

Overall
Score

17



2022
Score

15

Summary

Germany aims to install 215 GW of PV capacity by 2030, with annual expansion targets to be tripled from 7.5 GW to 22 GW in 2026. Solar Package I, approved in August 2023, aims to accelerate PV installation and enhance citizen participation, albeit, it is still under negotiation within the Parliament. While a solar mandate was considered, it was omitted in the final strategy. Yet, some German states have implemented their own mandates. Despite past successes, reductions in feed-in tariffs and policy complexities have hindered PV growth, but recent adjustments aim to ensure an uptake in deployment.




Permitting improvements include eliminating rooftop PV construction permits and streamlining processes. Solar Package I seeks to further expedite permitting. While concrete measures for energy sharing are lacking, Solar Package I encourages simplified internal electricity usage within buildings. Although Germany lags in transposing EU directives on energy communities, recent amendments foster a favourable environment for smaller citizen-owned solar systems. Some challenges regarding solar PV rollout include shortages of electricians and inverters, limiting market growth, and slow smart meter rollout. A new law mandates smart meter installations for certain consumers and renewable operators by 2025, aiming for broader adoption by 2030.

Scoring System



This country profile highlights the good and the bad policies and practices of solar rooftop PV development within Germany. It examines and scores six key areas: governance, incentives & support schemes, permitting procedures, energy sharing schemes, energy communities and additional measures to support solar PV development. For this update, we will have the 2022 score to the right as a benchmark:

The scoring system is set out below:

-  Green = 4-5 points
-  Orange = 2-3 points
-  Red = 0-1 points



Country Profile Germany



The Good



Ambitious Renewable Energy Goals: Germany's aim to install 215 GW of PV capacity by 2030 and is tripling its annual evaluation from 7.5 GW in 2022 to 22 GW in 2026.



Solar Package I: The approval of Solar Package I is a step in the right direction towards accelerating solar PV installation and enhancing citizen participation.



Permitting Improvements: Efforts to streamline permitting processes, including eliminating rooftop PV construction permits and simplifying grid connections, facilitate easier adoption of solar energy for consumers.



Energy Community Support: Amendments exempting smaller citizen-owned solar systems from tender requirements foster a favourable environment for energy communities, encouraging grassroots involvement in renewable energy production.



Smart Meter Rollout: Legislation mandating smart meter installations for certain consumers and renewable operators by 2025, with broader adoption goals by 2030, signifies progress toward modernizing energy infrastructure.



Country Profile Germany



The Bad



Omitted Solar Mandate: Despite initial considerations, the omission of a solar mandate from the final strategy hinders efforts to drive widespread adoption of solar energy.



Feed-in Tariff Reductions: Reductions in feed-in tariffs and policy complexities like the "breathing cap" have slowed the expansion of rooftop Solar PV.



No legal framework for energy sharing: No concrete measures have been adopted to date in regards to energy sharing. Germany still relies only on local self-consumption approaches without energy sharing or connection to the grid.



Slow adoption of energy community legislation: Germany is fairly far behind in terms of transposing provisions of the Directives, since it has only transposed the Renewable Energy Community definition and has not provided yet a coherent enabling framework.



Challenges in Market Growth: Shortages of electricians and inverters limit market growth and increase costs for smaller installations.

2024 : Governance 4

2022 Score : 3

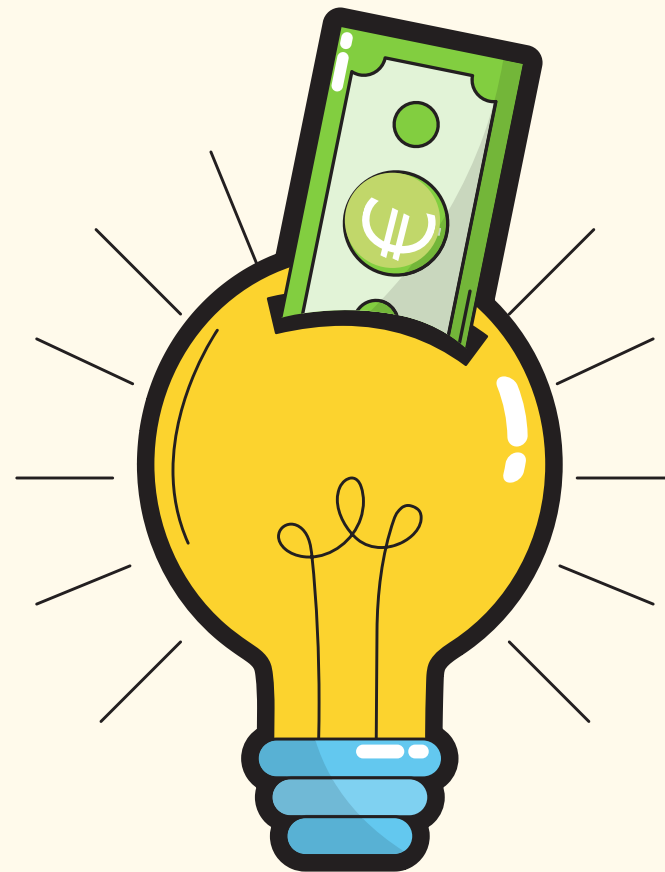
By 2030, 215 GW of PV should be installed in Germany. To this end, annual expansion is to be tripled, from 7.5 GW in 2022 to 22 GW in 2026. Roughly half of the expansion should be on roofs and half on ground.¹ The solar package I, which was approved by the cabinet on August 16, 2023, is a central step towards achieving the ambitious PV expansion goals by 2030. It contains a variety of measures that will accelerate the installation of solar PV both on the ground and on the roof and strengthen the participation of citizens.² The package, based on a consultation process with the industry and NGOs, is still under negotiation in the parliament.³

In Germany, a rather weak form of the solar mandate was foreseen in the coalition government agreement of 2022 and in the draft of the federal government's solar strategy, but was not released in the final strategy paper. However, some federal states, such as Baden-Württemberg or Hamburg, implemented solar mandates - yet to different extents.

1.<https://www.bmwk.de/Redaktion/DE/Dossier/Energieversorgung/details-solarpaket.html>

2.<https://www.bmwk.de/Redaktion/DE/Dossier/Energieversorgung/details-solarpaket.html>

3.<https://www.bmwk.de/Redaktion/DE/Dossier/Energieversorgung/details-solarpaket.html>



2024 : Incentives 3

2022 Score : 4

In Germany, an incentive system based on a state-guaranteed feed-in remuneration was probably one of the drivers of what we call the first boom in solar PV, and was very successful. However, reductions in the remunerations rates and policy tools like the “breathing cap” have stifled the expansion of rooftop photovoltaic systems⁴. On a positive note, starting in 2022 there were increases in feed-in tariffs for all newly commissioned PV systems and the breathing cap has been provisionally paused⁵. But the tariffs are limited and will continue to be reduced by 1% every 6 to 12 months (depending on the type of solar energy), even though the German Federal Network Agency can adapt the tariffs in auctions when needed in order to secure further deployment as seen in December 2023.⁶

4. <https://www.streem.eu/blog-posts/eeg-2023-important-changes-for-germany>

5. <https://www.streem.eu/blog-posts/eeg-2023-important-changes-for-germany>

6. https://www.gesetze-im-internet.de/eeg_2014/ and

https://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Energie/Unternehmen_Institutionen/Ausschreibungen/Solar2/FestlegungSolarII2024.pdf?__blob=publicationFile&v=3



2024 : Permitting 3

2022 Score : 3

Germany has made several improvements with regard to permitting, such as the removal of the construction permit for rooftop PV or the establishment of a single contact points for the permitting process, even though “lower authorities do not always, in practice, have all the technical equipment necessary, nor the trained employees, to process permits in a digital form”⁷. On the other hand, several steps towards acceleration of permitting are foreseen in the Solar Package 1, such as the expansion of⁷ the simplified grid connection procedure to systems up to 30 kW (previously: 10.8 kW), or the reduction of bureaucracy of balcony solar systems allowing for a maximum output power of 800 watts.^{8, 9}

7. <https://www.solarpowereurope.org/advocacy/position-papers/res-booster-stocktake>

8. <https://www.pv-magazine.com/press-releases/germanys-new-legislation-empowers-balcony-photovoltaic-systems/>

9. <https://www.bmwk.de/Redaktion/DE/Dossier/Energieversorgung/details-solarpaket.html>



2024 : Energy Sharing 1

2022 Score : 1

In Germany, even though the governmental coalition agreement in 2022 established the clear purpose to provide a legal framework favourable for energy sharing, so far no concrete measures have been adopted to date and still relies only on local self-consumption approaches without energy sharing or connection to the grid. Notwithstanding, the solar package approved in August 2023 by the government will encourage the so-called “communal building supply”, according to which it will be possible to use PV electricity within a building together and unbureaucratically—without having to fulfil all the obligations of an electricity supplier as before¹⁰.

10.

10. <https://www.bmwk.de/Redaktion/DE/Dossier/Energieversorgung/details-solarpaket.html>



2024 : Energy Communities 2

2022 Score : 1

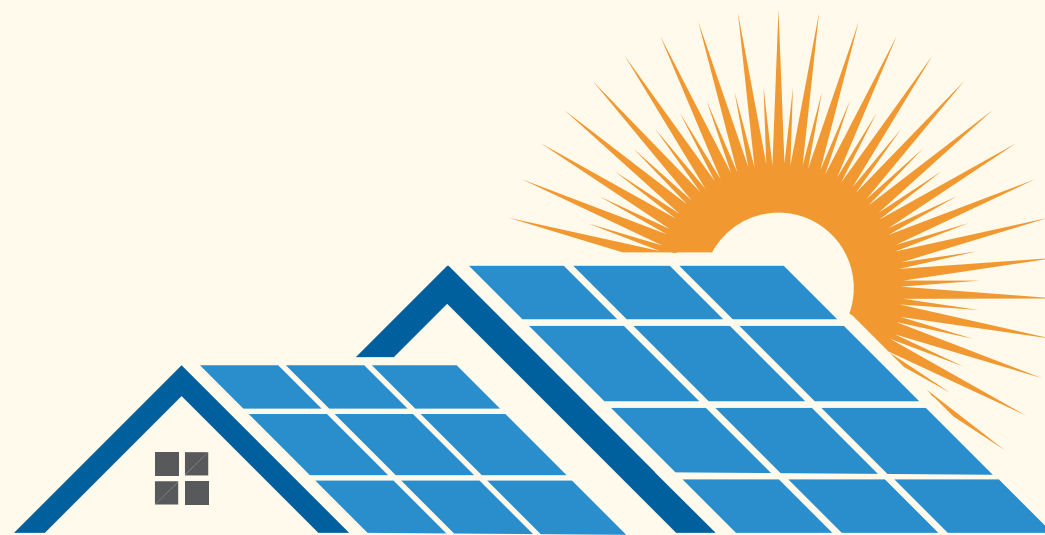
Generally speaking, Germany is fairly far behind in terms of transposing provisions of the Directives, since it has only transposed the REC definition and has not provided yet a coherent enabling framework.¹¹ But there is a long tradition of energy community engagement based on electricity cooperatives (“Strom-Genossenschaften”) which started in the early 20th century and declined since 2013 due to lower feed-in tariffs and the introduction of tendering in 2017.¹² Fortunately, a recent amendment to the Green Renewable Energy Sources Act (EEG) in 2022, exempting solar systems of citizen energy companies of up to 6 megawatts from the requirement to participate in tenders to be able to receive support, created a favourable environment for energy communities again.¹³ This measure was supported by a stricter definition of citizen energy company with the purpose to prevent abuse or corporate capture and ensure that the incentives are assigned for citizen driven energy communities.¹⁴

11. <https://www.rescoop.eu/policy/germany-rec-cec-definitions>

12. <https://pub.norden.org/nordicenergyresearch2023-03/germany.html>

13. <https://www.rescoop.eu/policy/germany-2>

14. <https://www.rescoop.eu/policy/germany-2>



2024 : Additional measures 4

2022 Score : 3

Germany was back in 2023 as the largest solar market, installing 14.1 GW and surpassing Italy's 12-year-old record of 9.3 GW in 2012. However, the lack of electricians and a lack of availability of inverters is limiting market growth, while raising the costs of smaller installations.^{15.} In terms of smart meter rollout, Germany has so far been among the laggards in Europe. In Germany, only around 160,000 of over 50 million metering locations were equipped with smart metering systems by 2021.^{16.} However, a new law passed in May 2023 provides for a rollout roadmap with binding targets until 2030, according to which consumers with a power demand from 6,000 kilowatt hours (kWh) per year and renewable operators with over seven kilowatts (kW) of installed capacity will be subject to mandatory installation from 2025.^{17.}

15. https://api.solarpowereurope.org/uploads/SPE_EMO_2023_full_report_c496546963.pdf

16. <https://www.ffe.de/en/publications/the-smart-meter-rollout-in-germany-and-europe/>

17. <https://www.cleanenergywire.org/news/electricity-smart-meters-become-standard-german-homes-2032>

Engaging citizens and local communities in the solar revolution

The Rooftop Solar PV Comparison Report update produced by CAN Europe and its member organisations aims to detect barriers at national level that impede a higher uptake of residential rooftop solar PV, highlight best and bad practices, and to put forward concrete policy recommendations for setting up the right regulatory framework to ensure an accelerated uptake of rooftop solar PV.

11 countries were chosen to be assessed and scored on their performance regarding the development of rooftop solar PV within their country.

For the full report, follow the link below:

<http://caneurope.org/rooftop-solar-pv-comparison-report>

