

## BROWN TO GREEN:

### THE G20 TRANSITION TO A LOW-CARBON ECONOMY | 2018

# GERMANY

GREENHOUSE GAS (GHG) EMISSIONS  
(INCL. FORESTRY) PER CAPITA  
(tCO<sub>2</sub>e/capita)



Data from 2015 | Source: PRIMAP 2018



#### The gap:

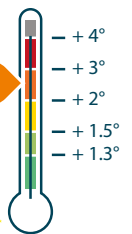
Is Germany on track to stay below the Paris Agreement temperature limit?

Based on implemented policies, Germany's **GHG emissions** are expected to decrease to 735 MtCO<sub>2</sub>e/year by 2030 (excl. forestry). This emission pathway is not compatible with the Paris Agreement.<sup>1</sup>

Germany committed to the joint **NDC** of the European Union (EU). The EU's NDC is not consistent with the Paris Agreement's temperature limit but would lead to a warming of between 2°C and 3°C.<sup>2</sup>

Germany's sectoral **policies** are still falling short of being consistent with the Paris Agreement, especially with respect to coal phase-out and transport, but the country's ambitious policy on renewable energy is a promising sign.<sup>3</sup>

Current NDC<sup>2</sup>



Source: CAT 2018

#### Recent developments:

What has happened since the Paris conference?



The government admitted in 2017 that Germany would miss its 2020 GHG emission target by 8%.



Germany has blocked negotiations on more ambitious CO<sub>2</sub> limits at EU level for light-duty vehicles for 2025 and 2030.

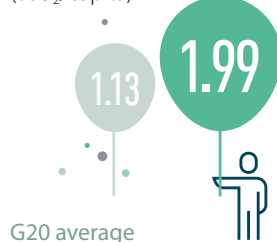


The government launched a Commission to develop by the end of 2018 a plan for the country's coal phase-out.

#### Brown and green performance:

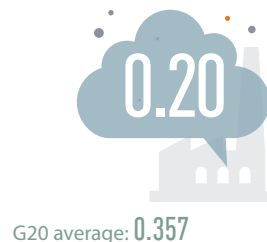
Where does Germany lead or lag compared to G20 countries?

TRANSPORT EMISSIONS  
PER CAPITA  
(tCO<sub>2</sub>/capita)



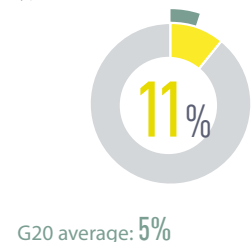
Data from 2017 | Source: Enerdata 2018

INDUSTRY EMISSIONS INTENSITY  
(tCO<sub>2</sub>e/thousand US\$2015  
sectoral GDP (PPP))



Data from 2015 | Source: PRIMAP 2018

SHARE OF NEW RENEWABLES  
IN ENERGY SUPPLY  
%



Data from 2017 | Source: Enerdata 2018

This country profile is part of the **Brown to Green 2018** report. The full report and other G20 country profiles can be downloaded at: <http://www.climate-transparency.org/g20-climate-performance/g20report2018>

BACKGROUND INDICATORS:  
GERMANYGDP PER CAPITA<sup>4</sup>  
(PPP US\$ const. 2015, international)

Source: World Bank 2017

HUMAN DEVELOPMENT INDEX<sup>5</sup>

0.94



Data from 2017 | Source: UNDP 2018

GERMANY'S EXPOSURE TO CLIMATE IMPACTS<sup>6</sup>

This indicator shows the extent to which human society and its supporting sectors are affected by the future changing climate conditions based on an approximately 2°C scenario. This sectoral exposure will be even higher given that the efforts depicted in current NDCs will lead to an approximately 3°C scenario.



## FOOD



Projected climate impacts on cereal yields



Projected increase of food demand due to population growth



## WATER



Projected climate impacts on annual run-off



Projected climate impacts on annual groundwater recharge



## HEALTH



Projected climate impacts on a spread of malnutrition and diarrhoeal diseases



Projected climate impacts on spread of vector-borne diseases

ECOSYSTEM  
SERVICE

Projected climate impacts on biomes occupying the countries



Projected climate impacts on marine biodiversity



## HUMAN HABITAT



Projected climate impacts on frequency of high temperature periods



Projected climate impacts on frequency and severity of floods



## INFRASTRUCTURE



Projected climate impacts on hydropower generation capacity



Proportion of coastline impacted by sea level rise

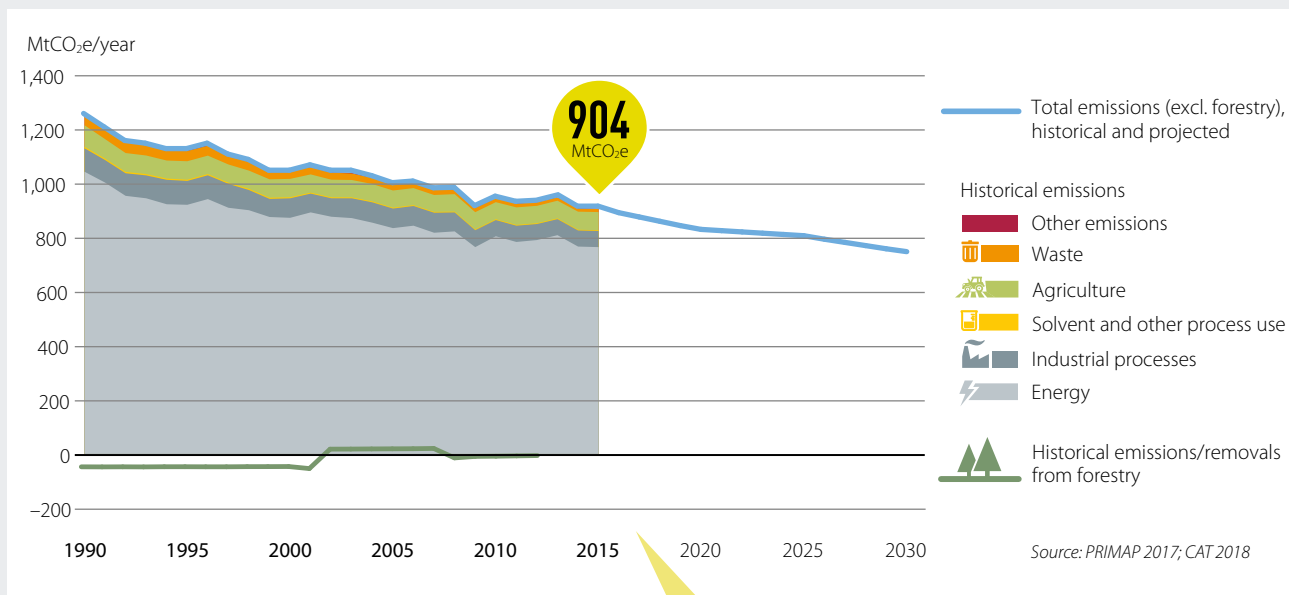
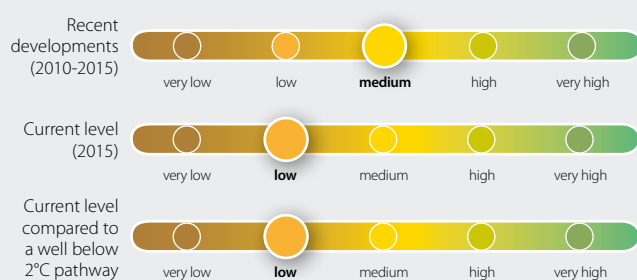


Own composition based on ND-GAIN 2017 (based on data for 2016)



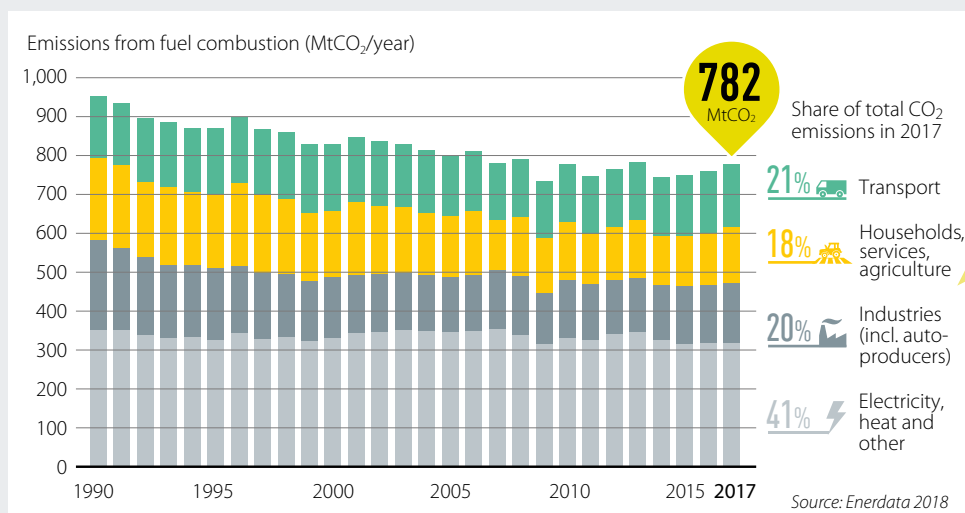
## GREENHOUSE GAS (GHG) EMISSIONS

## GERMANY

TOTAL GHG EMISSIONS ACROSS SECTORS<sup>7</sup>CCPI PERFORMANCE RATING OF GHG EMISSIONS PER CAPITA<sup>8</sup>

Source: CCPI 2018

Germany's emissions have decreased by 28% between 1990 and 2015, and this trend is expected to continue towards 2030. Emissions from the energy sector are by far the largest contributor.

ENERGY-RELATED CO<sub>2</sub> EMISSIONS<sup>9</sup>

The largest driver for overall GHG emissions are CO<sub>2</sub> emissions from energy, which have increased in Germany by 2% (2012–2017), mainly due to transport and industries. Overall, power generation still accounts for the largest share.

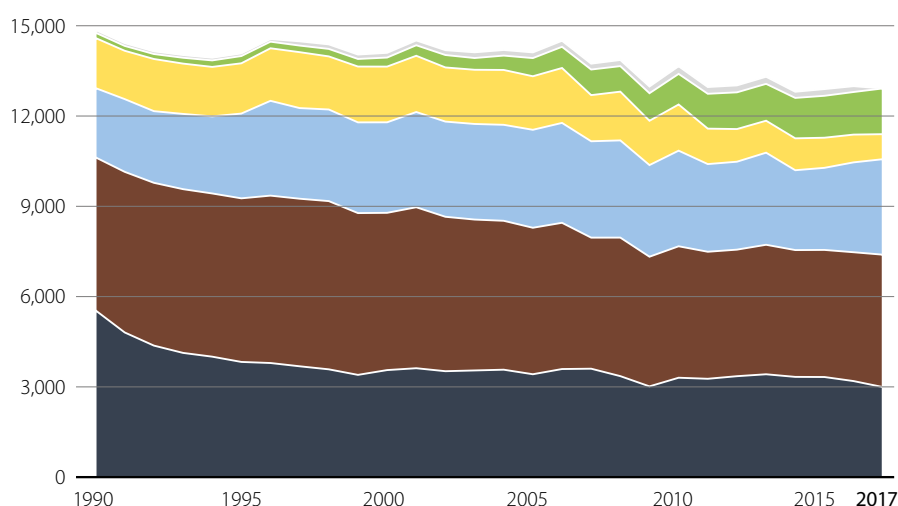


## DECARBONISATION

## GERMANY

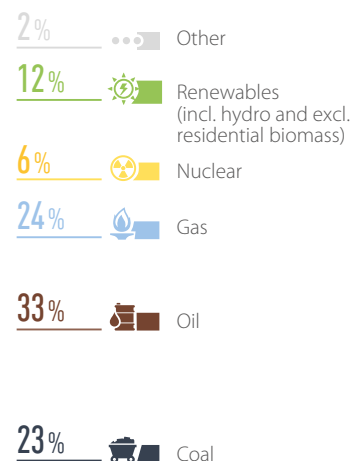
ENERGY MIX<sup>10</sup>

Total primary energy supply (PJ)

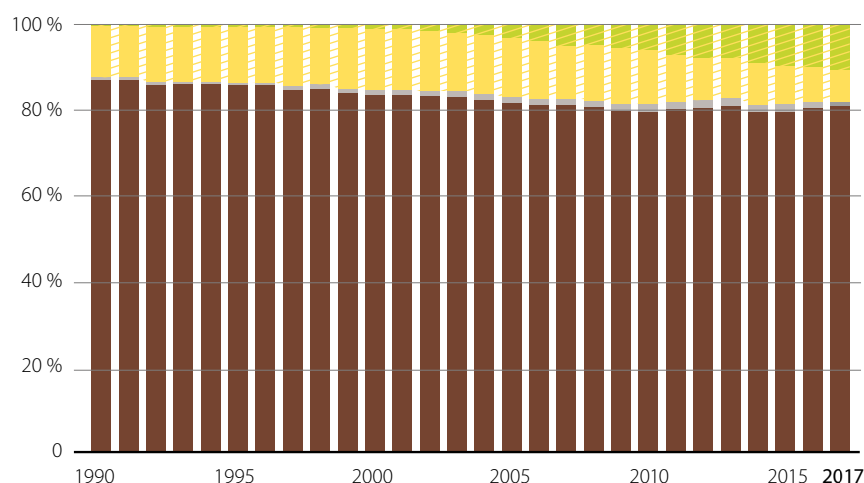


Source: Enerdata 2018

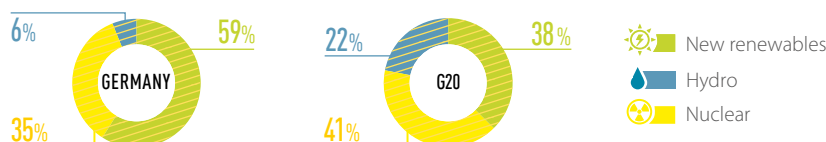
Share in 2017

SHARE OF FOSSIL FUELS AND 'ZERO-CARBON' FUELS IN ENERGY SUPPLY<sup>11</sup>

Share of fossil, 'zero-carbon', new renewables and others in energy supply (%)



## 'ZERO-CARBON' SHARES

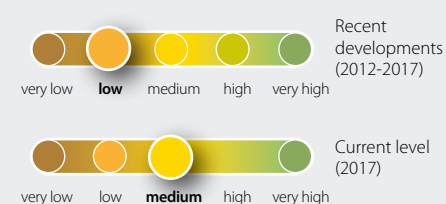


Source: Enerdata 2018

PERFORMANCE RATING OF SHARE OF FOSSIL FUELS<sup>12</sup>

Source: own evaluation

Zero-carbon fuels include nuclear, hydropower and new renewables. They account for 18% of Germany's energy mix, which is slightly above the G20 average of 14%.

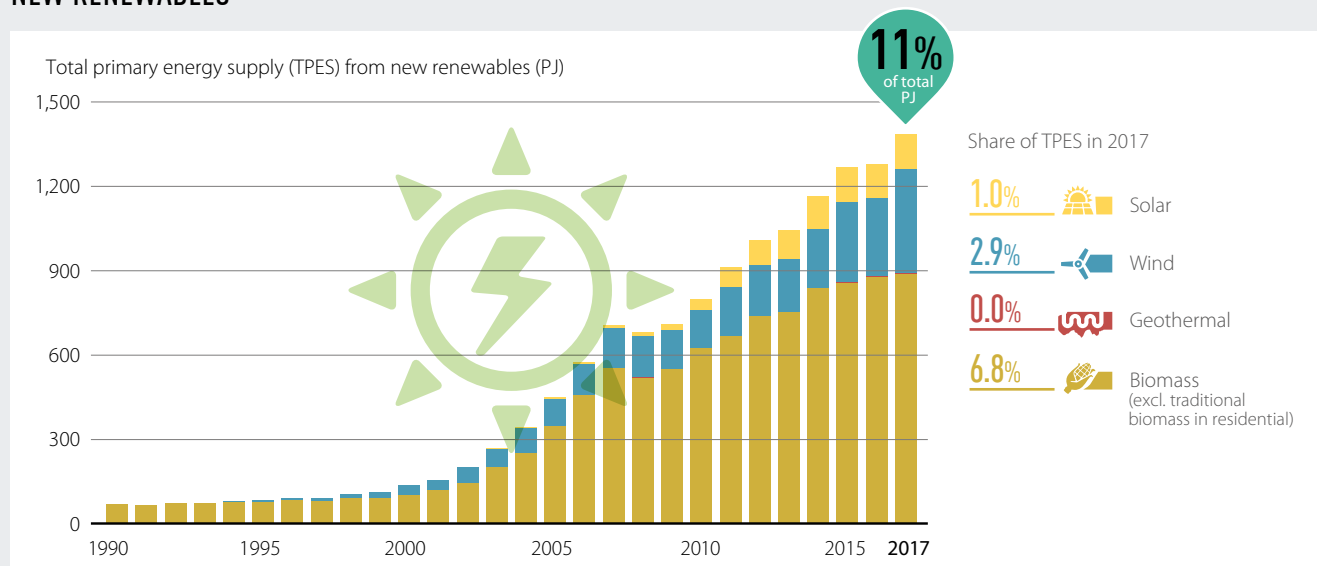
PERFORMANCE RATING OF SHARE OF ZERO-CARBON TECHNOLOGY<sup>12</sup>

Source: own evaluation

## DECARBONISATION

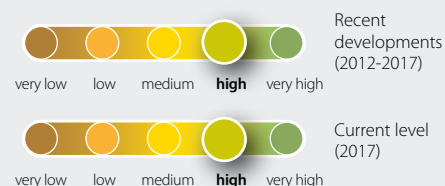
## GERMANY

### NEW RENEWABLES<sup>13</sup>



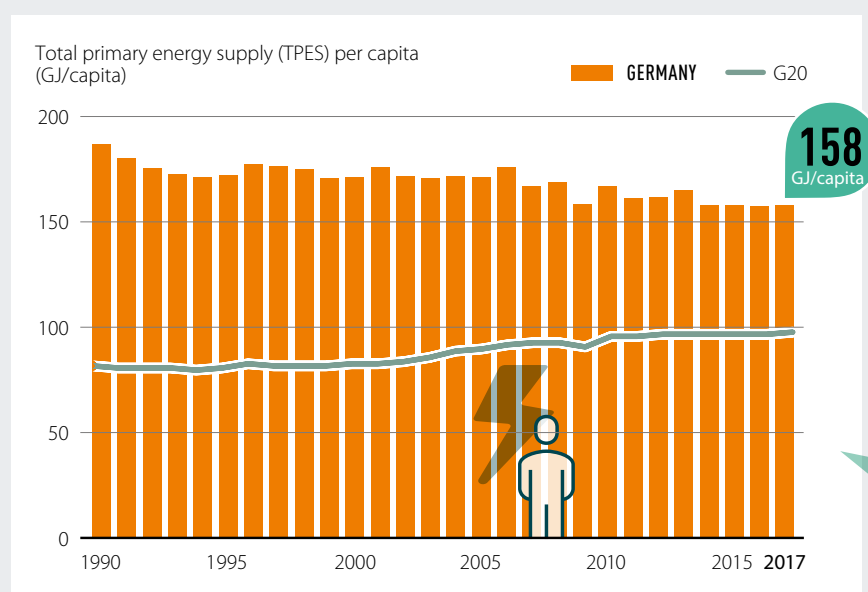
"New renewables" excludes unsustainable renewable sources such as large hydropower. New renewables account for 11% of Germany's energy supply – this is above the G20 average of 5%. Supply from new renewables increased by 37% between 2012 and 2017, driven by growth in wind, solar and biomass energy.

### PERFORMANCE RATING OF NEW RENEWABLES<sup>12</sup>

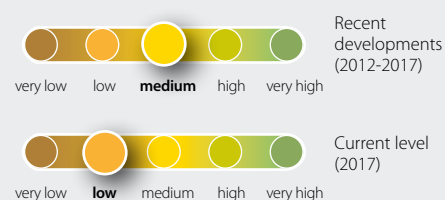


Source: own evaluation

### ENERGY USE PER CAPITA<sup>14</sup>



### PERFORMANCE RATING OF ENERGY USE PER CAPITA<sup>12</sup>



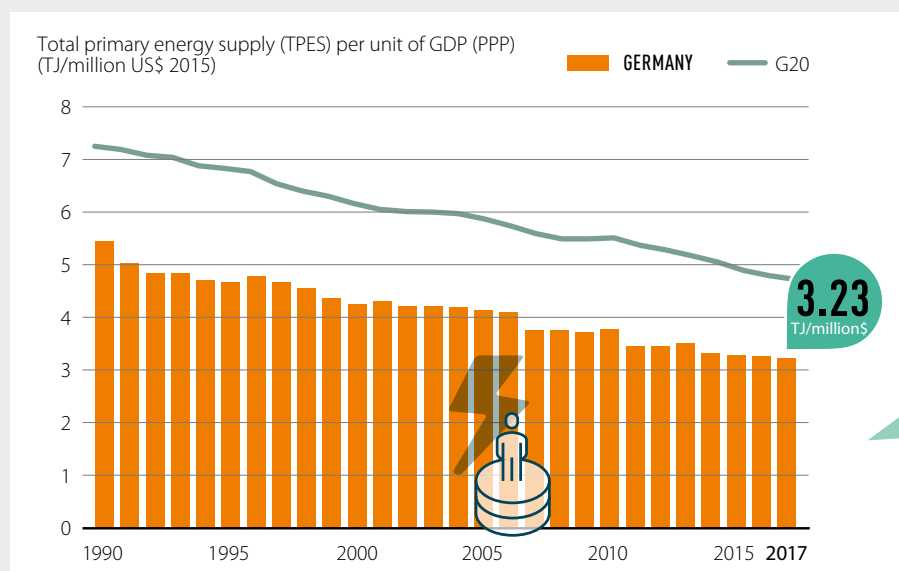
Source: own evaluation

Energy use per capita in Germany is well above the G20 average, and is only slowly decreasing (~2%, 2012–2017).



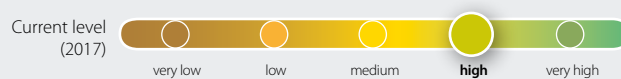
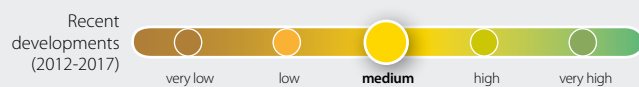
## DECARBONISATION

## GERMANY

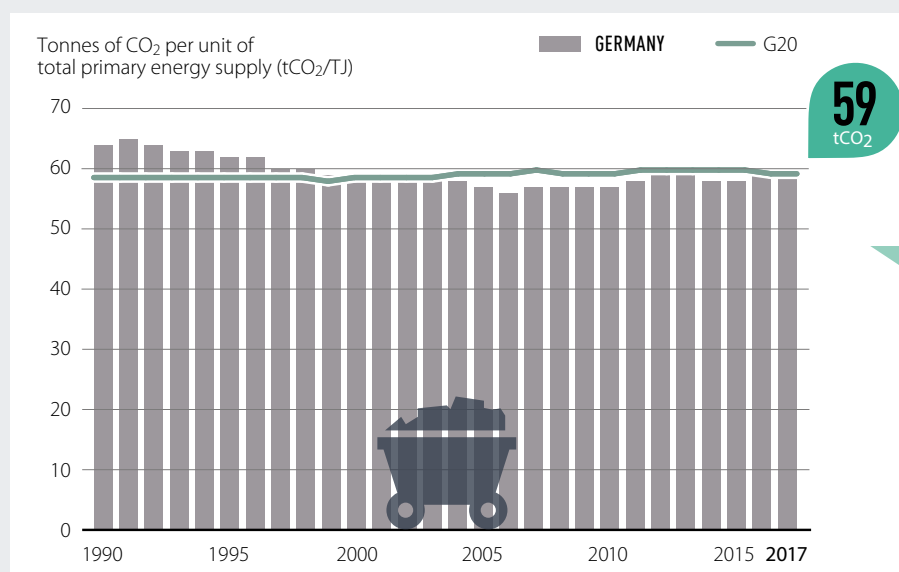
ENERGY INTENSITY OF THE ECONOMY<sup>15</sup>

Source: Enerdata 2018

This indicator quantifies how much energy is used for each unit of GDP. Germany's energy intensity is one of the lowest in the G20 but is decreasing at a lower speed (-6%, 2012–2017) than the G20 (-11%).

PERFORMANCE RATING OF ENERGY INTENSITY<sup>12</sup>

Source: own evaluation

CARBON INTENSITY OF THE ENERGY SECTOR<sup>16</sup>

Source: Enerdata 2018

The carbon intensity of Germany's energy sector is close to the G20 average and has hardly changed over the past few years, reflecting the continuously high share of fossil fuels.

PERFORMANCE RATING OF CARBON INTENSITY<sup>12</sup>

Source: own evaluation

# DECARBONISATION

## GERMANY

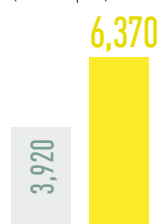
### SECTOR-SPECIFIC INDICATORS

Legend for trend: negative positive

The trend number shows developments over the past five years, where data is available

#### POWER SECTOR

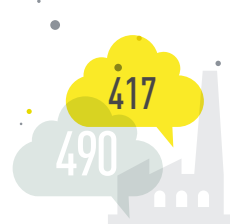
ELECTRICITY DEMAND PER CAPITA  
(kWh/capita)



Trend: -5%

Data from 2017  
Source: Enerdata 2018

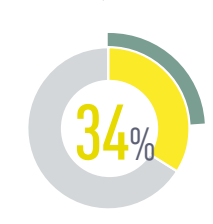
EMISSIONS INTENSITY OF THE POWER SECTOR  
(gCO<sub>2</sub>/kWh)



Trend: -7%

Data from 2016  
Source: Enerdata 2018

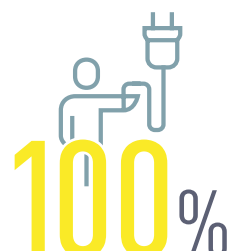
SHARE OF RENEWABLES IN POWER GENERATION  
(incl. large hydro)



Trend: +42%

Data from 2017  
Source: Enerdata 2018

SHARE OF POPULATION WITH ACCESS TO ELECTRICITY



Trend: 0%

Data from 2016  
Source: World Bank 2018

SHARE OF POPULATION WITH BIOMASS DEPENDENCY



Data from 2014  
Source: IEA 2016

#### TRANSPORT SECTOR

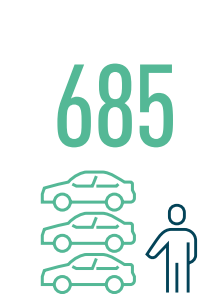
TRANSPORT EMISSIONS PER CAPITA  
(tCO<sub>2</sub>/capita)



Trend: +7%

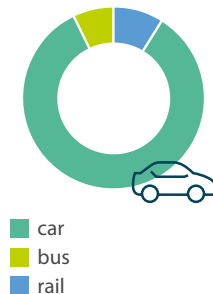
Data from 2017  
Source: Enerdata 2018

MOTORISATION RATE  
(Vehicles per 1000 inhabitants)



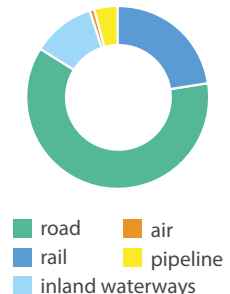
Data from 2016 | Source: Agora Verkehrswende 2018

PASSENGER TRANSPORT  
(modal split in % of passenger-km)



Data from 2016 | Source: Agora Verkehrswende 2018

FREIGHT TRANSPORT  
(modal split in % of tonne-km)



Data from 2016 | Source: Agora Verkehrswende 2018

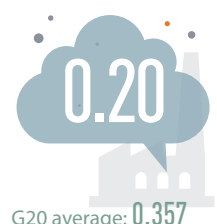
MARKET SHARE OF ELECTRIC VEHICLES IN NEW CAR SALES (%)



Data from 2017  
Source: IEA 2018

#### INDUSTRY SECTOR

INDUSTRY EMISSIONS INTENSITY  
(tCO<sub>2</sub>e/thousand US\$2015 sectoral GDP (PPP))



Trend: -5%

Data from 2015  
Source: PRIMAP 2018

#### BUILDING SECTOR

BUILDING EMISSIONS PER CAPITA  
(tCO<sub>2</sub>/capita)



Trend: 0%

Data from 2016  
Source: Enerdata 2018

#### AGRICULTURE SECTOR

AGRICULTURE EMISSIONS INTENSITY  
(tCO<sub>2</sub>e/thousand US\$2015 sectoral GDP (PPP))

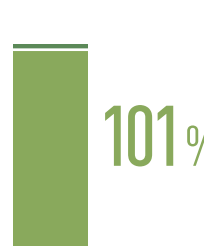


Trend: +12%

Data from 2015  
Source: PRIMAP 2018

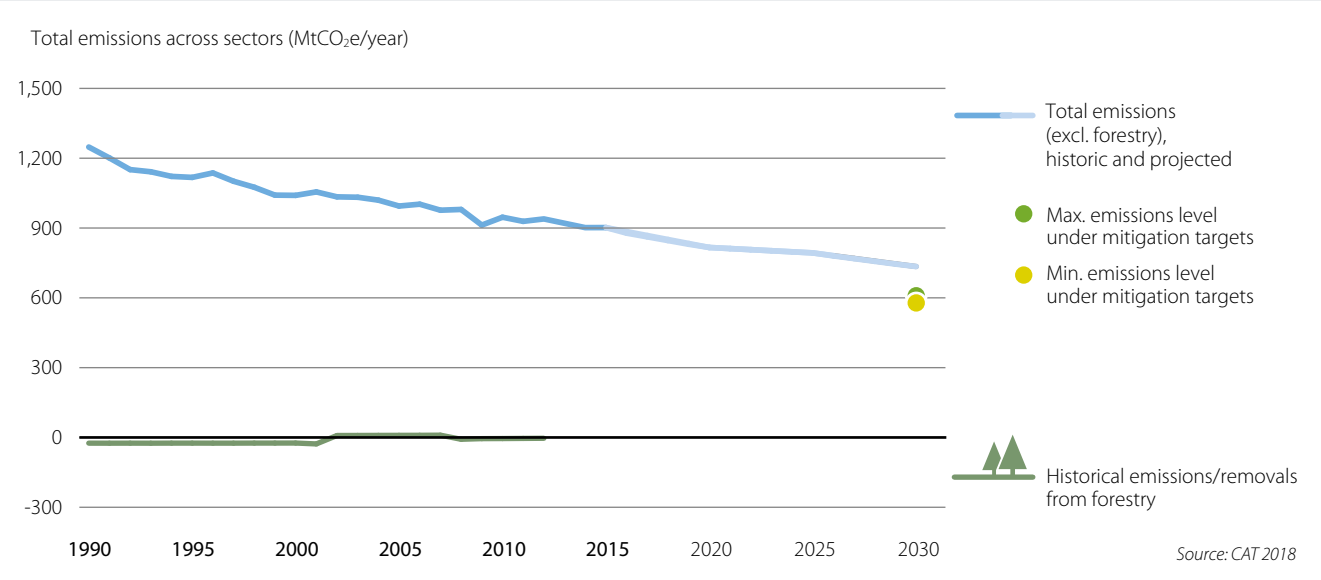
#### FOREST SECTOR

FOREST AREA COMPARED TO 1990 LEVEL (%)



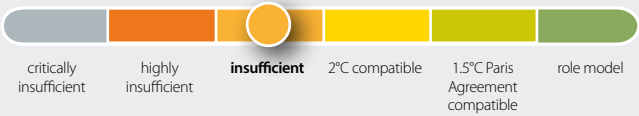
Data from 2015  
Source: PRIMAP 2018

COMPATIBILITY OF CLIMATE TARGETS WITH THE PARIS AGREEMENT<sup>2</sup>



Germany has a national target of reducing GHG emissions in 2030 by 55% below 1990 levels. As an EU member state, Germany did not submit its own NDC under the Paris Agreement, committing instead to the EU's NDC. The CAT rates the EU's NDC "insufficient" as it is not ambitious enough to limit warming to below 2°C, let alone to 1.5°C. Under current policies, the EU is not on track to meet its 2030 target.

CLIMATE ACTION TRACKER (CAT) EVALUATION OF NDC<sup>2</sup>



NATIONALLY DETERMINED CONTRIBUTION (NDC)

The table presents the NDC of the European Union that includes contributions from all member states.

MITIGATION	
Targets	<b>Overall targets</b> At least 40% domestic GHG emissions reduction compared to 1990 by 2030
	<b>Coverage</b> 100% of emissions covered (all sectors and gases)
Actions	Not mentioned

ADAPTATION	
Targets	Not mentioned
Actions	Not mentioned

FINANCE	
Conditionality	Not applicable
Investment needs	Not specified
Actions	Not mentioned
International market mechanisms	No contribution from international credits for the achievement of the target

Source: own compilation based on UNFCCC 2018







## CLIMATE POLICY

## GERMANY

POLICY EVALUATION<sup>17</sup>

The ratings evaluate a selection of policies that are essential pre-conditions for the longer-term transformation required to meet the 1.5°C limit. They do not represent a complete picture of what is necessary.

Legend:

**low** No action**medium** Some action**high** Significant action and a long-term vision**frontrunner** Significant action, and a long-term vision that is compatible with 1.5°C

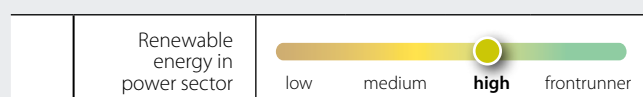
! most important measures based on share of emissions and political relevance



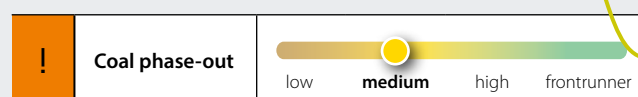
Germany's 2050 strategy envisages GHG emission reductions of 80% to 95% from 1990 levels by 2050, providing sectoral targets and interim steps to reach this goal. The government has

established institutions to monitor and regularly update the plan and intends to adopt a set of implementation measures by the end of 2018, and pass a Climate Protection Act in 2019.

## POWER

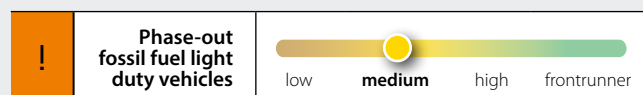


Germany aims to produce 80% of electricity from renewable sources by 2050. The government switched from a feed-in tariff system to an auctioning scheme in 2017.



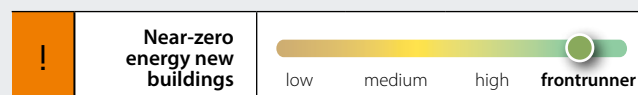
Germany is expected to miss its 2020 GHG emission reduction target of 40% compared to 1990 levels, mainly due to the remaining large share of coal in the energy mix and rising transport emissions. Germany has launched a Commission tasked with developing, by the end of 2018, a plan for coal phase-out.

## TRANSPORT



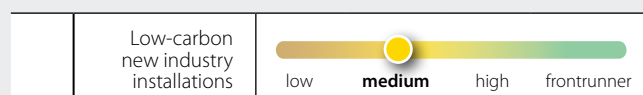
The German government has not adopted a target to phase out fossil fuel LDVs yet, although many regional governments have been demanding this step. The government supports the purchase of electric vehicles and invests in charging infrastructure to get 1 million EVs on the road by 2022 – but at the same time it still subsidises the use of fossil fuels, particularly diesel, through tax exemptions.

## BUILDINGS



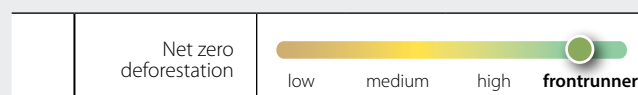
Germany wants to make all new buildings zero energy by 2020 but announced recently it will not upgrade its energy standards in the next few years. It also aims to make the entire building stock virtually climate-neutral by 2050 (80% energy reduction) but renovation rates are still insufficient.

## INDUSTRY



Germany forms part of the EU's Emissions Trading Scheme and applies a large range of regulatory and funding instruments to reduce energy use in industry, but has no target for new installations in emissions-intensive sectors to be low-carbon.

## FORESTS



Germany aims to increase its forest area over the next few decades.

Source: own evaluation

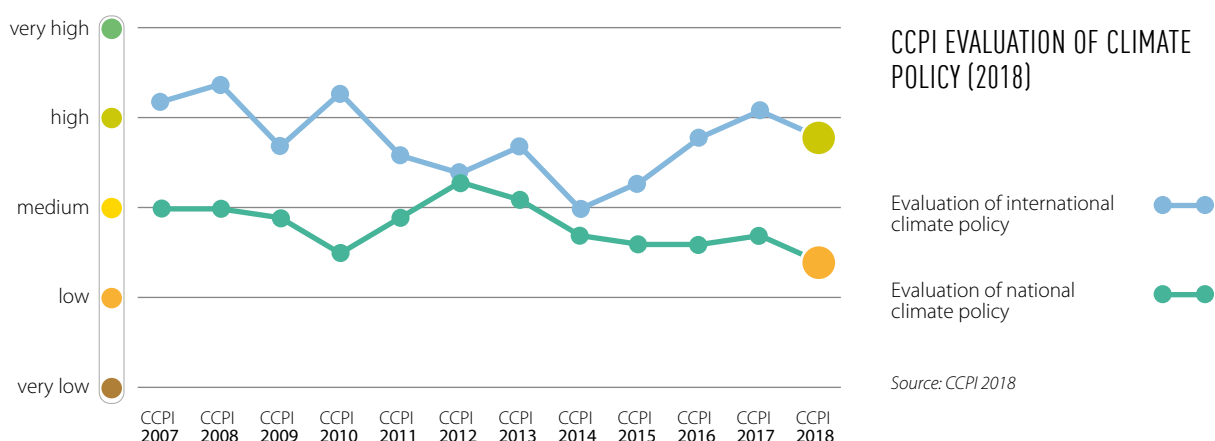


## CLIMATE POLICY

## GERMANY

CCPI EXPERTS' POLICY EVALUATION<sup>18</sup>

Germany's experts give a low rating for its national climate policy performance. They see room for improvement regarding the 2030 renewables target. They also criticise the previous (and current) government for insufficient action on turning the promises it made in Paris into national law. Germany has taken on an increasingly vocal role within international climate negotiations and during the G20 summit, for which the country receives a high rating for its international climate policy performance.

JUST TRANSITION<sup>19</sup>

Since 2016, Germany has had a long-term climate strategy with explicit sectoral targets, which will need far-reaching structural changes across various economic sectors to be achieved.

German labour unions have campaigned for just transition implementation for the affected sectors and workers. For example, around 20,000 workers would be affected if the government decides to phase out lignite coal use, to meet the Paris Agreement targets.

The government pledged €1.5 billion over 2017–2021 to ease structural changes, acknowledging more funding will be needed beyond 2021. It set up a commission on "Growth, structural change and employment" that will address coal phase-out.

There is ongoing debate in Germany on how to define "just transition". NGOs and citizens' initiatives emphasise that affected parties, including those forced to relocate due to lignite mining, or affected by climate change worldwide, must be included in just transition discourse.





## FINANCING THE TRANSITION

## GERMANY

## FINANCIAL POLICIES AND REGULATIONS

Through policy and regulation governments can overcome challenges to mobilising green finance, including: real and perceived risks, insufficient returns on investment, capacity and information gaps.

APPROACHES TO IMPLEMENTING THE RECOMMENDATIONS OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)<sup>20</sup>

This indicator establishes the degree of government engagement with the recommendations of the G20 Financial Stability Board's Task Force on Climate-Related Financial Disclosure.

No formal engagement with TCFD	Political and regulatory engagement	Formal engagement with private sector	Publication of guidance and action plans	Encoding into law

Source: CISL 2018

Germany's central bank, Deutsche Bundesbank, has endorsed the TCFD recommendations and is a founding member of the Central Banks and Supervisors Network for Greening the Financial System (NGFS). More broadly, Germany made sustainable finance a priority during their G20 presidency in 2017.

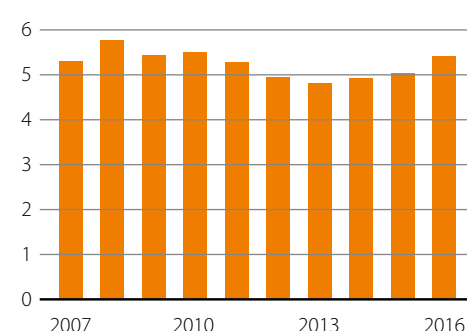
## FISCAL POLICY LEVERS

Fiscal policy levers raise public revenues and direct public resources. Critically, they can shift investment decisions and consumer behaviour towards low-carbon, climate-resilient activities by reflecting externalities in prices.

## FOSSIL FUEL SUBSIDIES

In 2016, Germany provided US\$5.4bn in fossil fuel subsidies. From 2007 to 2016, subsidies were lower (US\$0.001) than the G20 average (US\$0.003) per unit of GDP, fluctuating between US\$4.8bn and US\$5.8bn. Subsidies were provided through direct budget support and tax exemptions, and primarily targeted consumption and production (50% and 41%, respectively). The largest subsidy is the combined aid to hard coal mining in North Rhine Westphalia (US\$1.5bn in 2016).

Fossil fuel subsidies (US\$ billions)

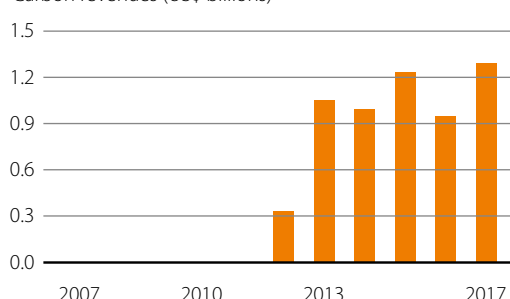


Source: OECD/IEA 2018

## CARBON REVENUES

Germany has no national carbon tax or emissions trading scheme, but announced it is exploring options for joint carbon pricing with France. Under the EU Emissions Trading Scheme, it generated US\$1.3bn in 2017 in Germany alone. From 2012 to 2017, Germany's carbon revenues were lower (US\$0.0003) than the G20 average (US\$0.0005) per unit of GDP.

Carbon revenues (US\$ billions)



Estimates only available from 2012.

Source: I4CE 2018

FINANCING THE TRANSITION

GERMANY

PUBLIC FINANCE

Governments steer investments through their public finance institutions including via development banks, both at home and overseas, and green investment banks. Developed G20 countries also have an obligation to provide finance to developing countries and public sources are a key aspect of these obligations under the UNFCCC.

NATIONAL AND INTERNATIONAL PUBLIC FINANCE IN THE POWER SECTOR<sup>21</sup>

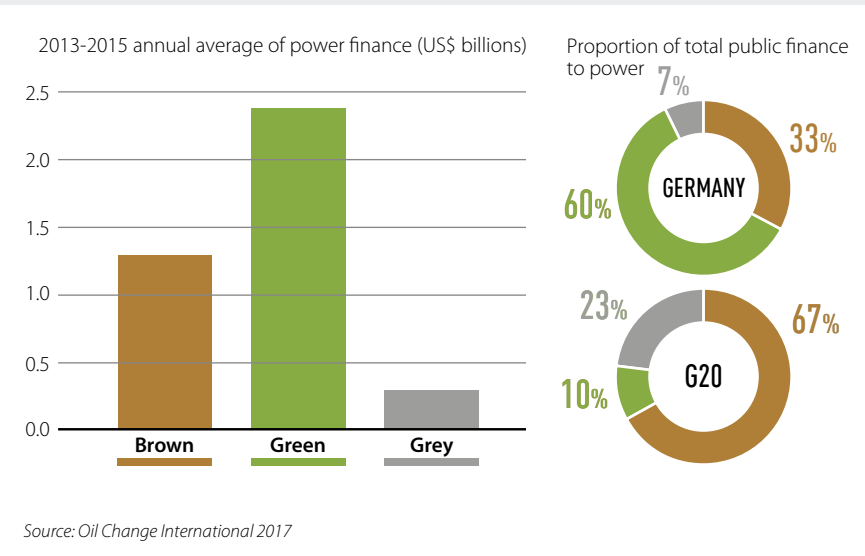
From 2013 to 2015, Germany's public finance institutions spent an annual average of US\$1.3bn brown, US\$2.4bn green and US\$0.3bn grey financing in the power sector, domestically and internationally. The largest transactions were Euler Hermes' loan guarantee (US\$1.3bn) for the Beni Suef natural gas power plant in Egypt, and the loan (US\$964m) to the Ptolemais V coal power plant in Greece.

- coal, oil and gas projects  
(and associated infrastructure)

brown
- large-scale hydropower, biofuels, biomass,  
nuclear, incineration, transmission,  
distribution, storage, energy efficiency,  
other general electricity support

grey
- renewable energy projects  
(excluding grey financing)

green



PROVISION OF INTERNATIONAL PUBLIC SUPPORT

Germany provided the third largest amount of bilateral climate finance and the fourth largest amount to multilateral climate funds (12.5% of the G20 total). Unlike other countries, Germany's reports include funds "mobilised through KfW", Germany's development bank, worth US\$5.47bn annually in 2015/2016. This amount is acknowledged but excluded, making Germany's contribution comparable to other G20 countries. While Germany may channel international public finance towards climate change via multilateral development banks, this has not been included in this report.

OBLIGATION TO PROVIDE CLIMATE FINANCE UNDER UNFCCC



CONTRIBUTIONS THROUGH THE MAJOR MULTILATERAL CLIMATE FUNDS<sup>22</sup>

Note: See Technical Note for multilateral climate funds included and method to attribute amounts to countries

Source: Climate Funds Update 2017

Annual average contribution (mn US\$, 2015-2016)	Theme of support		
	Adaptation	Mitigation	Cross-cutting
188.86	28%	58%	14%

BILATERAL CLIMATE FINANCE CONTRIBUTIONS<sup>23</sup>

Source: Country reporting to UNFCCC

Annual average contribution (mn US\$, 2015-2016)	Theme of support			
	Mitigation	Adaptation	Cross-cutting	Other
2,845.29	62%	11%	7%	20%



## ANNEX



For more detail on sources and methodologies, please refer to the Technical Note at:

[https://www.climate-transparency.org/wp-content/uploads/2018/11/Technical-Note\\_data-sources-and-methodology.pdf](https://www.climate-transparency.org/wp-content/uploads/2018/11/Technical-Note_data-sources-and-methodology.pdf)

- 1) The 2030 projections of the future development of greenhouse gas (GHG) emissions under current policies are based on the Climate Action Tracker (CAT) estimates.
- 2) The CAT is an independent scientific analysis that tracks progress towards the globally agreed aim of holding warming to well below 2°C, and pursuing efforts to limit warming to 1.5°C. The CAT "Effort Sharing" assessment methodology applies state-of-the-art scientific literature on how to compare the fairness of government efforts and (Intended) Nationally Determined Contribution (I) NDC proposals against the level and timing of emission reductions consistent with the Paris Agreement. The assessment of the temperature implications of a country's NDC is based on the assumption that all other governments would follow a similar level of ambition.
- 3) This assessment is based on the policy evaluation on page 9 of this Country Profile.
- 4) Gross Domestic Product (GDP) per capita is calculated by dividing GDP with mid-year population figures. GDP is the value of all final goods and services produced within a country in a given year. Here GDP figures at purchasing power parity (PPP) are used. Data for 2017.
- 5) The Human Development Index (HDI) is a composite index published by the United Nations Development Programme (UNDP). It is a summary measure of average achievement in key dimensions of human development. A country scores higher when the lifespan is higher, the education level is higher, and GDP per capita is higher.
- 6) The ND-GAIN index summarises a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. This report looks only at the exposure indicators as part of the vulnerability component of the ND-GAIN index for six sectors. It displays the exposure scores provided by the ND-GAIN on a scale from low (score: 0) to high (score: 1).
- 7) The indicator covers all Kyoto gases showing historic emissions in each of the IPCC source categories (energy, industrial processes, agriculture, etc.). Emissions projections (excl. forestry) under a current policy scenario until 2030 are taken from the Climate Action Tracker and scaled to the historical emissions from PRIMAP (see Brown to Green Report 2018 Technical Note).
- 8) The ratings on GHG emissions are taken from the Climate Change Performance Index (CCPI) 2018. The rating of "current level compared to a well below 2°C pathway" is based on a global scenario of GHG neutrality in the second half of the century and a common but differentiated convergence approach.
- 9) CO<sub>2</sub> emissions cover only the emissions from fossil fuels combustion (coal, oil and gas) by sector. They are calculated according to the UNFCCC methodology (in line with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories).
- 10) Total primary energy supply data displayed in this Country Profile does not include non-energy use values. Solid fuel biomass in residential use has negative environmental and social impacts and is shown in the category "other".
- 11) Zero-carbon fuels include nuclear, hydropower and new renewables (non-residential biomass, geothermal, wind, solar).
- 12) Climate Transparency ratings assess the relative performance across the G20. A high scoring reflects a good effort from a climate protection perspective but is not necessarily 1.5°C compatible.
- 13) New renewables include non-residential biomass, geothermal, wind and solar energy. Hydropower and solid fuel biomass in residential use are excluded due to their negative environmental and social impacts.
- 14) Total primary energy supply (TPES) per capita displays the historical, current and projected energy supply in relation to a country's population. Alongside the intensity indicators (TPES/GDP and CO<sub>2</sub>/TPES), TPES per capita gives an indication on the energy efficiency of a country's economy. In line with a well-below 2°C limit, TPES per capita should not grow above current global average levels. This means that developing countries are still allowed to expand their energy use to the current global average, while developed countries have to simultaneously reduce it to that same number.
- 15) TPES per GDP describes the energy intensity of a country's economy. This indicator illustrates the efficiency of energy usage by calculating the energy needed to produce one unit of GDP. Here GDP figures at PPP are used. A decrease in this indicator can mean an increase in efficiency but also reflects structural economic changes.
- 16) The carbon intensity of a country's energy sector describes the CO<sub>2</sub> emissions per unit of total primary energy supply and gives an indication of the share of fossil fuels in the energy supply.



## ANNEX (continued)

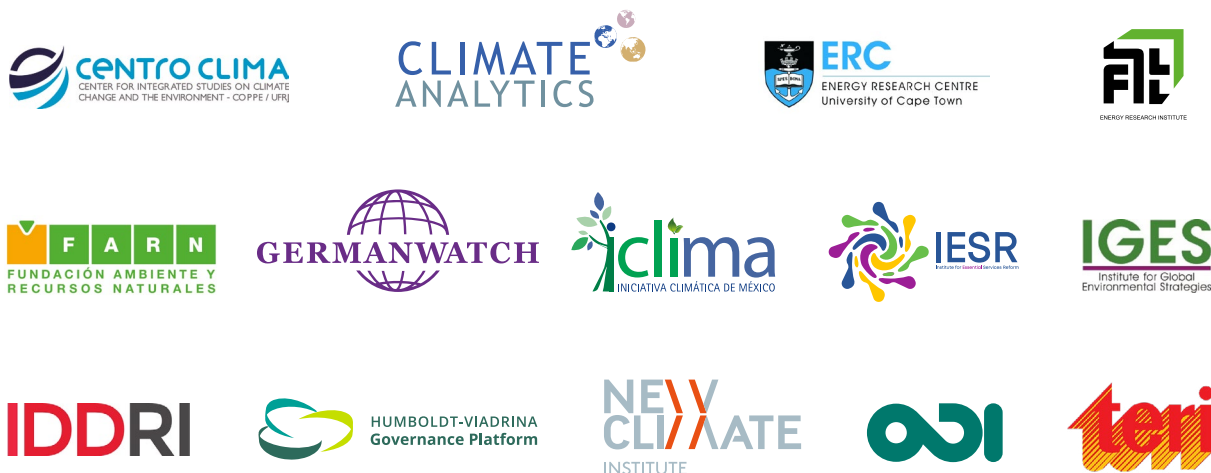


- 17) The selection of policies rated and the assessment of 1.5°C compatibility are informed by the Paris Agreement and the Climate Action Tracker (2016): "The ten most important short-term steps to limit warming to 1.5°C". The table below displays the criteria used to assess a country's policy performance. See the Brown to Green Report 2018 Technical Note for the sources used for this assessment.
- 18) The CCPI evaluates a country's performance in national climate policy, as well as international climate diplomacy through feedback from national experts from non-governmental organisations to a standardised questionnaire.
- 19) See the Brown to Green 2018 Technical Note for the sources used for this assessment.
- 20) The University of Cambridge Institute for Sustainability Leadership (CISL) in early 2018 reviewed the progress made by the national regulatory agencies of G20 members in making the Task Force on Climate-related Financial Disclosures (TCFD) recommendations relevant to their national contexts. See the Brown to Green Report 2018 Technical Note for more information on the assessment.
- 21) This data includes bilateral public finance institutions such as national development banks and other development finance institutions, overseas aid agencies, export credit agencies, as well as key multilateral development banks. The analysis omits most finance delivered through financial intermediaries and significant volumes of multilateral development bank (MDB) development policy finance (due to a lack of clarity on power finance volumes). Given a lack of transparency, other important multilateral institutions in which G20 governments participate are not covered. See the Brown to Green Report 2018 Technical Note for further details.
- 22) Finance delivered through multilateral climate funds comes from Climate Funds Update, a joint ODI/Heinrich Boell Foundation database that tracks spending through major multilateral climate funds. See the Brown to Green Report 2018 Technical Note for multilateral climate funds included and method to attribute approved amounts to countries.
- 23) Bilateral finance commitments are sourced from Biennial Party reporting to the UNFCCC. Financial instrument reporting is sourced from the OECD-DAC; refer to the Brown to Green Report 2018 Technical Note for more detail. Figures represent commitments of Official Development Assistance (ODA) funds to projects or programmes, as opposed to actual disbursements.

On endnote 17)	Criteria description			
	● Low	● Medium	● High	● Fronrunner
<b>GHG emissions target for 2050 or beyond</b>	No emissions reduction target for 2050 or beyond	Existing emissions reduction target for 2050 or beyond	Existing emissions reduction target for 2050 or beyond and clear interim steps	Emissions reduction target to bring GHG emissions to at least net zero by 2050
<b>Long-term low emissions development strategy</b>	No long-term low emissions strategy	Existing long-term low emissions strategy	Long-term low emissions strategy includes interim steps and/or sectoral targets	Long-term low emissions strategy towards full decarbonisation in the second half of the century; includes interim steps and/or sectoral targets, plus institutions and measures in place to implement and/or regularly review the strategy
<b>Renewable energy in power sector</b>	Allianz Monitor 2018 Category 1.2 (targets) and 2 (policies), average 0-25	Allianz Monitor 2018 Category 1.2 (targets) and 2 (policies), average 26-60	Allianz Monitor 2018 Category 1.2 (targets) and 2 (policies), average 61-100	Allianz Monitor 2018 Category 1.2 (targets) and 2 (policies), 61-100 plus 100% renewables in the power sector by 2050 in place
<b>Coal phase-out</b>	No consideration or policy in place for phasing out coal	Significant action to reduce coal use implemented or coal phase-out under consideration	Coal phase-out decided and under implementation	Coal phase-out date compatible with 1.5°C
<b>Phase-out of fossil fuel light duty vehicles (LDVs)</b>	No policy or emissions performance standards for LDVs in place	Energy/emissions performance standards or support for efficient LDVs	National target to phase out fossil fuel LDVs in place	Ban on new fossil-based LDVs by 2025/30
<b>Near zero-energy new buildings</b>	No policy or low emissions building codes and standards in place	Building codes, standards or fiscal/financial incentives for low emissions options in place	National strategy for near zero-energy buildings (at least for all new buildings)	National strategy for near zero-energy buildings by 2020/25 (at least for all new buildings)
<b>Low-carbon new industry installations</b>	No policy or support for energy efficiency in industrial production in place	Support for energy efficiency in industrial production (covering at least two of the country's sub-sectors (e.g. cement and steel production))	Target for new installations in emissions-intensive sectors to be low-carbon	Target for new installations in emissions-intensive sectors to be low-carbon after 2020, maximising efficiency
<b>Net zero deforestation</b>	No policy or incentive to reduce deforestation in place	Incentives to reduce deforestation or support schemes for afforestation / reforestation in place	National target for reaching zero deforestation	National target for reaching zero deforestation by 2020s or for increasing forest coverage

# CLIMATE TRANSPARENCY

## Partners:



## Funders:



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## Data Partners:



<http://www.climate-transparency.org/g20-climate-performance/g20report2018>

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## Contact point in Germany:

Jan Burck  
Germanwatch e.V.  
burck@germanwatch.org

Lena Donat  
Germanwatch e.V.  
donat@germanwatch.org

