The EnBW Group

Finance and strategy goal dimensions

Results of operations

Electricity sales increase, gas sales fell compared to the previous year

Electricity sales (without Grids)

in billions of kWh[1]	Sales		Renewable Energies		Generation and Trading		Total (without Grids)		Change in %
	2019	2018	2019	2018	2019	2018	2019	2018	
Retail and commercial customers (B2C)	14.8	14.9	0.0	0.0	0.0	0.0	14.8	14.9	-0.7
Business and industrial customers (B2B)	20.5	21.9	0.0	0.0	0.0	0.0	20.5	21.9	-6.4
Trade	2.0	0.9	2.9	2.4	112.4	96.7	117.3	100.0	17.3
Total	**37.3**	**37.7**	**2.9**	**2.4**	**112.4**	**96.7**	**152.6**	**136.8**	**11.5**

1 The figures for the previous year have been restated.

In the 2019 financial year, electricity sales were higher than in the previous year. Due to the changed classification of three companies, there was a slight shift in the figures for the previous year for the Sales and Generation and Trading segments. In a persistently challenging competitive environment, electricity sales to retail and commercial customers (B2C) stood at the same level as in the previous year. Sales to business and industrial customers (B2B) fell slightly as a result of the withdrawal from the B2B commodity business under the EnBW and Watt brands. Increased trading activities resulted in an increase in sales. However, the effect of the trading activities on the earnings potential of our company is limited. Adjusted for the effects of changes in the consolidated companies, the increase in electricity sales was 11.2%.

Gas sales (without Grids)

in billions of kWh[1]	Sales		Renewable Energies		Generation and Trading		Total (without Grids)		Change in %
	2019	2018	2019	2018	2019	2018	2019	2018	
Retail and commercial customers (B2C)	17.4	17.1	0.0	0.0	0.0	0.0	17.4	17.1	1.8
Business and industrial customers (B2B)	56.2	50.8	0.0	0.0	0.0	0.0	56.2	50.8	10.6
Trade	0.5	0.3	0.1	0.1	222.8	260.4	223.4	260.8	-14.3
Total	**74.1**	**68.2**	**0.1**	**0.1**	**222.8**	**260.4**	**297.0**	**328.7**	**-9.6**

1 The figures for the previous year have been restated.

Gas sales decreased in 2019 in comparison to the previous year. Due to the changed classification of three companies, there was a shift in the figures for the previous year for the Sales and Generation and Trading segments. In addition, there was also a reclassification within the Generation and Trading segment. In a challenging competitive environment, gas sales in the retail customer business (B2C) were slightly above the level in the previous year. In the 2019 financial year, sales to business and industrial customers (B2B) exceeded the level in the previous year due to higher sales to existing customers and the acquisition of new customers by individual brands. This was offset to some extent by the withdrawal from the B2B commodity business under the EnBW and Watt brands. Trading activities fell compared to the previous year. However, the effect of the trading activities on the earnings potential of our company is limited. There were no effects due to changes in the consolidated companies.

External revenue lower than previous year especially due to decrease in gas sales

External revenue by segment

in € million[1, 2]	2019	2018	Change in %
Sales	7,679.0	7,347.7	4.5
Grids	3,459.7	3,215.4	7.6
Renewable Energies	653.1	477.5	36.8
Generation and Trading	6,970.1	9,767.8	-28.6
Other/Consolidation	3.2	7.0	-54.3
Total	**18,765.0**	**20,815.4**	**-9.9**

1 The figures for the previous year have been restated.
2 After deduction of electricity and energy taxes.

Adjusted for the effects of the changes in the consolidated companies, external revenue fell by 10.7% or €2.237.4 million in comparison to the previous year. The figures for revenues in the previous year were restated due to the IFRIC agenda decision "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)". The application of the agenda decision only resulted in a reporting change and had no effect on EBITDA. Due to the changed classification of three companies in the previous year, there was also a slight shift between the segments.

Sales: In the 2019 financial year, external revenue in the Sales segment increased in comparison to the previous year. Adjusted for the effects of the changes in the consolidated companies, this would have been an increase of 2.3% or €173.5 million. This was primarily due to higher gas sales.

Grids: External revenue in the Grids segment in 2019 was higher than the figure in the previous year, especially due to higher earnings from the use of the grids. Adjusted for the effects of the changes in the consolidated companies, this would have been an increase of 8.4% or €266.8 million.

Renewable Energies: Revenue in the Renewable Energies segment in the 2019 financial year exceeded the level in the previous year. This increase was attributable to the commissioning of our EnBW Hohe See offshore wind farm, as well as higher generation volumes from our other offshore and onshore wind farms and our run-of-river power plants due to the weather. Adjusted for the effects of the changes in the consolidated companies, this would have been an increase of 13.0% or €75.0 million.

Generation and Trading: Revenue in the Generation and Trading segment decreased significantly in comparison to the previous year. Adjusted for the effects of the changes in the consolidated companies, there was a decrease in revenue of 28.3% or €2,746.8 million. This decrease was mainly due to a fall in sales and lower prices in the area of gas trading.

Material developments in the income statement

The fall in the cost of materials corresponds to the decrease in gas revenues. The balance from other operating income and other operating expenses in the reporting period increased from €-95.2 million in the previous year to €251.1 million in the reporting year. This increase was mainly attributable to valuation effects from derivatives (Glossary, from p. 139). The financial result improved in 2019 in comparison to the previous year by €284.6 million to €-95.8 million (previous year: €-380.4 million). Higher expenses caused by the drop in the discount rate for nuclear provisions were more than compensated for by the positive effect from the market valuation of securities. The improvement in the investment result was attributable to the revaluation of the shares in EnBW Hohe See, which since 1 October 2019 has no longer been accounted for using the equity method but was instead fully consolidated. Overall, earnings before tax (EBT) stood at €902.2 million in the 2019 financial year, after €596.3 million in the previous year. The complete consolidated financial statements can be found at www.enbw.com/report2019-downloads.

Earnings

The Group net profit/loss attributable to the shareholders of EnBW AG increased from €334.2 million in 2018 by €400.0 million to €734.2 million in the reporting period. Earnings per share amounted to €2.71 in the 2019 financial year compared to € 1.23 in the previous year.

Adjusted earnings and non-operating result

The sum of the adjusted earnings figures and non-operating figures gives the figures on the income statement. The non-operating result includes effects that cannot be predicted or cannot be directly influenced by us and as such are not relevant to the ongoing management of the company. The effects are presented and explained in the section "Non-operating EBITDA". The business activities relevant to the ongoing management of the company are of particular importance for internal management and for the external communication of the current and future earnings potential. We use the adjusted EBITDA – earnings before the investment and financial results, income taxes and amortisation, adjusted for non-operating effects – as the key reporting indicator for disclosing this information.

TOP Adjusted EBITDA and TOP the share of the adjusted EBITDA accounted for by the segments

Adjusted EBITDA by segment

in € million[1]	2019	2018	Change in %	Forecast 2019
Sales	294.3	268.4	9.6	€225 to €300 million
Grids	1,311.2	1,176.9	11.4	€1,300 to €1,400 million
Renewable Energies	482.8	297.7	62.2	€425 to €500 million
Generation and Trading	383.8	430.8	-10.9	€350 to €425 million
Other/Consolidation	-39.6	-16.3	-142.9	–
Total	**2,432.5**	**2,157.5**	**12.7**	**€2,350 to €2,500 million**

1 The figures for the previous year have been restated.

Share of adjusted EBITDA accounted for by the segments

in %[1]	2019	2018	Forecast 2019
Sales	12.1	12.4	5% to 15%
Grids	53.9	54.5	50% to 60%
Renewable Energies	19.8	13.8	15% to 25%
Generation and Trading	15.8	20.0	10% to 20%
Other/Consolidation	-1.6	-0.7	–
Total	**100.0**	**100.0**	

1 The figures for the previous year have been restated.

The adjusted EBITDA increased in 2019 compared to the previous year. This positive earnings performance was within the forecasted range for the 2019 financial year. The first-time application of the leasing standard IFRS 16 led to an increase in adjusted EBITDA of €114.2 million or 5.3%. Adjusted for the effects of the changes in the consolidated companies, the adjusted EBITDA was 8.1% higher than the level in the previous year. Due to the changed classification of three companies, there was a slight shift in the figures for the previous year for the Sales and Generation and Trading segments. All segments achieved a result within their forecasted range for 2019. The share of the adjusted EBITDA accounted for by each of the segments was also within the forecasted range.

Sales: The adjusted EBITDA in the Sales segment increased in the 2019 financial year in comparison to the previous year. Plusnet has been contributing to earnings since the beginning of the third quarter. Adjusted for the effects of the changes in the consolidated companies, earnings stood at almost the same level as in the previous year (-0.5%). Even without these largely unplanned effects, the result still stood in the middle quantile of the forecasted range.

Grids: In the Grids segment, the adjusted EBITDA increased in the 2019 financial year in comparison to the previous year. Adjusted for the effects of changes in the consolidated companies, the increase was 11.3%. The main factor influencing this positive earnings performance was higher revenue from the use of the grids, especially due to the increased investment that is necessary for ensuring the security and reliability of supply of the grids as well as the first-time application of the new leasing standards IFRS 16 in the 2019 financial year..

Renewable Energies: The adjusted EBITDA in the Renewable Energies segment for the 2019 financial year exceeded the level in the previous year. Adjusted for the effects of the changes in the consolidated companies which mainly involved the EnBW Hohe See offshore wind farm and the acquisition of Valeco, the increase was 23.3%. Our EnBW Hohe See offshore wind farm has been contributing to earnings since it was commissioned at the beginning of the fourth quarter. The acquisition of Valeco resulted in a contribution to earnings from the beginning of the third quarter. In addition, better wind conditions at our offshore and onshore wind farms and higher water levels at our run-of-river power plants contributed to the positive earnings performance.

Generation and Trading segment: In the Generation and Trading segment, the adjusted EBITDA fell in the 2019 financial year compared to the previous year. Adjusted for the effects of the changes in the consolidated companies which mainly involved the sale of VNG Norge and its subsidiary VNG Danmark in 2018, the decrease was 4.4%. As forecast, this development was largely attributable to lower out-of-period earnings in comparison to the previous year. In contrast, the higher availability of the nuclear power plants had a positive effect. In addition, we sold our electricity deliveries on the forward market at higher wholesale market prices than in the previous year (Glossary, from p. 139).

Development of non-operating EBITDA influenced by increased allocations to provisions for onerous contracts for electricity procurement agreements

Non-operating EBITDA

in € million	2019	2018	Change in %
Income/expenses relating to nuclear power	-61.9	-132.1	53.1
Income from the reversal of other provisions	48.2	11.8	–
Result from disposals	18.4	89.0	-79.3
Reversals of/additions to the provisions for onerous contracts relating to electricity procurement agreements	-54.8	39.2	–
Income from reversals of impairment losses	4.5	22.1	-79.6
Restructuring	-41.0	-49.1	16.5
Other non-operating result	-100.7	-48.8	-106.4
Non-operating EBITDA	**-187.3**	**-67.9**	**–**

The fall in non-operating EBITDA in comparison to the previous year was due to, amongst other things, allocations to provisions for onerous contracts for long-term electricity procurement agreements. In the previous year, there were higher reversals of provisions. In addition, the sale of VNG Norge and its subsidiary VNG Danmark had a positive effect on earnings in the previous year. The reason for the fall in the other non-operating result was the allocations to risk provisions for a possible obligation to pay EEG cost allocations (Glossary, from p. 139) for the company's own energy deliveries within the EnBW Group.

Significant increase in Group net profit compared to previous year

Group net profit

in € million	2019			2018		
	Total	Non-operating	Adjusted	Total	Non-operating	Adjusted
EBITDA	**2,245.2**	**-187.3**	**2,432.5**	**2,089.6**	**-67.9**	**2,157.5**
Amortisation and depreciation	-1,648.5	-160.7	-1,487.8	-1,213.8	-13.8	-1,200.0
EBIT	**596.7**	**-348.0**	**944.7**	**875.8**	**-81.7**	**957.5**
Investment result	401.3	270.9	130.4	100.9	-50.6	151.5
Financial result	-95.8	-176.0	80.2	-380.4	-18.6	-361.8
EBT	**902.2**	**-253.1**	**1,155.3**	**596.3**	**-150.9**	**747.2**
Income tax	2.1	191.0	-188.9	-128.7	51.9	-180.6
Group net profit/loss	**904.3**	**-62.1**	**966.4**	**467.6**	**-99.0**	**566.6**
of which profit/loss shares attributable to non-controlling interests	(170.1)	(-9.5)	(179.6)	(133.4)	(5.1)	(128.3)
of which profit/loss shares attributable to the shareholders of EnBW AG	(734.2)	(-52.6)	(786.8)	(334.2)	(-104.1)	(438.3)

The increase in impairment losses was primarily attributable to impairment losses on power plants – due to the quicker phase-out pathway for hard coal. The improvement in the non-operating investment result was mainly due to the revaluation of the shares in EnBW Hohe See, which has been fully consolidated in the EnBW consolidated financial statements since 1 October 2019. The company was accounted for using the equity method until this point in time. The increase in the financial result in comparison to the previous year was the result of, amongst other things, the market valuation of securities. In contrast, the development of the discount rate for nuclear provisions had a negative effect.

Financial position

Financial management

Basis and objectives

The purpose of our financial management system is to ensure that EnBW is able to meet its payment obligations at all times without restriction. In order to minimise risk, optimise costs and increase transparency, financial transactions are managed within the Group finance department as far as possible.

In the operating business, derivatives (Glossary, from p. 139) are generally deployed for hedging purposes only: for example, for forward contracts for electricity and primary energy source trading. This also applies for foreign exchange and interest rate derivatives. Proprietary trading is only permitted within narrow, clearly defined limits.

Interest rate risk management involves the management and monitoring of interest-sensitive assets and liabilities. The included companies regularly report on the existing risk position via the rolling liquidity planning. An interest rate risk strategy is developed in an analysis conducted every quarter on an aggregated basis. The purpose is to limit the impact of fluctuations in interest rates and interest rate risks on the results of operations and net assets.

The interest rates on financial liabilities are predominantly fixed. We use interest rate derivatives to keep the relationship between fixed and variable interest rates within predefined limits in order to optimise interest income. The potential risk is determined on the basis of current interest rates and possible changes in these interest rates.

Generally, currency positions resulting from operations are closed by appropriate forward exchange contracts. Overall, currency fluctuations from operating activities do not have any major effect on our operating result. Foreign exchange risks are monitored on a case-by-case basis within the framework of the currency management system. Details on the risk management system are presented in note 25 of the notes to the consolidated financial statements at www.enbw.com/report2019-downloads.

We continue to strive to maintain a balanced financing structure, solid balance sheet ratios and solid investment-grade ratings (Glossary, from p. 139).

The ongoing strategic development of our company is designed to continuously increase the operating result (adjusted EBITDA). Our target value for adjusted EBITDA of €2.4 billion in 2020 has been raised to €3.2 billion in 2025. To maintain a good creditworthiness at the same time, we stick to a high level of financial discipline.

Until the transformation of our portfolio has been completed by the end of 2020, the internal financing capability serves as an important performance indicator for the Group. It describes the adjusted retained cash flow in relation to the adjusted net (cash) investment and measures our company's ability to finance its activities internally. In the growth phase post 2020, internal financing capability will be replaced by the debt repayment potential – the ratio of the retained cash flow to net debt. This performance indicator is oriented to the relevant key ratios used by the rating agencies and should allow controlled growth.

Rating and rating trends

We aim to hold solid investment-grade ratings in order to:

- ensure unrestricted access to capital markets
- offer reliable opportunities for financing partners
- be regarded as a dependable business partner in our trading activities
- achieve the lowest possible capital costs
- implement an appropriate number of investment projects and thereby maintain the future viability of the company

Development of credit ratings – rating/outlook

	2019	2018	2017	2016	2015
Moody's	A3/negative	A3/stable	Baa1/stable	A3/negative	A3/negative
Standard & Poor's	A-/stable	A-/stable	A-/stable	A-/negative	A-/stable
Fitch	A-/stable	A-/stable	A-/stable	A-/stable	A-/stable

In the middle of June 2019, Moody's confirmed its A3 rating for EnBW but lowered the outlook to negative. In its rationale for the negative outlook, the rating agency pointed to the acquisitions of Valeco and Plusnet. Moody's believes that the two acquisitions support the strategic development of our company, however they have come too early. In addition, the low interest rate environment is having a negative effect on the present value of the pension and nuclear provisions. In its regular update, Standard & Poor's (S&P) confirmed its EnBW rating of A- with a stable outlook at the end of July 2019. The EnBW rating from Fitch remains unchanged at A-/stable.

Assessment by the rating agencies

Moody's (14/06/2019)	Standard & Poor's (26/07/2019)	Fitch (28/09/2018)
Leadership position as vertically integrated utility within Baden-Württemberg	Increasing share of operating income from low-risk regulated activities and long-term contracted renewables	Continued evolution towards a more regulated and contracted business profile
Around 50% of EBITDA from low-risk regulated distribution and transmission activities and growing share of renewables under contracts, as EnBW continues to invest in line with its strategy	Well-diversified sources of cash flow	High earnings visibility in grids and renewables partly offset by residual nuclear decommissioning risk; payment of €4.8 bn for transferring responsibility for nuclear waste storage has substantially reduced these risk
Historically balanced financial policy and demonstrated commitment to maintaining a robust credit quality	Geographical diversification in the renewables segment in Taiwan, the U.S. and France	Average forecast credit metrics are generally stronger than peers, with some exceptions with respect to funds from operations (FFO) fixed charge cover
Evolving operating environment in Germany for conventional generation and challenging environment in retail markets	Difficult operating environment in Germany for conventional power generation	If the share of regulated EBITDA exceeds 50% on a sustained basis, Fitch may apply a one-notch uplift to the senior unsecured rating
Certain execution risks relating to large investment programme	Still significant exposure to volatile and commodity-driven wholesale power prices	
Anticipated erosion of financial flexibility following acquisitions of VALECO and Plusnet in 2019	Debt increase following the integration of new acquisitions, in line with the company's strategy	
Strong shareholder support	Prudent financial policy	
	Moderate likelihood of government support	

Financing strategy

We manage the financing needs of our operating activities separately from the Group's pension and nuclear obligations. As part of the financing strategy, we constantly assess capital market trends with regard to the current interest rate environment and to any potentially favourable refinancing costs. On this basis, we decide on further financing steps.

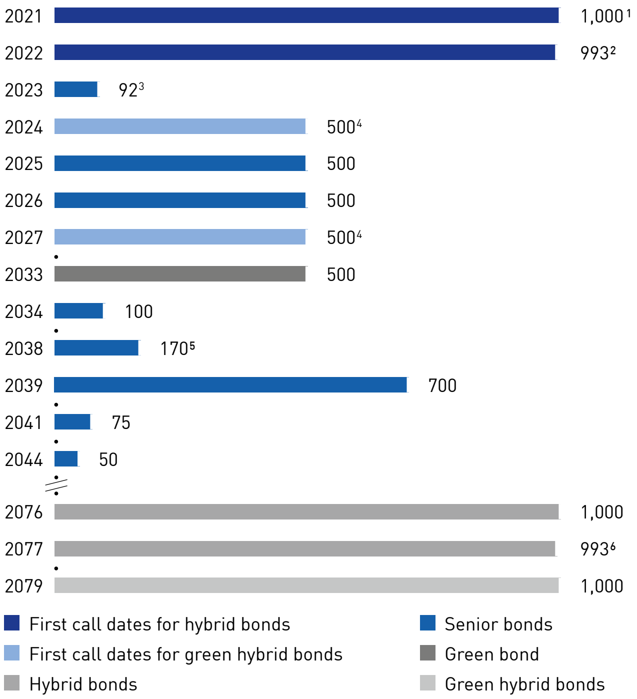
Alongside the internal financing capability and our own funds, we have the following financing instruments at our disposal to cover the financing needs for the strategic development of the operating business:

- Debt Issuance Programme (DIP) (Glossary, from p. 139), via which bonds are issued: €2.7 billion of €7.0 billion has been drawn
- Hybrid bonds: €3.0 billion. In July, EnBW issued two green hybrid bonds with a volume of €500 million each.
- Commercial paper (CP) programme (Glossary, from p. 139): €2.0 billion undrawn
- Syndicated credit line: €1.5 billion undrawn with a term until 2021
- Bilateral free credit lines: €0.7 billion of €1.4 billion drawn
- Project financing and low-interest loans from the European Investment Bank (EIB)

Documentation of short-term and long-term borrowings on the capital markets under the established DIP and CP programme, as well as all other credit documentation with banks (e.g. syndicated lines of credit) include internationally standardised clauses. The issuing of a negative pledge, as well as a pari passu clause (Glossary, from p. 139), to all creditors form essential key elements of our financing policy. The use of undrawn credit lines is not subject to restrictions. Details on financial liabilities are presented in note 22 and explanations on other financial commitments are presented in note 26 of the notes to the consolidated financial statements at www.enbw.com/report2019-downloads.

The maturities of the EnBW bonds have been further diversified.

Maturity profile of EnBW bonds
in € million



1 First call date: hybrid maturing in 2076.
2 First call date: hybrid maturing in 2077; includes US$300 million (swap in €), coupon before swap 5.125%.
3 CHF 100 million, converted in € as of 31/12/2019.
4 First call date: hybrid maturing in 2079.
5 JPY 20 billion (swap in €), coupon before swap 5.460%.
6 Includes US$300 million, converted in € at rate on 05/10/2016.

Green bonds

We issued our first two green hybrid bonds with a total volume of €1 billion on 29 July 2019. EnBW was thus the first German issuer to launch a green hybrid bond. The rating agencies classify half of the hybrid bonds as equity, which has a positive effect on the credit profile.

In line with our strategy, we are increasingly investing in climate-friendly growth projects. This was the reason why we executed a second green transaction after we had already issued the first green bond (Glossary, from p. 139) with a volume of €500 million in October 2018. The proceeds from the green hybrid bonds will be used for the expansion of offshore and onshore wind power and photovoltaic projects.

We were the first company to issue bonds according to the EU Prospectus Regulation from 21 July 2019. The sustainability rating agency ISS ESG and the Climate Bonds Initiative (CBI) examined and certified the two green hybrid bonds according to sustainability criteria.

The two bonds each have a volume of €500 million and a term of around 60 years. We have the right to redeem the bond with a starting coupon of 1.125% for the first time in a three month period before 5 November 2024 and it can then be redeemed early at every coupon date. The bond with a starting coupon of 1.625% can be redeemed for the first time in a three month period before 5 August 2027. It can then be redeemed early at every coupon date. The bonds are junior to all other financial liabilities but have an equal ranking to our existing hybrid bonds.

The green bonds contribute to selected sustainability goals of the United Nations (United Nations Sustainable Development Goals (SDGs)). The business activities and projects of EnBW focus, in particular, on the following four SDGs: SDG 7 (affordable and clean energy), SDG 9 (industry, innovation and infrastructure), SDG 11 (sustainable cities and communities) and SDG 13 (climate action). The green bonds also support our non-financial key performance indicators. Further information on our green bonds and the Impact Report can be found at www.enbw.com/green-bond.

Asset liability management model

We ensure the timely coverage of the pension and nuclear obligations using our asset liability management model (Glossary, from p. 139).

The aim is to cover the Group's pension and nuclear provisions within an economically feasible period of time by means of appropriate financial assets. We ensure this using our cash flow-based asset liability management model. For this purpose, we determine the effects on the cash flow statement, income statement and balance sheet over the next 30 years. Alongside the anticipated return on financial assets, the actuarial reports on pension provisions and sector-specific appraisals by external experts on costs for nuclear decommissioning and disposal are taken into account. The aim of this model is to limit the impact of payments for the pension and nuclear obligations on the operating business to €300 million a year (plus an inflation supplement) by taking funds from the financial assets.

If the provisions are fully covered by the financial assets, no further funds will be taken from the cash flow from operating activities as part of the model.

This model also allows simulations of various alternative scenarios. As of 31 December 2019, the dedicated financial assets (Glossary, from p. 139) for pension and nuclear provisions totalled €6,328.7 million (previous year: €6,279.8 million). Alongside the dedicated financial assets, there are plan assets to cover certain pension obligations with a market value of €974.3 million as of 31 December 2019 (previous year: €987.8 million).

We strive to reach the defined investment targets with minimum risk. We also further optimised the risk/return profile of the financial assets in 2019. The main part of the dedicated financial assets is distributed as investments across nine asset classes. The financial assets are bundled in two master funds with the following investment targets:

- Risk-optimised investments, with a performance in line with market trends
- Consideration of the effects on the balance sheet and income statement
- Broad diversification of the asset classes
- Reduction of costs and simplification of administrative processes

Net debt

As of 31 December 2019, net debt increased significantly by €3,265.8 million compared to the figure posted at the end of 2018. This increase was due to the acquisition of the two companies Valeco and Plusnet as well as their subsidiaries. In addition, net debt increased due to the issuing of two green hybrid bonds with a total volume of €1 billion and the first-time application of the leasing standard IFRS 16 in the 2019 financial year.

The decrease in the interest rate for pension provisions from 1.8% to 1.1% and the interest rate for nuclear provisions from 0.6% to 0.03% also resulted in an increase in net debt.

The coverage ratio (Glossary, from p. 139) describes the dedicated financial assets (Glossary, from p. 139) in relation to the net pension and nuclear obligations. As of 31 December 2019, this ratio stood at 48.1%, which was around the same level as in the previous year (51.8%). Within the scope of the ALM model (Glossary, from p. 139), EnBW is still in a position to cover its future cash outflows for pension and nuclear provisions without excessively burdening the cash flow from operating activities.

Net debt

in € million	31/12/2019	31/12/2018	Change in %
Cash and cash equivalents available to the operating business	-1,127.7	-1,954.0	-42.3
Current financial assets available to the operating business	-139.7	-200.6	-30.4
Bonds	5,702.7	4,869.4	17.1
Liabilities to banks	2,021.7	1,482.8	36.3
Other financial liabilities	466.4	644.0	-27.6
Lease liabilities	699.6	0.0	–
Valuation effects from interest-induced hedging transactions	-85.4	-88.8	-3.8
Restatement of 50% of the nominal amount of the hybrid bonds[1]	-1,496.3	-996.3	50.2
Other	-19.7	-18.1	8.8
Net financial debt	**6,021.6**	**3,738.4**	**61.1**
Provisions for pensions and similar obligations[2]	7,655.3	6,550.9	16.9
Provisions relating to nuclear power	5,864.6	5,848.2	0.3
Liabilities relating to nuclear power	0.0	63.3	-100.0
Receivables relating to nuclear obligations	-360.4	-334.4	7.8
Net pension and nuclear obligations	**13,159.5**	**12,128.0**	**8.5**
Long-term securities and loans to cover the pension and nuclear obligations[3]	-5,517.7	-4,864.4	13.4
Cash and cash equivalents to cover the pension and nuclear obligations	-236.1	-295.4	-20.1
Current financial assets to cover the pension and nuclear obligations	-299.4	-569.1	-47.4
Surplus cover from benefit entitlements	-251.5	-208.8	20.5
Long-term securities to cover the pension and nuclear obligations directly associated with assets classified as held for sale	0.0	-298.9	-100.0
Other	-24.0	-43.2	-44.4
Dedicated financial assets	**-6,328.7**	**-6,279.8**	**0.8**
Net debt relating to pension and nuclear obligations	**6,830.8**	**5,848.2**	**16.8**
Net debt	**12,852.4**	**9,586.6**	**34.1**

1 The structural characteristics of our hybrid bonds meet the criteria for half of the hybrid bonds to be classified as equity, and half as debt, by the rating agencies Moody's and Standard & Poor's.
2 Less the market value of the plan assets (excluding the surplus cover from benefit entitlements) of €974.3 million (31/12/2018: €987.8 million).
3 Includes equity investments held as financial assets.

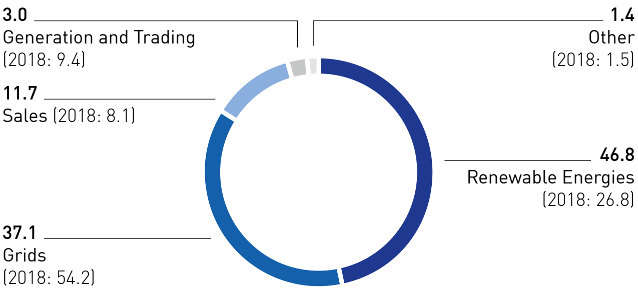
Investment analysis

Net cash investment

in € million[1, 2]	2019	2018	Change in %
Investments in growth projects[3]	2,807.3	1,340.4	109.4
Investments in existing projects	507.9	446.0	13.9
Total investments	**3,315.2**	**1,786.4**	**85.6**
Divestitures[4]	-471.3	-371.3	26.9
Participation models	-74.2	51.9	–
Disposals of long-term loans	-0.7	-3.6	-80.6
Other disposals and subsidies	-140.5	-163.4	-14.0
Total divestitures	**-686.7**	**-486.4**	**41.2**
Net (cash) investment	**2,628.5**	**1,300.0**	**102.2**

1 The figures for the previous year have been restated.
2 Excluding investments held as financial assets.
3 Does not include cash and cash equivalents acquired with the acquisition of fully consolidated companies. These amounted to €77.8 million in the reporting period (previous year: €0.4 million).
4 Does not include cash and cash equivalents relinquished with the sale of fully consolidated companies. These amounted to €40.2 million in the reporting period (previous year: €61.5 million).

Investment by segment[1]
in %



1 The figures for the previous year have been restated.

Investment by the EnBW Group in 2019 was significantly higher than in the previous year. This increase is mainly due to the investments in Valeco and Plusnet in the second quarter of 2019. Around 84.7% of overall gross investment was attributable to growth projects; the proportion of investment in existing facilities stood at 15.3%.

Investment in the **Sales** segment of €389.4 million was significantly higher than the level in the previous year (restated: €144.2 million) due to the acquisition of Plusnet.

Investment in the **Grids** segment stood at €1,230.9 million, compared to €967.7 million (restated) in the previous year. It was primarily used for the expansion of the electricity grids in both years. The increase in 2019 compared to the previous year is primarily attributable to the expansion of the transmission grid by our Group subsidiaries TransnetBW and ONTRAS Gastransport, the expansion and renovation of the distribution grid and investment in the area of electromobility.

Investment in the **Renewable Energies** segment of €1,552.6 million was considerably higher than the figure in the previous year (restated: €478.8 million). The main reasons for this were the acquisition of Valeco and the construction of the EnBW Hohe See and EnBW Albatros offshore wind farms.

Investment in the **Generation and Trading segment** fell significantly in 2019 in comparison to the previous year to €98.3 million. In the previous year, investment stood at €168.0 million (restated) and was mainly attributable to the exploration and production business of VNG and the modernisation of the combined gas heat and power plant in Stuttgart-Gaisburg.

Other investments in 2019 of €44.0 million were above the level in the previous year (restated: €27.7 million).

Divestitures increased in comparison to the level in the previous year; this increase was primarily due to the sale of the remaining shares in EWE, the sale of the shares in EMB Energie Mark Brandenburg and VNG Slovakia, and divestitures from participation models. Shares were sold in the Buchholz III and Aalen-Waldhausen wind farms.

Investment obligations for the acquisition of intangible assets and property, plant and equipment amounted to €1,213.8 million as of 31 December 2019 (previous year: €1,142.7 million). Commitments from corporate acquisitions totalled €535.5 million (previous year: €476.1 million).

Investment decisions will take climate goals into account to a greater extent in the future. In this context, the investment guidelines were adapted in the 2018 financial year: For significant investment projects, their influence on the environmental and climate protection targets and figures – in the sense of the TCFD recommendations (Glossary, from p. 139) – will be illustrated in the future. This additional information will provide a basis for the approval by the investment committee of the Board of Management.

Liquidity analysis

Condensed cash flow statement

in € million	2019	2018	Change in %
Cash flow from operating activities	707.0	827.6	-14.6
Cash flow from investing activities	-2,317.1	-895.8	–
Cash flow from financing activities	551.9	-907.3	–
Net change in cash and cash equivalents	**-1,058.2**	**-975.5**	**-8.5**
Change in cash and cash equivalents due to changes in the consolidated companies	169.3	6.6	–
Net foreign exchange difference	3.1	5.5	-43.6
Change in cash and cash equivalents due to risk provisions	0.2	0.2	0.0
Change in cash and cash equivalents	**-885.6**	**-963.2**	**8.1**

The reduction in cash flow from operating activities in compari son to the previous year was mainly caused by the increase in the net balance of assets and liabilities from operating activities as well as by higher income tax payments in comparison to the previous year.

Cash flow from investing activities returned a significantly higher outflow of cash in the reporting period compared to the previous year. This was due, in particular, to the acquisitions of Valeco and Plusnet and payments associated with the construction of the EnBW Hohe See offshore wind farm, which has since been fully consolidated.

Cash flow from financing activities returned a cash inflow in the reporting period, which was mainly due to the issuing of two green hybrid bonds, a bond as part of the Debt Issuance Programme (Glossary, from p. 139) and short-term loans. This was offset to some extent by the repayment to the commercial paper programme (Glossary, from p. 139) and repayments for short-term loans from the previous year. The outflow of cash in the previous year was mainly attributable to planned repayments on two bonds and the simultaneous issuing of the green bond (Glossary, from p. 139) as well as the utilisation of the commercial paper programme.

The solvency of the EnBW Group was ensured at all times throughout the 2019 financial year thanks to the company's available liquidity and its internal financing capability, as well as external sources available for financing. The company's future solvency is secured by its solid financial position (p. 72 ff.).

Retained cash flow

in € million	2019	2018	Change in %
EBITDA	**2,245.2**	**2,089.6**	**7.4**
Changes in provisions	-416.0	-394.6	5.4
Non-cash-relevant expenses/income	46.3	-116.0	–
Income tax paid	-409.1	-270.7	51.1
Interest and dividends received	286.5	284.6	0.7
Interest paid for financing activities	-214.9	-247.0	-13.0
Dedicated financial assets contribution	19.2	-34.0	–
Funds from operations (FFO)	**1,557.2**	**1,311.9**	**18.7**
Dividends paid	-316.5	-312.8	1.2
Retained cash flow	**1,240.7**	**999.1**	**24.2**

Funds from operations (FFO) increased compared to the previous year, which was due primarily to an increase in the cash-relevant EBITDA. A positive dedicated financial assets contribution and lower interest payments in the reporting period also contributed to the increase. This was offset to some extent by higher income tax payments in the reporting period. The increased FFO led to an increase in the retained cash flow. The retained cash flow reflects our internal financing capability after all stakeholder needs have been settled. It is available to the company for investment without the need to raise additional debt.

Internal financing capability[1]

	2019	2018	Change in %
Adjusted retained cash flow in € million[2]	1,485.7	1,199.1	23.9
Adjusted net (cash) investment in € million[3]	1,797.9	1,300.0	38.3
Internal financing capability in %	**82.6**	**92.2**	**–**

1 The figures for the previous year have been restated.
2 Adjusted for the effects from the reimbursement of the nuclear fuel rod tax of €245.0 million (previous year: €200.0 million).
3 Adjusted for accelerated growth investment of €830.6 million (previous year: €0.0 million).

We have translated the retained cash flow into the adjusted retained cash flow, in order to take the adjustment due to the reimbursement of the nuclear fuel rod tax (Glossary, from p. 139) into account. This resulted in an increase of €685.0 million in the period from 2018 to 2020 (nuclear fuel rod tax adjusted for debt repayment). The remaining amount will be distributed on a straight-line basis in 2019 and 2020. The reimbursement of the nuclear fuel rod tax of €1,520.8 million in the 2017 financial year was used by EnBW for the debt repayment in 2018 of €835.8 million and for investments of €200.0 million, as well as for investments of €245.0 million in 2019.

We have adjusted the net (cash) investment to take account of the accelerated growth investment in Valeco and Plusnet, which will contribute to the EnBW 2025 growth strategy.

As there was a sharp rise in adjusted net investment compared to the previous year in combination with a less sharp increase in the adjusted retained cash flow, the internal financing capability fell. Although the adjusted retained cash flow exceeded the forecasted range of €1.3 billion to €1.4 billion in the reporting period, we just missed the target for internal financing capability of ≥ 85% in 2019.

Net assets

Condensed balance sheet

in € million	31/12/2019	31/12/2018	Change in %
Non-current assets	31,622.5	26,746.0	18.2
of which intangible assets	(3,347.4)	(1,748.7)	91.4
of which property, plant and equipment	(18,552.7)	(15,867.5)	16.9
of which entities accounted for using the equity method	(1,064.0)	(1,600.2)	-33.5
of which other financial assets	(6,356.9)	(5,426.5)	17.1
of which deferred taxes	(1,214.0)	(1,059.3)	14.6
Current assets	11,664.7	12,520.7	-6.8
Assets held for sale	0.9	342.3	-99.7
Assets	**43,288.1**	**39,609.0**	**9.3**
Equity	7,445.1	6,273.3	18.7
Non-current liabilities	24,739.7	22,036.9	12.3
of which provisions	(14,333.1)	(13,246.0)	8.2
of which deferred taxes	(890.0)	(774.8)	14.9
of which financial liabilities	(7,360.7)	(6,341.4)	16.1
Current liabilities	11,103.3	11,277.6	-1.5
of which provisions	(1,535.9)	(1,549.9)	-0.9
of which financial liabilities	(830.2)	(654.8)	26.8
Liabilities directly associated with assets classified as held for sale	0.0	21.2	-100.0
Equity and liabilities	**43,288.1**	**39,609.0**	**9.3**

As of 31 December 2019, the total assets were higher than the level at the end of the previous year. Non-current assets increased by €4,876.5 million. The main reasons for this were the full consolidation of EnBW Hohe See and the first-time consolidation of Valeco and Plusnet. In addition, property, plant and equipment increased due to the first-time application of the leasing standard IFRS 16 in the 2019 financial year. The increase in financial assets was due to the securities. The decrease for entities accounted for using the equity method was primarily caused by the full consolidation of EnBW Hohe See since October 2019. Current assets fell by €856.0 million; this was mainly attributable to the payment of the purchase prices for Valeco and Plusnet. Lower trade receivables due to volume and price effects and a decrease in the current financial assets in the area of securities were more than compensated for by the change in derivatives (Glossary, from p. 139). The decrease in assets held for sale was primarily the result of EWE-Verband exercising its right to buy the 6% of the shares in EWE that were previously held by EnBW. The contractually agreed sale of shares in Stuttgart Netze Betrieb, which resulted in a loss of control of the company, also had an effect.

The equity increased by €1,171.8 million as of the reporting date of 31 December 2019. The main reasons for this development were the increase in non-controlling interests due to the first-time full consolidation of EnBW Hohe See and an increase in revenue reserves. This was offset by the increase in losses in other comprehensive income, which was mainly caused by the fall in the discount rate for the pension provisions from 1.8% at the end of 2018 to 1.1% as of the reporting date. The equity ratio increased from 15.8% at the end of 2018 to 17.2% on the reporting date. Non-current liabilities increased by €2,702.8 million. This was attributable, on the one hand, to the increase in the pension provisions because of the fall in the discount rate as well as the increase in financial liabilities due to the issuing of two green hybrid bonds with a total volume of €1 billion, while on the other hand, there was an increase in other liabilities and subsidies because of the first-time application of IFRS 16 in the 2019 financial year. The decrease in liabilities directly associated with assets held for sale was the result of the sale of shares in Stuttgart Netze Betrieb.

Other financial indicators

TOP ROCE and value added

The cost of capital before tax represents the minimum return on average capital employed (calculated on the basis of the respective quarterly figures for the reporting year and the year-end figure for the previous year). Positive value is added when the return on capital employed (ROCE) exceeds the cost of capital. The cost of capital is determined based on the weighted average cost of equity and debt together. The value of equity is based here on a market valuation and thus deviates from the value recognised in the balance sheet. The cost of equity is based on the return of a risk-free investment and a company-specific risk premium. The latter is calculated as the difference between a risk-free investment and the return for the overall market, weighted with a company-specific business field risk. The terms according to which the EnBW Group can raise long-term debt are used to determine the cost of debt.

Value added for 2019 by segment

	Sales	Grids	Renewable Energies	Generation and Trading	Other/ Consolidation	Total
Adjusted EBIT including the adjusted investment result[1] in € million	174.0	839.7	267.1	-178.0	-91.2	1,011.6
Average capital employed in € million	1,308.8	8,033.3	4,840.6	2,044.0	3,088.4	19,315.1
ROCE in %	**13.3**	**10.5**	**5.5**	**-8.7**	**–**	**5.2**
Weighted average cost of capital before tax in %	7.6	4.2	5.3	7.8	–	5.2
Value added in € million	**74.6**	**506.1**	**9.7**	**-337.3**	**–**	**0.0**

1 Investment result of €47.2 million, adjusted for taxes (investment result/0.706 - investment result; with 0.706 = 1 - tax rate 29.4%). Does not include impairment losses and reversals to impairment losses on investments, the result from the sale of equity investments, the share of the result from entities accounted for using the equity method not relevant to the ongoing management of the company and the result from equity investments held as financial assets.

Value added for 2018 by segment[1]

	Sales	Grids	Renewable Energies	Generation and Trading	Other/ Consolidation	Total
Adjusted EBIT including the adjusted investment result[2] in € million	218.0	768.4	123.7	-21.9	-46.6	1,041.6
Average capital employed in € million	1,067.1	7,019.8	3,667.4	2,109.0	2,190.0	16,053.3
ROCE in %	**20.4**	**10.9**	**3.4**	**-1.0**	**–**	**6.5**
Weighted average cost of capital before tax in %	7.7	5.3	6.1	8.0	–	6.3
Value added in € million	**135.5**	**393.1**	**-99.0**	**-189.8**	**–**	**32.1**

1 The figures for the previous year have been restated.
2 Investment result of €59.4 million, adjusted for taxes (investment result/0.706 - investment result; with 0.706 = 1 - tax rate 29.4%). Does not include impairment losses and reversals to impairment losses on investments, the result from the sale of equity investments, the share of the result from entities accounted for using the equity method not relevant to the ongoing management of the company and the result from equity investments held as financial assets.

There are various factors that influence value added. The level of ROCE and value added depend not only on the development of the operating result but above all on the capital employed. Large-scale investments tend to significantly increase the capital employed in the early years, while the effect on income that boosts value, however, only filters through over a lengthier period of time, often long after the investments were initially made. This is especially true of capital expenditure on property, plant and equipment relating to the construction of new power plants, which do not have any positive effect on the operating result of the Group until after they are commissioned. Capital expenditure on power plants, on the other hand, is already taken into account in the capital employed during the construction phase. In a comparison of individual years, the development of ROCE and value added is, to a certain extent, cyclical in nature, depending on the investment volume. This effect is therefore inherent in the system and results in lower ROCE in phases of strong growth or phases of investment.

In the 2019 financial year, value added fell in comparison to the previous year by €32.1 million to €0.0 million. The adjusted EBIT including the adjusted investment result fell, while the average capital employed rose. The risk-adjusted weighted average cost of capital was below the level in the previous year at 5.2%. The ROCE of 5.2% was below our forecasted range for the 2019 financial year (forecast 2019: 6.0% to 7.0%).

Sales: Value added in the Sales segment decreased in 2019 by €60.9 million. This was attributable to the increase in the average capital employed, which was primarily due to the first-time consolidation of Plusnet on 30 June 2019. In addition, the lower adjusted EBIT including the adjusted investment result contributed to the fall in value added.

Grids: Value added in the Grids segment increased by €113.0 million in comparison to 2018. Both the adjusted EBIT including the adjusted investment result and also the capital employed were above the figures in the previous year. The increase in capital employed was primarily attributable to the investment in the transmission and distribution grids and also the first-time application of the leasing standard IFRS 16.

Renewable Energies: Value added in the Renewable Energies segment of €9.7 million was higher than the value in the previous year. The adjusted EBIT including the adjusted investment result increased to €267.1 million. The capital base grew due to the construction of the EnBW Hohe See offshore wind farm and its revaluation as part of its full consolidation, as well as due to the acquisition of Valeco.

Generation and Trading: Value added in the Generation and Trading segment of €-337.3 million was below the level in 2018. This was caused by the decrease in adjusted EBIT including the adjusted investment result. The average capital employed in the reporting year remained at approximately the same level as in the previous year.

Performance indicators relevant to remuneration

The performance indicators relevant to remuneration are derived as follows. The remuneration of the members of the Board of Management is described in full in the remuneration report (p. 110 ff.).

EBT relevant to remuneration

in € million	2019	2018
EBT	**902.2**	**596.3**
Less outstanding items for derivatives allocated under trading within EBITDA	2.7	-4.1
Less the measurement of financial assets and outstanding items for derivatives allocated under trading within the financial result	-323.7	38.8
Less changes to the inflation rate and discount rate for nuclear provisions	475.3	133.3
EBT relevant to remuneration according to the new regulations[1]	**1,056.5**	**764.3**

1 The EBT relevant to remuneration was above the forecast of €850 million to €950 million due primarily to the revaluation of the shares in EnBW Hohe See.

Funds from operations (FFO) relevant to remuneration

in € million	2019	2018
Funds from operations (FFO)	**1,557.2**	**1,311.9**
Less income tax paid	409.1	270.7
Funds from operations (FFO) relevant to remuneration	**1,966.3**	**1,582.6**

Intangible assets and property, plant and equipment (net) relevant to remuneration

in € million	2019	2018
Intangible assets	3,347.4	1,748.7
Property, plant and equipment	18,552.7	15,867.5
Investment properties	30.3	31.6
Investment cost subsidies	-6.7	-7.7
Construction cost subsidies	-901.6	-876.8
Intangible assets and property, plant and equipment (net)	**21,022.1**	**16,763.3**
Average intangible assets and property, plant and equipment (net)[1]	**18,327.1**	**16,371.6**

1 Average calculation based on the relevant quarterly values for the reporting year and the year-end value for the previous year.

ROA (return on assets) relevant to remuneration

in € million	2019	2018
EBIT	**596.7**	**875.8**
Less outstanding items for derivatives allocated under trading within EBITDA	2.7	-4.1
EBIT relevant to remuneration	**599.4**	**871.7**
Less changes to the inflation rate and discount rate for nuclear provisions	297.8	–
EBIT relevant to remuneration according to the new regulations	**897.2**	**871.7**
Average intangible assets and property, plant and equipment (net)	18,327.1	16,371.6
ROA (return on assets) relevant to remuneration in %	**4.9**	**5.3**

Customers and society goal dimension

Reputation

A strong reputation is an important factor for the sustainable success of a company. The good social reputation of a company reflects the trust placed by the general public and relevant stakeholders in the competent and responsible actions of a company.

We assume our responsibilities for the economy and society and aspire to be a driver of the Energiewende. In the process, we want to gain social acceptance and improve our reputation. A good reputation signals the willingness of society and its different stakeholder groups to cooperate with and invest in the company.

We aim to continuously improve our reputation. The focal point of this concept is the stakeholder team, which was set up on the initiative of the Board of Management in 2017. It consists of representatives from all important areas of the company. The stakeholder team communicates and maintains dialogue with relevant stakeholder groups both directly and indirectly.

TOP Reputation Index

Reputation is measured by means of the key performance indicator Reputation Index using a standardised survey that is carried out by an external market research institute. It is measured in accordance with the requirements of the EnBW Group standard for market research and surveys (p. 45).

Key performance indicator

	2019	2018	Change in %	Forecast 2019
Reputation Index	52.8	51.3	2.9	54.1

Our Reputation Index increased to 52.8 index points in the reporting year. The most positive changes in comparison to the previous year were in the B2C target group – customers and the wider public. The EnBW image campaign in autumn 2019 was another positive development that strengthened above all the aspect of sympathy. However, we were unable to achieve the target value for 2019 of 54.1 points. The values for comparable large companies, whose reputation index was below our value, did not improve as strongly as our reputation. In other words: We were able to improve our relative position with respect to comparable large companies. The reputation values for municipal utilities and regional suppliers generally lie significantly higher than the values for EnBW and comparable large companies. More details on reputational risks can be found in the “Report on opportunities and risks” on p. 103.

Customer proximity

We aim to become a sustainable and innovative provider of infrastructure. A sustainable contribution could be made, for example, in the form of cooperative partnership models with local authorities, municipal utilities and suppliers. Our company also has great opportunities for generating additional revenue and for acquiring new customers using digital services and solutions.

An important step in this direction was the introduction of the new IT and process landscape for sales called **EnPower**. After it was introduced at Yello in the previous year, the EnBW brand also switched over to the new system in the middle of July 2019. On the one hand, EnPower facilitates better interaction between customers and the brands, while on the other hand, it lays the foundations for the digitalisation, automation and streamlining of settlement processes for the supply of electricity.

In parallel to the introduction of EnPower, the website www.enbw.com was also updated and given an even more customer-oriented design. The focus was placed on creating a user-friendly interface, ensuring clear navigation and providing information that is particularly relevant to customers.

TOP Customer Satisfaction Index

The energy sector is helping to push forward major social changes. The new energy world offers us great opportunities that we want to exploit and the main point of focus is our customers. We strive to maintain **long-term customer relationships** by offering networked products and new product combinations, continuous open communication and the best possible quality of service. Customer loyalty is based on high customer satisfaction, which is measured in accordance with the requirements of the EnBW Group standard for market research and surveys. The Customer Satisfaction Indices for EnBW and Yello are compiled from customer surveys carried out by an external provider (p. 45).

Key performance indicator

	2019	2018	Change in %	Forecast 2019
Customer Satisfaction Index for EnBW/Yello	116/157	120/152	-3.3/3.3	114–141/ 148–159

The satisfaction of the customers of EnBW fell slightly in 2019 but still reached a good level at 116 points – and was thus also within our forecasted range for 2019 of 114 to 141 points. A good level is reached when half of those surveyed indicate that overall they are particularly satisfied with EnBW. This is the case from 114 points upwards. A very good level of satisfaction is achieved from 136 points upwards. A possible cause for the slight decrease in the Customer Satisfaction Index for EnBW was, on the one hand, a price adjustment applied at the turn of the year 2018/2019 for the majority of those customers surveyed, while on the other hand, the switch over to the new EnPower platform had temporary effects on the service process and could also have had an impact on customer satisfaction.

The satisfaction of Yello customers remained at a high level (157) in 2019 and was thus at the higher end of our forecast (148–159). In comparison to the previous year, the value increased from 152 to 157. We believe that this high value could, amongst other things, be due to the diverse range of products for the Yello Plus tariff and a larger proportion of kWhapp users. kWhapp is an energy check app that helps users check their consumption regularly and adjust their advance payments at an early stage in the event of any changes.

Selected activities

Following the successful switchover of the system and process landscape in 2018, Yello benefited from new functionalities that increased its competitiveness in 2019. For example, products and services can be brought to the market more quickly and customers can be addressed individually. In October 2019, the **Digital Service Centre** also went online. It is a central digital contact point for customers and other interested parties. It combines content, services, contact options and answers to frequently asked questions.

With the continuation of our **corporate campaign,** we are demonstrating – under the revised slogan of "We're making E happen" – that electromobility is not just a future theme for the company but has already been part of our everyday lives and those of our customers for a long time. The campaign illustrates this with facts and information on the services provided by EnBW in the area of e-mobility. The aim of the campaign is to improve our reputation and prominence as a leading provider of e-mobility solutions, as well as for being a company that is making the Energiewende happen.

A main focus of the activities in the goal dimension "Customer proximity" in 2019 was **electromobility.** As a full-service provider together with our subsidiaries, our company covers the complete spectrum of services for the development and expansion of electromobility from the supply of electricity and the operation of a comprehensive charging infrastructure (Glossary, from p. 139) through to digital services for the consumer. In particular, the main focus was placed in 2019 on the comprehensive expansion of quick-charging stations. We were the largest operator of quick-charging infrastructure in Germany at the end of 2019 with around 290 quick-charging stations and we plan to operate up to 1,000 quick-charging stations across the country by the end of 2020. In addition, we offer drivers of electric cars access to more than 35,000 charging points in Germany, Austria and Switzerland via the EnBW mobility+ app. Following the introduction of the purely kWh-based EnBW mobility+ tariff, customers can use the app to pay for the electricity used to charge their e-cars at these charging points very easily and transparently. Yello also introduced e-mobility services in 2019. Anyone who is interested can, for example, rent a selection of vehicle models and test them under everyday conditions. In the yubee electromobility app, customers can use a driving simulator to find out whether an e-car would suit them at all and if so, which one would suit them best.

In the **SAFE project** (core charging network for e-cars in Baden-Württemberg), which was funded by the State of Baden-Württemberg, 77 municipal utilities and suppliers as well as three local authorities worked together with us to develop a core charging network (Glossary, from p. 139) in Baden-Württemberg. We coordinated the project as the head of the consortium. Following the conclusion of the funded project at the end of September 2019, Baden-Württemberg now has a comprehensive charging and quick-charging network for electric vehicles.

EnBW Telekommunikation GmbH is responsible for the main **telecommunications activities** of EnBW AG. As of 1 April 2019, it acquired around 55% of the shares in **NetCom BW** from Netze BW. NetCom BW has a strong market position with a focus on Baden-Württemberg. In order to expand our business in the telecommunications market across Germany, we acquired the company **Plusnet** on 30 June 2019. The company is active across the whole of Germany and has around 25,000 business customers.

The EnBW subsidiary **Senec** based in Leipzig is a specialist in equipping customers so that they are able to meet their own energy needs with solar electricity. According to a survey conducted by the market research company EuPD Research, the company was able to increase its market share on the German home electricity storage market from 9% to 14% in the first half of 2019. In the reporting year, Senec more than doubled its sales of electricity storage systems from 4,800 to 10,000 systems.

Our **contracting department** offers solutions to customers from industry, the real estate sector and local authorities for their on-site energy infrastructure. Depending on the customer's requirements, it provides, for example, heating, steam, cooling or compressed air as well as electricity from combined heat and power blocks based on long-term contracting agreements. We thus support our customers not only with modern energy infrastructure but also in the achievement of their targets with respect to supply reliability, energy and cost savings and CO_2 reductions. We can also help them make use of funding opportunities. These approaches were also used, for example, for three contracting projects that were concluded with local authorities in 2019.

Our company views itself as an experienced and powerful **partner for local authorities and public utilities.** Via our concessions in the electricity and gas sectors and numerous local authority holding companies in which we are active as a shareholder, we have extensive and strong connections throughout Baden-Württemberg. Alongside electricity and gas, other areas of cooperation in 2019 included the water and broadband networks (Glossary, from p. 139), the development of district projects (Glossary, from p. 139), the integration of charging infrastructure (Glossary, from p. 139) into local authority mobility concepts and assisting local authorities with their digital agendas.

In July 2019, we started a participation model for cities and communities in Baden-Württemberg called **"EnBW connects".** Around 550 local authorities can acquire shares in Netze BW. The prerequisite for taking part is that Netze BW must be the owner and also operator of the local electricity and/or gas distribution grid in the local authority as of 1 July 2019. We aim to further expand our role as a partner for cities and communities in Baden-Württemberg using this model.

Supply reliability

As an energy company and distribution grid operator, we are tasked with guaranteeing a reliable supply of electricity to our customers. The fact that the energy is increasingly being generated decentrally is a real challenge for the supply of electricity. This means that the electricity is being fed into our grid at many different points. In addition, the feed-in of energy from renewable sources fluctuates because it is dependent on the weather and other factors that are outside of our sphere of influence. We have set ourselves the goal of preparing our transmission grids so that they can handle this decentralised energy world. To this end, we are adding so-called smart grid technologies (Glossary, from p. 139) to the existing conventional infrastructure. This will enable us to better manage the generation, distribution and storage of the energy.

Our grid companies are responsible for the safe and reliable operation of the transmission grids. Processes are managed by these companies at their grid control centres. These are also responsible for resolving any unplanned outages in the respective region. As part of the investment and maintenance programmes, we maintain the grids and expand them according to demand. Depending on its volume, the investment must be approved by the Board of Management, along with the overall annual budget for the realisation of all investment and maintenance measures. The measures are carried out over one or multiple years and are realised independently by our grid companies. Some of the investment budget is used for the gradual expansion of smart grids. The increasing use of smart grid technology (Glossary, from p. 139) enables us to avoid or delay expensive investment in conventional grids. Besides the reliability and security of supply, the efficiency of the measures is also taken into account when making investment decisions. This is because grid investment also has an influence on the grid charges that make up part of the electricity price paid by customers.

TOP SAIDI

We record all unscheduled interruptions to supply at our distribution grid operators. This data flows into the "System Average Interruption Duration Index" (SAIDI) for electricity. It states the average duration of supply interruptions per connected customer in minutes per year (p. 45).

Key performance indicator

	2019	2018	Change in %	Forecast 2019
SAIDI (electricity) in min./year	15	17	-11.8	15–20

A better value for SAIDI was achieved in 2019 in comparison to previous years and it thus stood encouragingly at the lower end of the forecasted range. This was due to the fact that all of our grid subsidiaries were able to reduce the average length of the interruptions to supply in 2019.

Employees goal dimension

Employees are responsible for the business development of EnBW and shape the future of our company. Therefore, the key tasks of HR are recruiting employees for the company, including the promotion of young talent, encouraging loyalty to the company amongst employees and maintaining and fostering their motivation, satisfaction and employability. As part of the EnBW 2020 strategy, we believe that the value drivers for our HR policy can be found in the following areas of focus: leadership, safeguarding and promoting expertise, employment conditions and structures, and health management.

The further development of our corporate strategy in the period up to 2025 (p. 42 f.) will place new requirements on our HR policy. In future, the strategic focus will be placed on growth, infrastructure, selective internationalisation and new business also outside of the energy sector. Using a revised HR strategy that is valid from 2020, we want to give the people at EnBW – and at the same time our company – the opportunity for growth, development, a future and thus success.

Employee commitment

TOP Employee Commitment Index (ECI)

The key performance indicator ECI is an important indicator for us as it reflects the degree to which employees identify with the company. The annual measurement of this indicator enables us to respond specifically to any negative trends at an early stage. The key performance indicator ECI is taken into account in the remuneration and corresponding target agreements for the Board of Management (p. 46).

Key performance indicator

	2019	2018	Change in %	Forecast 2019
Employee Commitment Index (ECI)[1]	66	62	6.5	63

1 Variations in the group of consolidated companies (all companies with more than 100 employees are generally considered (except ITOs)).

The fifth short survey for monitoring the ECI – MAB-Blitzlicht (Employee Flashlight) – was carried out between 16 September and 4 October 2019. As in the previous year, the MAB-Blitzlicht survey comprised twelve questions and was carried out by taking a random representative sample by an external, independent service provider. As in the full surveys, it collected information on the level of commitment of the employees to the EnBW Group and to their respective company. The already very high level of participation increased for the third year in a row to 74% (2018: 73%). This demonstrates that the employee survey enjoys a consistently high level of acceptance as a tool for providing feedback. The ECI from MAB-Blitzlicht 2019 showed a clear improvement to 66 points. The target set for 2019 was thus far exceeded. In general, commitment improved across all management and employee levels. According to an assessment carried out by our service provider, the ECI level achieved by our company is at a very high level in comparison to other companies in the sector. We believe that this positive development reflects the increasing level of trust in the future viability and competitiveness of our company as well as our attractiveness as an employer overall. Both are decisive factors for retaining high-performing employees and also for acquiring new talent.

Selected activities in the HR areas of focus

Leadership: As part of the **"Next Level Leadership"** initiative, we offer employees with leadership roles the chance to take advantage of learning and development opportunities and provide space for the concrete practical implementation of modern leadership approaches in an increasingly complex and digital environment. In 2019, new teaching content was added into the syllabus for this programme that was launched back in 2018 (including delegating responsibility to a team, leading myself, resilience). A total of more than 1,100 employees and managers have used the different learning and development opportunities since the start of the programme (2019: 829 participants).

The new talent development programme **"SP4RK for Pioneers",** which was launched in 2019, combines the development of leadership skills with the development of innovative business models. Talent from across the company work for several months in cross-functional teams on projects with a start-up character in order to identify strategically relevant business models. At the same time, they learn methods for developing customer-centric business models and have the opportunity to develop important skills for the future in the context of modern leadership expertise.

A comprehensive cultural and transformation project was launched at **ED** at the beginning of 2019 to develop a common leadership culture and common principles, as well as to strengthen mutual trust. In numerous cross-hierarchical workshops, five leadership principles were developed that will be implemented across the whole ED Group and regularly evaluated in the individual departments.

Safeguarding and promoting expertise: We believe that **diversity** acts as a lever for successfully implementing our strategy. Under the motto "Diversity generates success", we rely on a diverse workforce in terms of numerous different criteria such as gender, age, interculturality, sexual orientation and people with disabilities, as well as sector backgrounds, different working models and work organisation. Strengthening diversity in the composition of the workforce and the leadership team is an important factor for success in many areas of the company. It promotes innovative strength, internationalisation and customer orientation, and thus also the successful implementation of our strategy. In recognition of this diversity, we took part in the Christopher Street Day in Stuttgart for the second time in 2019 with our own float. To promote diversity, we have introduced a process in which specific targets for particularly relevant diversity characteristics in various areas of the company have been agreed together with measures for their implementation. For example, language training courses have been offered to a greater extent to ensure the successful integration of many new employees with an international background. The Diversity Week 2019 was held in June with numerous campaigns and events also focussing on this complex theme.

SWD held a Diversity Day for the second time this year, this time on the theme of "Experience diversity". The main focus on this day was placed on the diversity of the workforce. The aim was to raise awareness for diversity and promote appreciative cooperation without any prejudice.

Proportion of women in management positions at EnBW AG

in %	2019	2018
First level below the Board of Management	0.0	0.0
Second level below the Board of Management	17.2	15.1

The Board of Management has set the goal for EnBW AG of further increasing the proportion of women at both management levels below the Board of Management in the period from 1 January 2017 to 31 December 2020. At both the first level (top management) and second level (upper management), the proportion of women should increase to at least 20%. Despite a great deal of effort, these targets were not yet achieved in 2019.

Another part of the HR policy is promoting young talent. Our company employed 1,014 trainees and students from the Cooperative State University (DH) as of 31 December 2019. This represents an increase of 8.1% compared to the previous year. There are plans to take on 409 new trainees and DH students in 2020. Our goal is to employ all of them after they have successfully completed their training. More than 80% of our trainees and DH students receive the guarantee of a job. In addition, we employed 1,333 working students and interns in 2019, which was 15.5% more than in 2018.

The **EnBW employer brand** was developed further in 2019 in order to achieve a stronger position on the job market and differentiate the company from the competition. Around 500 employees participated in the feedback campaign "Give our employer brand an image" in September 2019. The EnBW employer brand that was developed received a high level of acceptance at almost 90%.

We introduced the new **online application management system** Avature in 2019. It simplifies the process overall for applicants and offers them various different options when making an application, such as the automated scanning of a CV or adding links to social networks. In addition, it will provide better support to our internal processes dealing with the recruitment of new employees.

To recruit employees in growth fields, **PRE** is actively working together with specialist schools and carried out a special recruitment campaign for IT specialists and electrical fitters in 2019. Another main focus was placed on the promotion of young talent by offering, for example, internships and work placements abroad.

Employment conditions and structures: The Employers Association for Electricity Power Plants in Baden-Württemberg and the service trade union ver.di reached a **collective bargaining agreement** with a term of 24 months on 28 February 2019 after intensive negotiations. In accordance with the agreement, remuneration was increased by 2.5% from 1 March 2019 and by a further 1.9% from 1 November 2019. There will be another increase of 1.9% from 1 July 2020. Monthly remuneration for trainees in all year groups increased or will increase on the same dates by €80.00, €50.00 and €50.00, respectively. At EnBW AG and companies that come under the scope of the FOKUS collective bargaining agreement, the increases for trainees are €77.12, €48.20 and €48.20, respectively.

Health management: As part of occupational health and safety management, we offer a variety of preventative medical services for occupational safety and health protection at several sites. In 2019, the focus was placed on issues such as intestinal health. Health campaigns for the early detection of colorectal cancer were run throughout the year. In the area of mental health, a large range of preventative measures were also offered on the themes of stress, conflict situations and psychological disorders.

At **PRE,** the focus of health management is placed on primary prevention. This includes offering company sporting activities and holding sports events and is supplemented by a broad range of social measures. At **VNG,** there is a wide range of preventative services as part of occupational healthcare provision on the themes of heart, circulation, metabolism and musculoskeletal illnesses. Eye and hearing tests, as well as ECG and laboratory testing, are also available.

The sickness ratio of 4.9% was slightly below the figure in the previous year of 5.1%.

Outlook for the HR strategy

The revised HR strategy, which will be valid from 2020, supports the company's EnBW 2025 strategy (p. 42f.). In defining the future direction of our HR policy, we assume that routine tasks and standardised processes will gradually become less significant due to digitalisation. Human strengths such as creativity, flexibility and curiosity will become more important in the workplace in future and employees will be called upon more strongly as idea generators and progressive thinkers. Our newly designed HR policy will support employees in this process of change, for example by developing new forms and formats for cooperation and opportunities for further training and education. In addition, we want to promote innovative thinking and action and strengthen networking opportunities. We will place a particular emphasis on the potential offered by the internationality and diversity of our employees.

The new HR strategy will focus on six key areas, which will be underpinned by a total of 21 strategic areas:

- HR processes, services & digitalisation
- Employer brand & recruiting
- Leadership and skills
- Qualification@EnBW
- Internationalisation
- Transformation into a modern working world

EnBW has set itself the following goal for its HR policy: We want to make every employee at our company an enthusiastic architect of their own individual development – and thus pivotal shapers of EnBW 2025.

On the basis of this goal, a new **future competence model** for the area of leadership has been designed in cooperation with the Board of Management at EnBW, which will act as a common standard for all people in leadership roles at EnBW – irrespective of their precise role. The central focus will be placed on skills such as customer orientation, entrepreneurship, innovative strength and team empowerment. The new future competence model will be consolidated by our entire leadership team in 2020 and operationalised in all relevant leadership processes.

Other performance indicators

Employees[1]

	31/12/2019	31/12/2018	Change in %
Sales[2]	4,394	3.718	18.2
Grids	9,254	8,920	3.7
Renewable Energies	1,384	1,144	21.0
Generation and Trading[2]	5,499	5.358	2.6
Other	2,762	2,635	4.8
Total	**23,293**	**21,775**	**7.0**
Number of full-time equivalents[3]	21,843	20,379	7.2

1 Number of employees excluding apprentices/trainees and inactive employees.
2 The figures for the previous year have been restated.
3 Converted into full-time equivalents.

As of 31 December 2019, our company had 23,293 employees, which was 7.0% more than at the end of 2018. This increase was primarily due to acquisitions and taking on new employees in strategic growth fields. The number of employees in the Sales segment thus increased due to the first-time consolidation of Plusnet and Senec. In the Grids segment, the increase in the number of employees was due to the growing importance of the regulated business. However, this expansion was offset to some extent by the sale of shares in Stuttgart Netze Betrieb, which resulted in a loss of control of the company. In the Renewable Energies segment, the increase was mainly attributable to the acquisition of Valeco. The increase in the number of employees in the Generation and Trading segment was attributable to restructuring within the Group and an increase in employees in the area of recycling of residual nuclear material. Digitalisation and the transformation of the company led to an increase in the number of employees in the Other segment; this effect was offset to some extent by restructuring measures. The employee turnover ratio stood at 6.3% in 2019 and was thus 0.2 percentage points lower than the figure in the previous year.

Further performance indicators for employees, such as the regional distribution or age structure of our employees, can be found on our website at www.enbw.com/performance-indicators. We also refer you to the details provided in the “Report on opportunities and risks” (p. 103).

Occupational safety

Our main goals in the area of occupational safety are to avoid accidents and work-related illness and to create a safe working environment. Responsibilities, roles and processes are defined in the Group guidelines “Occupational safety and health protection”, which also documents the EnBW guidelines for occupational safety and health protection. The Occupational Safety Working Group (AK KAS) has the task of regulating issues that affect all companies uniformly within the Group. AK KAS is headed by the Chief Technical Officer of EnBW and has the power to make binding decisions in accordance with the company’s rules of procedure.

TOP LTIF

The key performance indicator LTIF is used to measure the number of LTI according to the definition on p. 46. Every Group company included in the consolidated companies for the LTIF receives an individual target from the Board of Management on an annual basis – the fulfilment of this LTIF target flows into the monetary assessments for the achievement of targets in each case. The companies can also set their own individual targets that go beyond those set by the Board of Management.

Key performance indicator

	2019	2018	Change in %	Forecast 2019
LTIF for companies controlled by the Group[1]	2.1	2.3	-8.7	< 3.7
LTIF overall[2]	3.8	3.6	5.6	–

1 Variations in the group of consolidated companies (all companies with more than 100 employees are generally considered except for companies in the area of waste management as well as external agency workers and contractors).
2 Variations in the group of consolidated companies (all companies with more than 100 employees are generally considered except for external agency workers and contractors).

In 2019, the LTIF for companies controlled by the Group once again improved in comparison to the previous year. The average days of absence per accident at 19.0 fell in comparison to the previous year (22.2). We believe that the significant improvement in occupational safety at EnBW is the result of consistent and effective activities in the area of occupational safety and health protection. The LTIF overall increased slightly in comparison to the previous year. This performance indicator includes subsidiaries in the area of waste management. However, the number of accidents in this area are at a good level in comparison to other companies in the sector.

In the reporting year, there was a fatal accident in relation to loading work.

The measures for achieving targets are independently defined by the Group companies. Various different **activities focussing on occupational safety** were carried out in 2019:

We work continuously on minimising danger in the workplace, which could result in accidents or work-related illnesses, through training and a programme of measures. In the first half of 2019, the focus was placed on the successive roll-out of the EHS software Quentic (formerly called EcoWebDesk, EWD) that had already begun in 2018. Important elements of Quentic are the documentation of risk assessments and hazardous substance management. A uniform hazardous substance register is being gradually collated from various existing sources which have existed for years. The internal audit department carried out an audit on the topic of "Risk assessments of work activities (HSSE)" in the first half of 2019. The audit did not result in any objections. In addition, two workshops for all occupational safety experts on the subject of "Talking about near accidents" were held in the reporting period. At Netze BW, a series of campaigns to further improve the safety culture were carried out in 2019:

- The management systems for occupational safety, environmental protection and energy management were integrated further.
- The grid-wide roll-out of the Quentic database is currently being realised.
- A meeting of the safety officers to discuss the latest issues was held in December 2019.
- To support the theme of health protection, first aid courses were offered to all employees. The target group was those employees who had not yet completed this type of course as part of their work activities.

In the area of conventional and renewable generation, numerous events were held at the power plant sites in 2019. The themes covered included simulator and safety training as well as fire-extinguishing exercises. At the nuclear power plants, more in-depth information was provided about best practice examples and reporting near accidents, and the exchange about experiences with partner companies was intensified in 2019. In addition, the "100 days without accidents" campaign started in 2015 was continued. This is a good tool for motivating employees to act safely.

The main focus at SWD was placed on the following activities:

- Building on the occupational safety and health protection programme 2015plus, a concept for the new programme 2020plus was developed further.
- A concept for dealing with near accidents was implemented in the first pilot areas.
- As part of the "RheinSchiene" project, a meeting of safety officers was held in Düsseldorf in cooperation with the Employer's Liability Insurance Association for the Energy, Textile and Electronics Sectors (BG ETEM).

We also refer you to the details provided in the "Report on opportunities and risks" (p. 104).

Environment goal dimension

Our Group environmental targets – which are integrated into the EnBW 2020 and EnBW 2025 Group strategies – are related to the expansion of renewable energies and to making our contribution to climate protection. These targets are measured using the key performance indicators "installed output of renewable energies (RE) and the share of the generation capacity accounted for by RE" and CO_2 intensity (Glossary, from p. 139). Alongside EnBW AG, the main subsidiaries that have to deal with environmental issues include SWD and ED. In particular, both subsidiaries and EnBW AG have an environmental management system certified according to DIN EN ISO 14001:2015. This creates the prerequisites for ensuring that environmental requirements are systematically and continuously taken into account. It is used to manage the required guidelines and regulations, define and monitor environmental targets and establish the necessary testing processes. The consistent implementation and further development of the environmental management system ensures that any material negative impacts on the environment can be avoided as well as possible. Risks generally exist in the area of environmental protection due to the operation of power generation plants and transmission facilities and the possible consequences for air, water, soil and nature. We counter these risks using organisational and procedural measures to reduce their impact, as well as with emergency planning and hazard prevention measures.

Expansion of Renewable Energies

Key performance indicator

	2019	2018	Change in %	Forecast 2019
Installed output of RE in GW and the share of the generation capacity accounted for by RE in %	4.4/31.8	3.7/27.9	18.9/–	4.4–4.5/31–32

TOP Installed output of renewable energies (RE) and the share of the generation capacity accounted for by RE

In the reporting year, the installed output of renewable energies increased to 4.4 GW and was thus within the range of the forecast. This increase was primarily attributable to the commissioning of our EnBW Hohe See offshore wind farm with an output of 497 MW and the onshore wind farms and solar parks added through the acquisition of Valeco. We also constructed 54 MW of output from photovoltaic power plants. Overall, the share of the generation capacity accounted for by RE increased – within the range of our forecast – to 31.8%.

Breakdown of the generation portfolio[1] (as of 31/12)

Electrical output[2, 3] in MW	2019	2018
Renewable Energies	**4,398**	**3,738**
Run-of-river power plants	1,006	1,006
Storage/pumped storage power plants using the natural flow of water[3]	1,507	1,507
Onshore wind	826	718
Offshore wind	834	336
Other renewable energies	225	171
Thermal power plants[4]	**9,451**	**9,649**
Brown coal	875	875
Hard coal	3,586	3,491
Gas	1,165	1,458
Other thermal power plants	347	347
Pumped storage power plants that do not use the natural flow of water[3]	545	545
Nuclear power plants[5]	2,933	2,933
Installed output[6]	**13,849**	**13,387**
of which renewable in %	31.8	27.9
of which low CO_2 in %[7]	12.3	15.0

1 The generation portfolio includes long-term procurement agreements and generation from partly owned power plants.
2 The figures for the previous year have been restated.
3 Output values irrespective of marketing channel, for storage: generation capacity.
4 Including pumped storage power plants that do not use the natural flow of water.
5 The output from Block 2 of the Philippsburg nuclear power plant is included in the generation portfolio in 2019 because it was not shut down until the evening of 31/12/2019.
6 In addition, power plants with an installed output of 1,706 MW were registered for decommissioning. However, they were classified as system-relevant by the Federal Network Agency and TransnetBW and are thus used by TransnetBW as reserve grid capacity.
7 Excluding renewable energies; only gas power plants and storage power plants that do not use the natural flow of water.

Own generation[1] by primary energy source

in GWh	2019	2018
Renewable Energies	**9,988**	**8,414**
Run-of-river power plants	5,342	4,846
Storage/pumped storage power plants using the natural flow of water	959	1,030
Onshore wind	1,522	996
Offshore wind	1,806	1,233
Other renewable energies	359	309
Thermal power plants[2]	**37,819**	**45,078**
Brown coal	2,598	6,048
Hard coal	8,758	12,868
Gas	3,634	3,518
Other thermal power plants	188	198
Pumped storage power plants that do not use the natural flow of water	1,608	1,790
Nuclear power plants	21,033	20,656
Own generation	**47,807**	**53,492**
of which renewable in %	20.9	15.7
of which low CO_2 in %[3]	11.0	9.9

1 Own electricity generation includes long-term procurement agreements and partly owned power plants.
2 Including pumped storage power plants that do not use the natural flow of water.
3 Excluding renewable energies; only gas power plants and storage power plants that do not use the natural flow of water.

Own generation fell in 2019 compared to the previous year to 47.8 TWh. The main reason for this development was the lower deployment of our thermal power plants because of prices on the market. In contrast, generation based on renewable energies increased significantly, mainly due to the commissioning of our EnBW Hohe See offshore wind farm and the acquired wind turbines in France and Sweden. In addition, the greater volumes of electricity generated due to the better wind conditions and also at the run-of-river power plants due to higher water levels had a positive effect on this development. The proportion of own generation from renewable energy sources thus increased in comparison to 2018 to more than 20%.

Climate protection

Key performance indicator

	2019	2018	Change in %	Forecast 2019
CO_2 intensity in g/kWh	419	553	-24.2	-10% to 0%

TOP CO_2 intensity

The CO_2 intensity (Glossary, from p. 139) of own generation of electricity excluding nuclear power fell significantly in comparison to the previous year by 24.2% to 419 g/kWh and was thus appreciably below our forecasted range. This decrease was due, on the one hand, to higher generation from renewable sources in comparison to 2018 and, on the other hand, to the fact that our electricity generation from our fossil fuel-fired power plants fell much more sharply than forecast due to market-driven developments.

Climate neutrality: 2019 was characterised by political and social debate on climate change. In its Green Deal, the EU wants to introduce comprehensive measures and legal obligations for becoming climate neutral by 2050. Therefore, we have closely examined the significance of sustainability and climate protection themes for the business model and aim to support the international and national targets for climate neutral economic activities when developing our future measures and targets.

Our subsidiary ED was one of the first integrated energy companies in Germany and Switzerland to become climate neutral already at the beginning of 2020. For this purpose, ED implemented a comprehensive range of measures over the last few years, such as producing its own green electricity, increasing the energy efficiency of its buildings, reducing the CO_2 emissions from its vehicle fleet and compensating for grid transmission losses using green electricity.

In addition to the key performance indicators in the area of the environment, we utilise a broad range of additional environmental indicators for measuring, controlling and presenting the other results of our environmentally relevant activities. The most important performance indicators are presented in the following table on p. 90. A comprehensive presentation of our environmental performance indicators can be found on the Internet at www.enbw.com/umweltschutz. There is also information available here on our wide-ranging measures to improve energy efficiency, conserve biological diversity and protect nature and species, such as our EnBW amphibian protection programme, or on ecological enhancement measures in the area of our hydroelectric power plants. In addition, further information in conformity with the Global Reporting Initiative (GRI standards) can be found on the Internet.

Carbon footprint: Direct CO_2 emissions are determined mainly by the deployment of power plants. In particular, the sharp decrease in electricity generation from coal in combination with a significant increase in electricity generation from renewable sources led to a corresponding reduction in direct CO_2 emissions from 16.6 to 10.8 million t CO_2eq. Lower indirect CO_2 emissions from grid losses led to a fall in Scope 2 CO_2 emissions from 1.0 to 0.9 million t CO_2eq. Scope 3 CO_2 emissions are mainly influenced by the gas consumption of our customers. The moderate increase in gas sales led to a corresponding rise in Scope 3 emissions from 16.8 to 17.6 million t CO_2eq. The figure for the previous year was restated due to a reclassification within the Generation and Trading segment. Primarily as a result of the increased generation from renewable energy sources, CO_2 emissions avoided rose from 6.9 to 8.3 million t CO_2eq.

Energy consumption: Total final energy consumption includes the consumption of final energy for our business activities. It does not include conversion losses during energy generation or grid losses. Total final energy consumption is mostly influenced by pump energy as well as the company's own consumption requirements and the operating consumption of the power plants. Due to the lower level of own generation overall, the total final energy consumption fell by around 10% in comparison to the previous year from 3,252 GWh to 2,919 GWh.

The proportion of renewable energies in final energy consumption increased from 51% in 2018 to 53% in 2019. This was primarily due to an increase in electricity generation from renewable energies with a correspondingly higher proportion of renewable energies used for the company's own consumption requirements and the operating consumption of the power plants.

The energy consumption of our buildings covers the energy required for heating rooms, providing hot water and electricity. The energy consumption of buildings per employee decreased from 10,482 kWh in 2018 to 9,606 kWh in 2019. This decrease was the result of a diverse range of measures for increasing the energy efficiency of our buildings.

Environmental protection expenditure: We report environmental protection expenditure in line with the requirements of the statistical offices and using the guidelines published by our sector association, BDEW. According to these reporting requirements, investments and current expenditure for the use of renewable energies should be reported in full as expenditure for climate protection. Investment in climate protection increased at an above-average rate from €535 million in the previous year to €1,535 million in 2019. The reasons for this development were the investments associated with the construction of the EnBW Hohe See and EnBW Albatros offshore wind farms and the acquisition of the project developer and operator of wind farms and solar parks Valeco, which are included as expenses for climate protection in accordance with the reporting requirements. The increase in current environmental protection expenses to €301 million (previous year: €268 million) was mainly attributable to higher expenditure in the area of renewable energies.

Mobility: Alongside the expansion of the public charging infrastructure (Glossary, from p. 139) (p. 82), we are also continuously expanding the charging options for electric cars at our sites for our employees. A total of around 580 charging points were thus installed at 65 sites across Germany in 2019. By expanding the charging infrastructure at our sites, we want to make it easier for our employees to switch over to electromobility and thus also push forward the mobility transition internally within the company.

Environmental performance indicators

	Unit	2019	2018
Carbon footprint			
Direct CO_2 emissions (Scope 1)[1]	millions of t CO_2eq	10.8	16.6
Indirect CO_2 emissions (Scope 2)[2]	millions of t CO_2eq	0.9	1.0
Other indirect CO_2 emissions (Scope 3)[3, 4]	millions of t CO_2eq	17.6	16.8
CO_2 emissions avoided[5]	millions of t CO_2eq	8.3	6.9
CO_2 intensity of business journeys and travel[6]	g CO_2/km	169	181
Energy consumption			
Total final energy consumption[7]	GWh	2,919	3,252
Proportion of renewable energies in final energy consumption[3, 8]	%	53	51
Energy consumption of buildings per employee[9]	kWh/MA	9,606	10,482
Environmental protection expenditure[10]			
Investment in environmental protection	€ million	1,535	535
Current environmental protection expenses	€ million	301	268

1 Preliminary data.
2 Includes greenhouse gas emissions through electricity grid losses and through electricity consumption of plants in the gas and electricity grid, water supplies and buildings.
3 The figures for the previous year have been restated.
4 Includes greenhouse gas emissions through consumption of purchased electricity volumes by customers, consumption of gas by customers, fuel provision, supply chains for gas sales and business travel.
5 Includes CO_2 emissions avoided through the expansion of renewable energies, through energy efficiency projects with customers/partners and through the generation and sale of biogas.
6 Includes all business travel activities (Scope 1 and Scope 3).
7 Includes final energy consumption of production including pump energy, energy consumption of grid facilities (electricity, gas and water) excluding grid losses, energy consumption of buildings and vehicles.
8 For electricity consumption for which the proportion of renewable energies is unknown, a proportion of renewable energies in accordance with the current Bundesmix (federal mix) label for electricity of 35% is assumed. For fuels, a proportion of 5% bioethanol is generally assumed.
9 Calculated partially on the basis of assumptions and estimations.
10 Pursuant to the German Environmental Statistics Act (UStatG) and BDEW guidelines on the recognition of investment and ongoing expenditure relating to environmental protection (April 2007).

Selected activities

Hydropower: Electricity generated from hydropower protects the climate. At the same time, the use of hydropower also encroaches on nature. Therefore, we are committed to harmonising hydropower with ecology. If power plants cause changes to the natural landscape, we compensate for these effects through ecological enhancement measures. For example, we ensure or improve the continuity of watercourses by constructing or optimising fish passes and fish ladders for fish to ascend or descend the river. We are constantly working on new, innovative solutions for ensuring that fish can ascend rivers and for protecting the fish. This can be seen, for example, in our project to enable fish to migrate along the River Murg at the sites in Kirschbaumwasen and Forbach (low-pressure power plant). As the local conditions do not allow the use of traditional solutions for fish to ascend or descend the river, a new type of fish lift is being used. This makes a valuable contribution to achieving the targets in the EU Water Framework Directive for the River Murg, which is classified as a salmon programme waterway. By constructing additional weir turbines at the sites of the fish lifts, we ensure a continuous supply of residual and weir water while generating climate-friendly energy at the same time.

Conservation of biological diversity: We initiated the programme "Stimuli for Diversity" for the protection of amphibian species together with LUBW (Baden-Württemberg State Institute for the Environment) in 2011, which has also included funding for protective measures for reptiles since 2016. The programme is part of the project "The economy and business for nature", which is a component of the state initiative "Active for biological diversity". It still remains the only conservation programme from a company nationwide that not only funds the protection of one single species but two whole groups of species across the state. In the reporting year, nine further projects were realised. More than 110 measures have been implemented in total across Baden-Württemberg since the start of the funding programme, which have successfully improved the living conditions for many endangered species in the state.

EnBW Ostwürttemberg DonauRies has planted a total of 10,600 native deciduous and conifer trees in Ostwürttemberg and the DonauRies region in the last three years. It works together with eight local authorities and the Association for the Protection of German Forests (SDW) on this initiative, which makes a contribution to biodiversity and regional climate protection.

We also refer you to the details provided in the "Report on opportunities and risks" (p. 104).