- Also, **relaxed rules apply to locally anchored citizens' energy companies bidding in auctions for onshore wind funding**.

3. Stakeholder diversity

- Special rules for **citizens' energy projects**:
 - Companies consisting of at least ten private individuals, with the majority of voting rights held by local residents. No shareholder may hold more than 10 % of the voting rights.
 - Projects with a maximum of 6 installations and maximum total output of 18 MW.
 - Municipalities will be given the opportunity to contribute up to 10 % of the investment.

3. Stakeholder diversity

- Relaxed **participation rules** so that these projects do not have to pre-finance excessive costs:
 - When a bid is submitted, no approval under the Immissions Act is required, only proof that the site is available and the presentation of a certified wind survey.
 - Half of the usual security has to be deposited once the Immissions Act approval has been obtained.
 - Extension of the realisation deadline by up to 2 years.
- Citizens' energy projects will not be awarded funding based on the price of their bid, but on the price of the highest bid which won funding. This means that this auctioning scheme is designed to **favour citizens' energy projects**.