

A large-scale photograph of an offshore wind farm. In the foreground, a large white wind turbine with blue accents and red-and-white striped blades is partially visible. The tower has the "EnBW" logo. In the background, several other similar turbines are scattered across a vast blue sea under a clear sky. A large orange graphic element, a rounded rectangle, is positioned behind the title text.

Green Bond Impact Report

2021

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We are involved in a variety of initiatives relating to corporate social responsibility (CSR) and sustainability:



International Integrated
Reporting Council (IIRC) [↗](#)



Task Force on Climate-related
Financial Disclosures [↗](#)



Global Compact
Netzwerk Deutschland

Global Compact
Network Germany [↗](#)



**Sustainable
Finance**

Sustainable Finance Committee
of the German Federal Government [↗](#)



**VALUE
REPORTING
FOUNDATION**

Value Reporting Foundation [↗](#)

The EnBW green bonds: Investing in the future of energy

For further information about our green bonds, please see our

[Website](#) [↗](#)

In line with our strategy of developing into a sustainable and innovative infrastructure partner, we are investing increasingly heavily in climate-friendly growth projects. For this reason, we plan to invest a total of around €12 billion between 2021 and 2025, 80% of which will be spent on growth projects (focusing on grid expansion, expansion of renewables and further development of our smart infrastructure for customers). We also aim to reduce our carbon emissions to net zero by 2035.

We issued our first green bond on the capital market in October 2018 and have since issued green bonds totalling € 2.5 billion. This equates to over 34% of our total outstanding corporate bonds (as of 23.03.2022). Green bonds are issued exclusively to fund climate-friendly projects. All EnBW green bonds have met the criteria for certification by the Climate Bonds Standard Board on behalf of the Climate Bonds Initiative. Based on our Green Financing Framework, proceeds from our green bonds must go exclusively to projects in the following categories that are eligible for support:

- Renewable energy (onshore/offshore wind power and solar/photovoltaics)
- Energy-efficiency (such as smart meters)
- Clean transportation (such as e-mobility infrastructure/charging stations)

Key data on EnBW green bonds

Bond type	Rating (Moody's / S&P)	Issue size (€m)	Net issue proceeds (€m)	Issue date	Term (years)	Coupon (% p.a.)	Denomination (€)	ISIN
Green Senior	A3 (negative) / A- (stable)	500	496.42	31.10.2018	15	1.875	1,000	XS1901055472
Green Subordinated	Baa2 / BBB-	500	498.25	05.08.2019	60	1.625	100,000	XS2035564629
Green Subordinated	Baa2 / BBB-	500	498.25	05.08.2019	60.25	1.125	100,000	XS2035564975
Green Subordinated	Baa2 / BBB-	500	494.75	22.06.2020	60	1.875	100,000	XS2196328608
Green Subordinated	Baa3 / BBB-	500	498.25	24.08.2021	60	1.375	100,000	XS2381272207

Sustainable projects with sustainable finance

We invest the proceeds from our green bonds in expanding renewables. These include onshore wind, offshore wind and photovoltaics. We are also pressing ahead with the expansion of charging infrastructure for e-mobility.

Onshore wind



Onshore wind

€ 459 m
proceeds from green bonds

479 MW
total output

390 MW
of which attributable to the bonds

319,628 t
CO₂ avoided attributable to the bonds

39
green-financed projects



Offshore wind

€ 1,337 m
proceeds from green bonds

2,140 MW
total output

1,820 MW
of which attributable to the bonds

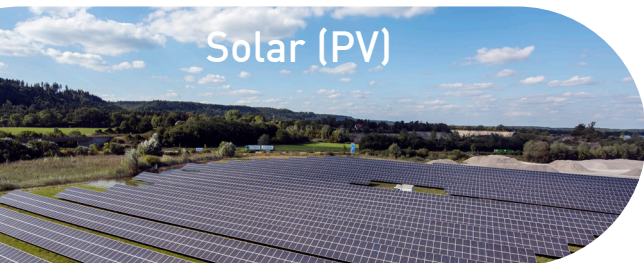
953,057 t
CO₂ avoided attributable to the bonds

3
green-financed projects

Offshore wind



Solar (PV)



Solar (PV)

€ 175 m
proceeds from green bonds

588 MW
total output

295 MW
of which attributable to the bonds

94,194 t
CO₂ avoided attributable to the bonds

17
green-financed projects



Valeco

€ 495 m
proceeds from green bonds

516 MW
total output

343 MW
of which attributable to the bond

33,453 t
CO₂ avoided attributable to the bonds

Acquisition of Valeco



Charging infrastructure for e-mobility



E-mobility

€ 21 m
proceeds from green bonds

573
green-financed charging points

239,494
Number of charges

EnBW Green Financing Framework

Link to the Green Bond Framework:

[Website ↗](#)

We published our Green Financing Framework in October 2018. It is based on the Green Bond Principles published by the International Capital Market Association (ICMA) in June 2018. Sustainability rating agency ISS ESG has confirmed that the EnBW Green Financing Framework is in accordance with the Green Bond Principles.

The Green Financing Framework governs the use of green financing instruments¹ within the EnBW Group. We have elected a two-step approach to ensure a diligent project evaluation and selection process. This approach is likewise integrated into the Green Financing Framework:

- To ensure eligibility for green financing, we have set up a Green Financing Committee with representatives from the corporate finance department, the corporate sustainability department and, on a case by case basis, representatives from business units. Projects to be allocated with proceeds from Green Financing can be submitted by the business units or are chosen by the Green Financing Committee directly. The final decision on the selection of eligible green assets can only be taken unanimously.
- The Committee is responsible for verifying compliance of all projects with the eligibility criteria specified in the Green Financing Framework. Typical exclusion filters include but are not limited to material controversies and concerns about impacts on environment.

In addition, selection criteria have been defined for prioritising projects. A prioritisation mechanism is used to assess the extent to which projects meet the selection criteria.

For further information about the EU taxonomy, please see our

[Website ↗](#)

EU taxonomy

The project categories specified in the Framework correspond to the classification system for environmentally sustainable economic activities² and the technical screening criteria for the environmental objective of climate change mitigation³ under the EU Taxonomy Directive.

Projects financed or refinanced under the Framework are selected, among other criteria, on the basis of compliance with the relevant metrics, thresholds and 'do no significant harm' criteria under the EU taxonomy.

EU Green Bond Standard

Our current Green Financing Framework conforms with the July 2021 Proposal for a Regulation on European Green Bonds.⁴ This enables us where applicable to use the EU Green Bond label in future green bond issues.

¹ green bonds, green loans, green project financing, etc.

² as amended 18.06.2020











³ as amended 20.11.2020

⁴ „Proposal for a regulation of the European Parliament and of the Council on European green bonds” as amended 06.07.2021 (2021/0191 (COD))

For further information about our ESG performance indicators, please see our

[Website](#) [↗](#)

Correspondence of eligible project categories to our non-financial key performance indicators, the United Nations Sustainable Development Goals (SDGs) and the EU taxonomy

Eligible green activity	Project category	Contribution to the EnBW key performance indicators ¹	Contribution to the UN SDGs	Contribution to the EU taxonomy ²
Renewable energies	Offshore wind energy generation	<ul style="list-style-type: none"> • Expand renewable energies (RE): Installed output of RE in GW and the generation capacity accounted for by RE in % • Climate protection: CO₂ intensity in g/kWh 	 <ul style="list-style-type: none"> • Clean and affordable energy  <ul style="list-style-type: none"> • Climate action 	4.3 Electricity generation from wind power
	Onshore wind energy generation	<ul style="list-style-type: none"> • Expand renewable energies (RE): Installed output of RE in GW and the generation capacity accounted for by RE in % • Climate protection: CO₂ intensity in g/kWh 	 <ul style="list-style-type: none"> • Clean and affordable energy  <ul style="list-style-type: none"> • Climate action 	4.3 Electricity generation from wind power
	Solar (photovoltaic) energy generation	<ul style="list-style-type: none"> • Expand renewable energies (RE): Installed output of RE in GW and the generation capacity accounted for by RE in % • Climate protection: CO₂ intensity in g/kWh 	 <ul style="list-style-type: none"> • Clean and affordable energy  <ul style="list-style-type: none"> • Climate action 	4.1 Electricity generation using solar photovoltaic technology
Energy efficiency	Smart meters		 <ul style="list-style-type: none"> • Industry, innovation and infrastructure  <ul style="list-style-type: none"> • Climate action 	7.5 Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings
Clean transportation	E-mobility charging stations		 <ul style="list-style-type: none"> • Industry, innovation and infrastructure 	6.15 Infrastructure enabling low-carbon road transport and public transport
			 <ul style="list-style-type: none"> • Sustainable cities and communities 	7.4 Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)

¹ Our green activities also have a positive impact on other EnBW top non-financial performance indicators such as our reputation index and our customer satisfaction index.

² Classification based on the Draft Delegated Act Annex I dated 04.06.2021 (including appendices). The project needs to fulfil the definition, metrics and thresholds of the applicable Substantial Contribution, the Do No Significant Harm criteria and minimum safeguards requirements.

Good independent assessments

For independent assessments, we have obtained both a Second Party Opinion from ISS ESG and CBI certification for all of our green bonds.

Direct download:
Second Party Opinion from
ISS ESG (PDF, eng., 1.05 MB)

[PDF download ↗](#)



ISS ESG Second Party Opinion

ISS ESG, a rating agency internationally specialising in sustainability, has confirmed that all EnBW green bonds issued to date comply with the Green Bond Principles on the basis of International Capital Market Association (ICMA) criteria. In addition, ISS ESG confirmed the good sustainability quality of the bonds and also our above-average sustainability performance as the issuer (ISS ESG Prime Status).



Climate Bonds Initiative certification






Our green bonds also are certified to the high standards of the Climate Bonds Initiative (CBI). The Climate Bonds Initiative (CBI) is an international organisation that works to mobilise the bond market for climate change solutions. These feature detailed sector-specific criteria for qualification as green bonds.


Impact Reporting

📄 2018 Green Bond [XS1901055472]

📄 2019 Green Subordinated Bonds [XS2035564975 & XS2035564629]

📄 2021 Green Subordinated Bond [XS2381272207]

Project-category	Investment attributable to the bonds €m (per category) ¹			Generating capacity attributable to the bonds (MW) ¹			Generation attributable to the bonds (MWh, 2021)	CO ₂ avoidance factor (gCO ₂ eq/ kWh) ²	Emissions avoided attributable to the bonds (tCO ₂ eq)		
	2018 Green Senior Bond	2019 Green Subordi- nated Bonds	2021 Green Subordi- nated Bond	2018 Green Senior Bond	2019 Green Subordi- nated Bonds	2021 Green Subordi- nated Bonds			2018 Green Senior Bond	2019 Green Subordi- nated Bonds	2021 Green Subordi- nated Bond
Offshore wind 	227.5	839.8	-	68.2	251.5	-	1,237,737	770	189,383	763,674	-
Offshore wind 	-	-	269.8	-	-	1,500.0	-	336	-	-	-
Onshore wind 	233.3	142.4	83.1	143.9	48.3	79.8	689,964	754	204,847	60,362	54,419
Onshore wind 	-	-	-	-	105.5	12.6	266,055	- ³	-	-	-
Solar (PV) 	27.6	14.3	132.9	37.8	23.7	232.9	137,509	685	25,314	16,098	52,782
Total	488.4	996.5	485.8	250.0	429.1	1,825.4	2,994,196		419,544	840,134	107,201

Expansion of fast charging infrastructure 	Investment attributable to the bonds €m ¹	Sites	Number of charges 2021
2018 Green Senior Bond	8.1	123 charging points at 89 locations	155,680
2021 Green Subordinated Bond	12.5	450 charging points at 242 locations	83,814

Federal Environment Agency methodology for determining CO₂ avoidance factors⁴

The method is identical for PV, offshore wind and onshore wind. However, different emission and substitution factors are used in each case. Includes greenhouse gases CO₂, CH₄ and N₂O. It therefore measures not only CO₂ emissions, but also CO₂ equivalents (CO₂eq) for the other two gases..

$$\begin{array}{rcl}
 \text{Avoided CO}_2\text{eq emissions from RE generation gross} & - & \text{CO}_2\text{eq emissions (indirect emissions from RE generation - from production of generating plant, auxiliary energy, etc.)} \\
 & & = \text{Avoided CO}_2\text{eq emissions from RE generation net}
 \end{array}$$

$$\begin{array}{rcl}
 \text{Avoided CO}_2\text{eq emissions from RE generation net} & \div & \text{RE generation} \\
 & & = \text{CO}_2\text{-avoidance factor CO}_2\text{eq}
 \end{array}$$

¹ Rounded figures

² Source: Germany: Federal Environmental Agency publication „Climate Change 71/2021 - Emissionsbilanz erneuerbarer Energieträger, Bestimmung der vermiedenen Emissionen im Jahr 2020“, as of November 2019; UK: Avoided emissions assume that green electricity generated from offshore wind replaces an equal quantity of electricity generation from fossil fuels; Source: UK Government fuel-mix-disclosure-data, last updated 02.08.2021 (disclosure period 01.04.2020 – 31.03.2021)



³ No calculation of avoided emissions. In Sweden, the energy generated from renewables and low-CO₂ generation (nuclear energy) is at over 90%. It is assumed that additional renewables do not contribute to additional CO₂ avoidance.; Source: International Energy Agency - Energy Policies of IEA countries - Sweden 2019 Review

⁴ Source: Umweltbundesamt (Federal Environment Agency): Emissionsbilanz erneuerbarer Energieträger 2020 (Emission Balance of Renewable Energy sources), November 2021; gCO₂eq/kWh: grams of CO₂-equivalent per kilowatt-hour.

Impact Reporting

📄 2020 Green Subordinated Bond (XS2196328608)

The proceeds from the bond issue were used to refinance the acquisition of Groupe Valeco in 2019. Groupe Valeco is a French wind and PV project developer building and operating wind and solar farms.

Project-category		Investment attributable to the bonds €m (per category) ¹	Generating capacity attributable to the bonds (MW) ¹	Generation attributable to the bonds (MWh, 2021)	CO ₂ avoidance factor (gCO ₂ eq/kWh) ²	Emissions avoided attributable to the bonds (tCO ₂ eq)
Onshore wind		494.8	264.3	563,707	56	31,568
Solar (PV)			78.4	112,029	19	1,885
Total		494.8	342.7	675,736		33,453

Calculation of CO₂ avoidance factor for France³

It is assumed that renewable energy generation in France substitutes conventional generation. Accordingly, the conventional generation data is combined with the corresponding CO₂ emission factors to calculate the specific CO₂-equivalent (CO₂eq) for power generation in France. The CO₂ avoidance factor is calculated for renewables for each generation category by deducting from the resulting specific CO₂eq for power generation the lifecycle specific CO₂eq for each renewables category.

Specific CO₂eq
for conventional
energy generation
in France

—

CO₂eq
lifecycle renewable
energy generation

=

CO₂-
avoidance
factor

1 Rounded figures

2 Sources: Own calculation

3 Sources:
Electricity generation of France: RTE-Electricity-Report 2020
CO₂-emission factors:
1) IPCC WGIII Contribution AR5 2014, Climate Change 2014 Mitigation of Climate Change.
2) IPCC 2011 Special Report on renewable energy sources and climate change mitigation (SRREN).

Allocation Reporting

📄 [2018 Green Senior Bond \(XS1901055472\)](#)

📄 [2019 Green Subordinated Bonds \(XS2035564975 & XS2035564629\)](#)

📄 [2021 Green Subordinated Bond \(XS2381272207\)](#)







Our detailed allocation of funds is provided in the online version of our Impact Report.

[Impact Report](#) [↗]



Out of the proceeds from the 2018 Green Senior Bond issue, 49% was used for new build projects and 51% for refinancing projects already in operation. Of the proceeds from the 2019 Green Subordinated Bond issues, 87% was used for new build projects and 13% for refinancing projects already in operation. The proceeds from the 2020 Green Subordinated Bond were used to refinance the acquisition of Groupe Valeco in 2019.

Groupe Valeco is a French wind and PV project developer building and operating wind and solar farms. 84% of the proceeds from the 2021 Green Subordinated Bond was used for new build projects and the remainder for refinancing existing projects.

Proceeds from the four Green Bonds went into these project categories:

Project category	Sites	Investment attributable to the bonds €m (per category) ¹			Installed capacity (MW) ¹	Generation capacity attributable to the bonds (MW)		
		2018 Green Senior Bond	2019 Green Subordinated Bonds	2021 Green Subordinated Bond		2018 Green Senior Bond	2019 Green Subordinated Bonds	2021 Green Subordinated Bond
Offshore wind 	2	227.5	839.8	-	639.5	68.2	251.5	-
Offshore wind 	1	-	-	269.8	1,500.0	-	-	1,500.0
Onshore wind 	31	233.3	142.4	83.1	360.9	143.9	48.3	79.8
Onshore wind 	8	-	-	-	118.1	-	105.5	12.6
Solar (PV) 	17	27.6	14.3	132.9	588.2	37.8	23.7	232.9
Expansion of quick charging infrastructure 	2018 Green Senior Bond: 123 charging points at 89 locations 2021 Green Subordinated Bond: 450 charging points at 242 locations	8.1	-	12.5	-	-	-	-
Total		496.5	996.5	498.3	3,206.7	250.0	429.1	1,825.4

📄 [2020 Green Subordinated Bond \(XS2196328608\)](#)

Project category	Project name	Capital expenditure attributable to the bond (€m, per category)	Installed capacity (MW) ¹	Generation capacity attributable to the bonds (MW) ¹
Onshore wind 	Refinancing of 2019 Groupe Valeco acquisition	494.8	426.9	264.3
Solar (PV) 			89.0	78.4

¹ Rounded figures

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