# **ARGENTINA**





**CLIMATE TRANSPARENCY REPORT: COMPARING G20 CLIMATE ACTION TOWARDS NET ZERO** 

202

#### **NOT ON TRACK FOR A 1.5°C WORLD**

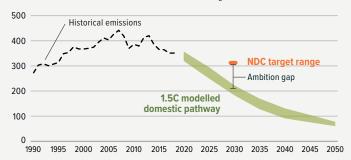


Argentina's official NDC target is 359 MtCO $_2$ e (incl. LULUCF) or 313 MtCO $_2$ e\* (excl. LULUCF) by 2030, an increase of 35% above 1990 levels. To keep below

the 1.5°C temperature limit, Argentina's 2030 emissions would need to be around 210 MtCO $_2$ e (excl. LULUCF) or 9% below 1990 levels, thus leaving an ambition gap of 103 MtCO $_2$ e.

Gütschow et al., 2021; Climate Analytics, 2021

1.5°C compatible emissions pathway (MtCO<sub>2</sub>e/year)<sup>1</sup>



#### PER CAPITA GREENHOUSE GAS (GHG) EMISSIONS ABOVE G20 AVERAGE

GHG emissions (incl. land use) per capita (tCO2e/capita)2 in 2018



Argentina's per capita emissions (incl. land use) are 1.05 times the G20 average. Total per capita emissions have decreased by nearly 21% between 2013 and 2018.

Climate Action Tracker, 2021; Gütschow et al., 2021; United Nations, 2019

# KEY OPPORTUNITIES FOR ENHANCING CLIMATE AMBITION



**Phasing out fossil fuel exploration,** use in the power sector is a key opportunity to reduce emissions in Argentina.



Argentina has the opportunity to **transition directly to renewable energy sources** rather than relying on natural gas.



Natural ecosystems protection in Argentina, mainly forests and wetlands, can provide excellent opportunities to mitigate and adapt to climate change.

#### RECENT DEVELOPMENTS



Work under the Climate Change National Cabinet (Law 27520) saw Argentina submitting its second, more ambitious, NDC in December 2020; however, **uncertainty remains about development of National Sectoral Plans to implement the 2030 target.** 



Argentina has been developing its long-term strategy with a view to announcing a **net zero target for 2050 at COP26**.



Despite record declines in energy prices during the COVID-19 pandemic, natural gas exploration through fracking has continued to increase in Argentina's Vaca Muerta gas fields after energy demand recovered in 2021.

# 较

# CORONAVIRUS RESPONSE AND RECOVERY

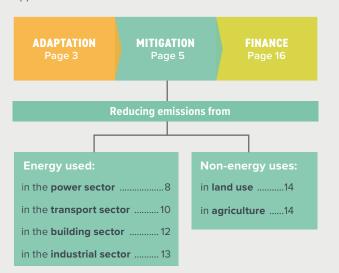
Argentina has been in an economic recession since 2018, with the COVID-19 pandemic only worsening circumstances. In December 2020, the government announced a tax on the wealthiest portion of the population to fund recovery measures. Twenty-five percent of this scheme is directed towards the fossil fuel industry, but despite this unprecedented kind of support, with the loosening of COVID-19 restrictions, Argentina has restarted fracking in its largest shale gas field and has continued subsidising fossil fuels, while many renewable energy projects that were started prior to the pandemic have been kept on hold.

BBC News, 2020; Gobierno de Argentina, 2021b; Ise, Villalba, Clementi, and Carrizo, 2021; Newbery, 2021

<sup>\*</sup>This target is in AR4 GWP; Argentina expressed its official NDC target in SAR GWP.

#### CONTENTS

We unpack Argentina's progress and highlight key opportunities to enhance climate action across:



#### **LEGEND**

Trends show developments over the past five years for which data are available. The colour-coded arrows indicate assessment from a climate protection perspective: Orange is bad, green is good.



**Decarbonisation Ratings**<sup>3</sup> assess a country's performance compared to other G20 countries. A high score reflects a relatively good effort from a climate protection perspective but is not necessarily 1.5°C compatible.

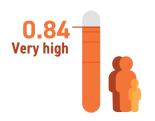


Policy Ratings<sup>4</sup> evaluate a selection of policies that are essential pre-conditions for the longer-term transformation required to meet the 1.5°C limit.



#### SOCIO-ECONOMIC CONTEXT

#### **Human Development Index (HDI)**

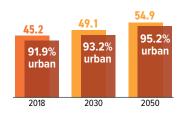


The HDI reflects life expectancy, level of education, and per capita income. Argentina ranks very high.

Data for 2019, UNDP, 2020

#### Population and urbanisation projections

(in millions)

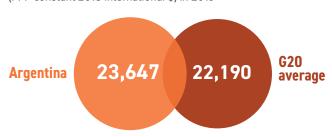


Argentina's population is projected to increase by 21% between 2020 and 2050, and become more urbanised. Argentina is already one of the most urbanised nations in the world, with 92% of its population living in urban areas and 48% living within the broader Buenos Aires Metropolitan area.

United Nations, 2019; United Nations, 2018

# **Gross Domestic Product (GDP) per capita**

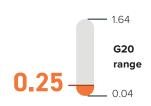
(PPP constant 2015 international \$) in 2019



World Bank, 2021; United Nations, 2019

#### Death rate attributable to air pollution

Ambient air pollution attributable death rate per 1,000 population per year, age standardised in 2019



Over 13,800 people die in Argentina every year as a result of outdoor air pollution due to stroke, heart disease, lung cancer and chronic respiratory diseases. Compared to total population, this is still one of the lower levels in the G20.

Institute for Health Metrics and Evaluation, 2020

This source differs from the source used in last year's profiles and, therefore, the data are not comparable.

#### A JUST TRANSITION

COVID-19 quarantines and mobility restrictions, helped to contain greater contagion in the first part of the pandemic, but largely affected poorer neighbourhoods at the expense of wealthier areas. The COVID-19 response also overshadowed long-existing public health crises affecting Argentina's poorer urban areas, such as Dengue fever outbreaks. Over a year after the beginning of the pandemic it is still unclear how the government is planning to make the recovery just and sustainable.

The energy transition, in particular is already suffering, as Argentina continue to heavily subsidise natural gas exploration and has set weak clean fuel standards in the transport sector. While the national government claims a just transition is one of the pillars of its climate targets, there are no clear indications of programmes, roundtables, nor plans to support a just transition.

Gilbert, 2020; Gobierno de Argentina, 2021b; Villasenin, 2021

# ADAPTATION | ADDRESSING AND REDUCING VULNERABILITY TO CLIMATE CHANGE



Increase the ability to adapt to the adverse effects of climate change and foster climate resilience and low-GHG development.



Extreme climate events are associated with effects on economic output, with 302 billion hours of potential labour capacity lost in 2019.



Climate projections for the City of Buenos Aires include **higher** frequency and longer duration of heatwaves in the future.



Argentina has been suffering from extreme weather events in recent years. Flooding and drought are the most prominent impacts, especially in the agriculture sector, representing 1% of GDP losses in 2018.

# **ADAPTATION NEEDS**

#### Climate Risk Index

Impacts of extreme weather events in terms of fatalities and economic losses that occurred. All numbers are averages (2000-2019).

Annual average losses (US\$ millions PPP) Annual weather-related fatalities High High **RANKING: RANKING:** Death Losses rate in the G20 in the G20 PER 100,000 **INHABITANTS** Low Low

Based on Germanwatch, 2019

Based on Germanwatch, 2019

Impact ranking scale:

#### Exposure to future impacts at 1.5°C, 2°C and 3°C

impact ranking scale.					
Ve	ery low Low	Medium High Very high	1.5°C	2°C	3°C
WATER		% of area with increase in water scarcity			
WATER		% of time in drought conditions			
HEAT AND HEALTH		Heatwave frequency			
HEAT AND HEALTH		Days above 35°C			
		Reduction in crop duration			
	Maize	Hot spell frequency			
		Reduction in rainfall			
		Reduction in crop duration			
AGRICULTURE	Soybean	Hot spell frequency			
		Reduction in rainfall			
	Wheat	Reduction in crop duration			
		Hot spell frequency			
		Reduction in rainfall			

Water, Heat and Health: own research; Agriculture: Arnell et al., 2019

Note: These indicators are national scale results, weighted by area and based on global data sets. They are designed to allow comparison between regions and countries and, therefore, entail simplifications. They do not reflect local impacts within the country. Please see technical note for further information.



#### **CORONAVIRUS RESPONSE AND RECOVERY**

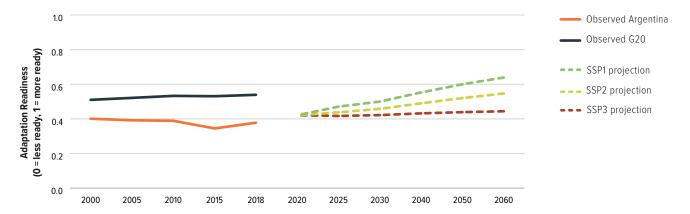
Argentina has not yet submitted a National Adaptation Plan to the UNFCCC and only sets a general goal of ensuring that all Argentinians are aware of the effects of climate change and have the capacity to respond. In the Adaptation Communication submitted to the UNFCCC as part of its second NDC in December 2020, Argentina identified increased heatwaves, increased droughts, and variability of precipitation in different regions of the country as its main adaptation challenges. COVID-19 has further delayed the formulation of Argentina's National Adaptation Plan, leaving the path for setting synergies between a green COVID-19 recovery and adaptation planning unclear.

Ministerio de Ambiente y Desarrollo Sostenible Argentina, 2020

#### **Adaptation Readiness**

The figure shows 2000-2018 observed data from the Notre Dame Global Adaptation Initiative (ND-GAIN) Index overlaid with projected Shared Socioeconomic Pathways (SSPs) from 2020 to 2060.

Notre Dame Global Adaptation Initiative (ND-Gain) Readiness Index



Argentina's observed adaptation readiness between 2000 and 2018 is below the G20 average and not improving. Adopting socio-economic developments in line with SSP1 would produce improvements in readiness to bring it in line with the 2018  $\mbox{G20}$ average by 2035; SSP2 developments by 2050. Other measures, as represented by SSP3, would continue to undermine its readiness to adapt in the long term.

The readiness component of the Index created by the ND-GAIN encompasses social (social inequality, information and communications technology infrastructure, education and innovation),

economic, and governance indicators to assess a country's readiness to deploy private and public investments in aid of adaptation. The index ranges from 0 (low readiness) to 1 (high readiness).

The overlaid SSPs are qualitative and quantitative representations of a range of projections of future governance and, therefore, of possible adaptation readiness. The three scenarios shown here in dotted lines are described as a sustainable development-compatible scenario (SSP1), a middle-of-the-road (SSP2), and a 'Regional Rivalry' (SSP3)

Based on Andriievic et al., 2020; ND-Gain Index, 2021

# **ADAPTATION POLICIES**

#### **National Adaptation Strategies**

		Fields of action (sectors)													
Document name	Publication year	Agriculture	Biodiversity	Coastal areas and fishing	Education and research	Energy and industry	Finance and insurance	Forestry	Health	Infrastructure	Tourism	Transport	Urbanism	Water	Monitoring & evaluation process
No adaptation policy															

# **Nationally Determined Contribution (NDC): Adaptation**

#### **TARGETS**

No precise and/or quantitative targets for adaptation are listed in Argentina's most recent Adaptation Communication within its second NDC (2020).

#### **ACTIONS**

Not mentioned

# MITIGATION | REDUCING EMISSIONS TO LIMIT GLOBAL TEMPERATURE INCREASE



Hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit to 1.5°C, recognising that this would significantly reduce the risks and impacts of climate change.

# **EMISSIONS OVERVIEW**



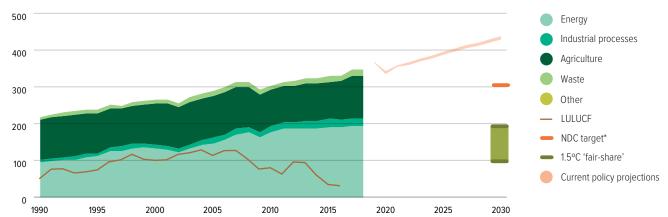
Argentina's GHG emissions, excluding LULUCF, have dropped by only 23% in the period 2013-2018. The government's target of reaching emissions levels of 313 MtCO<sub>2</sub>e by 2030 (excluding LULUCF) is not compatible with a 1.5°C pathway.



In 2030, global CO<sub>2</sub> emissions need to be 45% below 2010 levels and reach net zero by 2050. Global energy-related CO<sub>2</sub> emissions must be cut by 40% below 2010 levels by 2030 and reach net zero by 2060. Rogelj et al., 2018

# GHG emissions across sectors and CAT 1.5°C 'fair-share' range (MtCO2e/year)5

Total GHG emissions across sectors (MtCO2e/year)



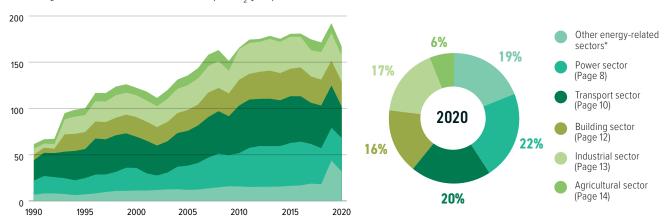
Argentina's emissions (excl. land use) increased by 30% between 1990 and 2018, reaching 351 MtCO<sub>2</sub>e in 2018. This was mainly driven by a sustained increase in energy-related emissions in all sectors, with the majority coming from the transport and energy sectors. Argentina's 2030 target is not 1.5°C 'fair-share' compatible. To be 1.5°C 'fair-share' compatible, Argentina would need to strengthen its domestic emissions reduction target.

Gütschow et al., 2021; Climate Action Tracker, 2020a, 2021

\*This target is in AR4 GWP; Argentina expressed its official NDC target in SAR GWP of 359 MtC0,e excl. LULUCF

# Energy-related CO<sub>2</sub> emissions by sector

Annual CO<sub>2</sub> emissions from fuel combustion (MtCO<sub>2</sub>/year)



The largest driver of overall GHG emissions are CO<sub>2</sub> emissions from fuel combustion. In Argentina, emissions increased steadily between 2009 and 2016, and have since declined, with a more noticeable drop in 2020 due to the COVID-19 pandemic. The power sector, the largest contributor, accounts for 22% of emissions from fuel combustion followed by the transport and other energy-related sector at 20% and 19%, respectively.

Ministerio de Ambiente y Desarrollo Sostenible, 2019 Due to rounding, some graphs may sum to slightly above or below 100% \*'Other energy-related sectors' covers energy-related CO, emissions from extracting and processing fossil fuels.

#### **ENERGY OVERVIEW**



Fossil fuels account for 85% of Argentina's total primary energy supply, while renewables (excl. large hydropower) account for only 5%. The main fuels used in Argentina's total primary energy supply are natural gas (55%) and oil (30%).

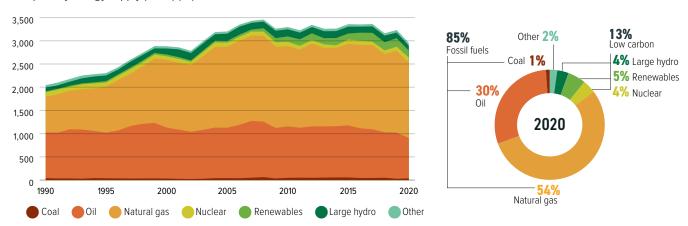


The share of fossil fuels globally needs to fall to 67% of global total primary energy by 2030 and to 33% by 2050, and to substantially lower levels without carbon capture and storage (CCS).

Rogelj et al., 2018

#### **Energy mix**

Total primary energy supply (TPES) (PJ)

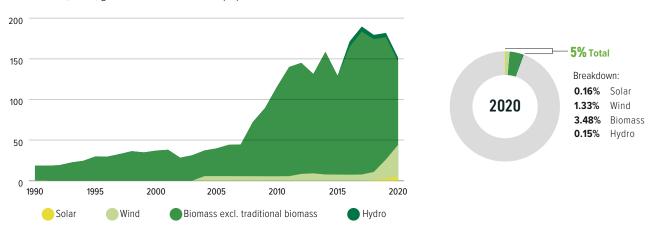


This graph shows the fuel mix for all energy supply, including energy used not only for electricity generation, heating, and cooking, but also for transport fuels. Fossil fuels (oil, coal, and gas) make up 85% of Argentina's energy mix, which is slightly higher than the G20 average of 82%. Natural gas production has continuously increased since 1990, while the proportion of oil has remained relatively constant over the years but shows signs of declining from 2019 onwards.

BEN, 2020; CAMMESA, 2021 Due to rounding, some graphs may sum to slightly above or below 100%

# Solar, wind, geothermal, and biomass development

TPES from solar, wind, geothermal and biomass (PJ)

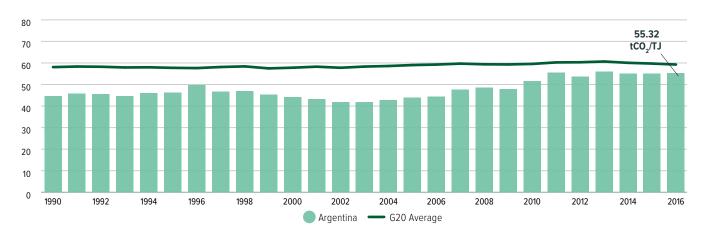


Solar, wind, and biomass accounted for 5% of Argentina's energy supply in 2020 - the G20 average is 7%. The share of renewables in Argentina's total energy supply has increased by around 15% in the last five years (2015-2020). Biomass (for electricity and heat) makes up the largest share (3.5%), with wind at 1.3% in 2020.

Ministerio de Ambiente y Desarrollo Sostenible, 2019; BEN, 2020 Due to rounding, some graphs may sum to slightly above or below 100%

#### Carbon intensity of the energy sector

Tonnes of CO<sub>2</sub> per unit of TPES (tCO<sub>2</sub>/TJ)



Carbon intensity is a measure of how much CO<sub>2</sub> is emitted per unit of energy supply.

Carbon intensity remained almost constant in Argentina between 2011-2016, around 55 tCO<sub>2</sub>, and is slightly lower than the G20 average (58 tCO<sub>2</sub>), reflecting the continuously high share of fossil fuels in the energy mix.

Ministerio de Ambiente y Desarrollo Sostenible, 2019; Ministerio de Desarrollo Productivo, 2020

#### **Energy supply per capita**

TPES per capita (GJ/capita) in 2019



TPES per capita (GJ/capita): 5-year trend (2014-2019)



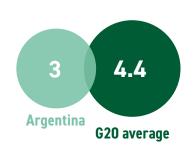
G20 average

The level of energy use per capita is closely related to economic development, climatic conditions and the price of energy. Energy use per capita in Argentina is, with 72 GJ/capita in 2019, well below the G20 average of 97 GJ/capita, and it has been decreasing faster, at 6% between 2014 and 2019, compared to the G20 average of a 2% increase in the same period.

Ministerio de Ambiente y Desarrollo Sostenible, 2019; BEN, 2020; United Nations, 2019

# **Energy intensity of the economy**

(TJ/million US\$2015 GDP) in 2019



Energy intensity of the economy: 5-year trend (2014-2019)



-10.56%

G20 average

This indicator quantifies how much energy is used for each unit of GDP. This is closely related to the level of industrialisation, efficiency achievements, climatic conditions or geography. Argentina's energy intensity is lower than the G20 average, but has been decreasing at a slower pace (-1.8%) between 2014 -2019 compared to the G20 average of -10.56%.

Enerdata, 2021; World Bank, 2021

# **POWER SECTOR**

Emissions from energy used to make electricity and heat



Argentina produced 1% of its electricity from coal in 2020, and has not set a phase-out date. Instead, in 2021, Argentina plans a new 21 MW thermal coal power plant in the Río Turbio coal field region, to improve "energy security".



Share of energy-related CO<sub>2</sub> emissions from electricity and heat production in 2020.



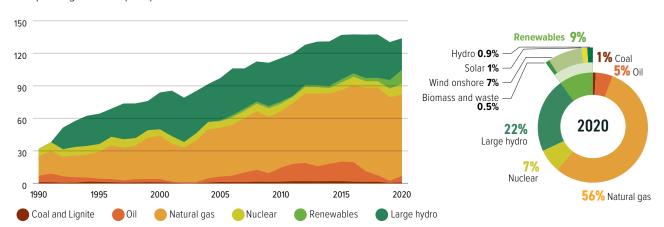
Worldwide, coal use for power generation needs to peak by **2020**, and between 2030 and 2040, all the regions of the world need to phase out coal-fired

power generation. By 2040, the share of renewable energy in electricity generation has to be increased to at least 75%, and the share of unabated coal reduced to zero.

Rogelj et al., 2018; Climate Action Tracker, 2020b

#### **Electricity generation mix**

Gross power generation (TWh)



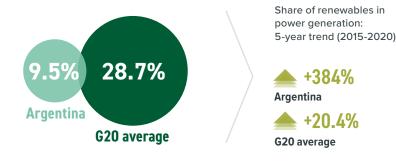
Argentina generated 61% of its electricity from fossil fuels in 2020. The share of renewable energy in Argentina's power sector has been increasing steadily, accounting for approximately 9% of the power mix in 2020. The major forms of renewables in the energy mix are onshore wind (7%) and solar (1%).

CAMESSA, 2020

Due to rounding, some graphs may sum to slightly above or below 100%

# Share of renewables in power generation

(exluding large hydro) in 2020

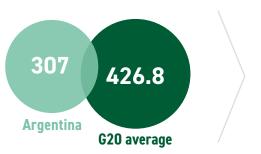


A rapid expansion of onshore wind capacity between 2015 and 2020 has seen a huge jump in the share of renewables in power generation. Large hydro is not included.

CAMMESA, 2020; Ministerio de Ambiente y Desarrollo Sostenible, 2019

#### **Emissions intensity of the power sector**

(gCO<sub>2</sub>/kWh) in 2020



Emissions intensity of the power sector: 5-year trend (2015-2020)

-18.9% **Argentina** 

-11<sub>-</sub>18%

G20 average

For each kilowatt hour of electricity, 307 g of CO, were emitted in Argentina in 2020. This is well below the G20 average. Between 2015 and 2020 emissions intensity decreased at a faster rate (19%) than the average decreasing G20 trend (11%) due to the economic crisis and growth of onshore wind capacity.

Enerdata, 2021

#### **POLICY ASSESSMENT**

#### Renewable energy in the power sector



#### Medium

Argentina is developing sectoral plans for its NDC, but renewable energy installation is stalling due to economic challenges and a lack of new incentives to encourage renewable energy development.

Under the Law on Renewable Energy (Law 27.191), Argentina set targets for the share of non-hydro renewables in the power supply to reach 20% by 2025. In 2020, the non-hydro renewable power production reached 9.5%, while wind and solar accounted for only 4% and 1%, respectively. At the Leaders' Summit in April 2021, President Fernandez announced that Argentina would commit to achieving a 30% share of renewable energy in the energy mix by 2030

El Senado y Cámara de Diputados de la Nación Argentina, 2015; Subscecretaría de Planeamiento Energético, 2019

#### Coal phase-out in the power sector



Far from phasing out coal, in 2020, the government announced that it would assign substantial funds to the power plant in Río Turbio through increased budget for the national energy scheme.

This 240 MW coal-fired power plant has been out of service since it was inaugurated in September 2015, due to insufficient coal production by the Rio Turbio coal mine. Successive governments have made repeated announcements that coal production would be increased in order for power generation to begin, but the powerplant is still not fully operational.

Subscecretaría de Planeamiento Energético, 2019



#### CORONAVIRUS RESPONSE AND RECOVERY

Despite the sharp drop in fossil fuel prices caused by the pandemic, Argentina announced new support for fossil fuels at the end of 2020, prioritising subsidies to natural gas production in the Vaca Muerta shale gas field. This directs over USD 5bn in subsidies to fossil fuels rather than green recovery measures, such as increased investments in renewable energy projects. The Argentinian government justified its decisions in the name of rapidly restarting the economy and building back confidence in energy security.

#### TRANSPORT SECTOR

Emissions from energy used to transport goods and people



Emissions from transport in Argentina are still on the rise. 70% of passenger transport and 93% of freight transport was by road in 2017. Both sectors are dominated by fossil fuels, and electric vehicles (EVs) still make up less than 1% of car sales.



The share of lowcarbon fuels in the transport fuel mix globally must increase to between 40% and 60% by 2040 and 70% to 95% by 2050.

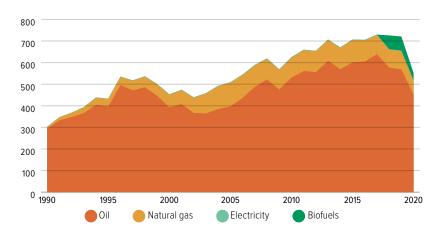


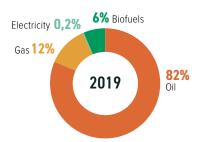
Share of transport in energyrelated CO<sub>2</sub> emissions

Rogelj et al., 2018; Climate Action Tracker, 2020b

#### Transport energy mix

Final energy consumption of transport by source (PJ/year)



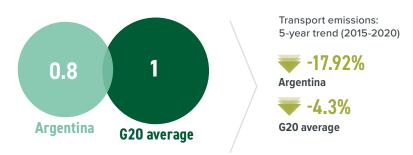


Electricity and biofuels make up only 6.5% of the energy mix in transport.

Ministerio de Economía, 2020 Due to rounding, some graphs may sum to slightly above or below 100%

# Transport emissions per capita

excl. aviation (tCO<sub>2</sub>/capita) in 2020



Reductions in transport emissions per capita in 2020, and concomitant changes in the 5-year trends and decarbonisation ratings, reflect widespread economic slowdowns and transport restrictions imposed in response to the COVID-19 pandemic. For a discussion of broader trends in the G20 and the rebound of transport emissions in 2021, please see the Highlights Report at www.climate-transparency.org

Enerdata, 2021; United Nations, 2019

#### Aviation emissions per capita<sup>6</sup>

(tCO<sub>2</sub>/capita) in 2018



Enerdata, 2021; International Energy Agency, 2020; United Nations, 2019

#### **Motorisation rate**



per 1,000 inhabitants in 2019 in Argentina\*

Enerdata, 2021

#### Market share of electric vehicles in new car sales (%)

The share of EVs in car sales in 2020 was 1.1%.



ADEFA, 2020; SIOMMA, 2021

#### Passenger transport

(modal split in % of passenger-km) in 2017\*



Enerdata, 2021

\*Owing to the variety of sources and data years available, these data are not comparable across G20 countries.

#### Freight transport

(modal split in % of tonne-km) in 2014\*



Freight transport by air and pipelines are excluded due to lack of data.

Ministerio de Ambiente v Desarrollo Sostenible, 2017

# **POLICY ASSESSMENT**

#### Phase out fossil fuel cars



#### Medium

Argentina has not yet set national targets for phasing out fossil fuel light-duty vehicles (LDVs). Its 2017 National Transport Mitigation Plan indicates it plans to reduce transport sector emissions by 47 MtCO<sub>2</sub>e by 2030 through a combination of "low-emission" vehicles, revival of road freight transport, and promotion of non-motorised transport, such as biking. As of August 2021 the government was revising the Plan. Law 27640, passed in August 2021, sets minimum requirements for the content of nationally produced bioethanol included in transport fuels, with a minimum of 5% biodiesel in diesel fuels and a minimum of 12% bioethanol in gasoline.

CAT, 2020; Ministerio de Ambiente y Desarrollo Sostenible, 2017; Ministry of Energy of Argentina, 2017; New Climate Institute, 2020; Boletín Oficial de la República Argentina, 2021

#### Phase out fossil fuel heavy-duty vehicles



#### Medium

Similar to its treatment of LDVs, Argentina has not set any date to phase out fossil fuel heavy-duty vehicles (HDVs). Under Law 27640, it has, however, set emission performance standards and established a scheme to support the use of mixing biofuels and diesel in order to lower emissions from HDVs.

Ministerio de Ambiente y Desarrollo Sostenible, 2017; Ministry of Energy of Argentina, 2017; New Climate Institute, 2020; Boletín Oficial de la República Argentina, 2021

# Modal shift in (ground) transport



#### Medium

Argentina maintains support schemes to encourage modal shifts, such as increasing freight transport by rail, incentivising the purchase of EVs and non-motorised transport. The government reduced import tariffs on EVs, and set a goal in 2017, to import 6,000 vehicles. It is particularly focusing on increasing the share of EVs in public transport, setting a target to have 30% electric buses in Buenos Aires, by 2030. However, there are still no national targets for shares of EVs in the national fleet, nor a longer-term strategy for decarbonisation of the transport sector.

Ministerio de Ambiente y Desarrollo Sostenible, 2017; New Climate Institute, 2020

#### **BUILDING SECTOR**

Emissions from energy used to build, heat and cool buildings



Direct and indirect emissions from the building sector in Argentina account for 15% and 12% of total energy-related CO<sub>2</sub> emissions, respectively. Per capita emissions from this sector are 0.7 times the G20 average. Argentina has mandatory energy efficiency standards and a renewable energy support scheme for social housing, but not for all buildings. There is no climate-focused urban planning strategy.



Share of buildings in energy-related CO<sub>2</sub> emissions. Building emissions occur directly (burning fuels for heating, cooking, etc) and indirectly (grid-electricity for air conditioning, appliances, etc.)



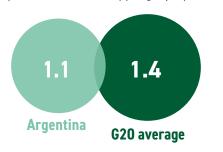
By 2040, global emissions from buildings need to be reduced by 90% from 2015 **levels,** and be 95-100%

below 2015 levels by 2050, mostly through increased efficiency, reduced energy demand, and electrification in conjunction with complete decarbonisation of the power sector.

Rogelj et al., 2018; Climate Action Tracker, 2020b

#### **Building emissions per capita**

(incl. indirect emissions) (tCO<sub>2</sub>/capita) in 2020



Building emissions: 5-year trend (2015-2020)

-23.12% **Argentina** -2.91% G20 average

Building-related emissions per capita in Argentina are slightly less than the G20 average as of 2020. Argentina has also managed to reduce its buildings emissions per capita by 23% (2015-2020), at a faster rate than the G20 average of 3%.

Enerdata, 2021; United Nations, 2019

# **POLICY ASSESSMENT**

#### Near zero energy new buildings



Medium

Argentina has enacted several policies geared toward improving the efficiency of new social housing projects, including mandatory energy efficiency standards and heating/cooling support schemes for these types of housing projects. However, these standards and incentives do not yet extend to all types of housing. There is also no mention of incentivising or implementing near zero energy building standards in this sector.

International Energy Agency, 2019; New Climate Institute, 2020

# Renovation of existing buildings



No policies exist regarding mandatory retrofitting or energy efficiency standards for existing buildings.

International Energy Agency, 2020; New Climate Institute, 2020

# **INDUSTRY SECTOR**

**Emissions from energy use in industry** 



Argentina is in the process of developing a Green Productive Development Plan focusing on sustainable mobility, green hydrogen production, "green industrialisation", energy transition, guidelines for small and mediumsized enterprises (SMEs), circular economy, sustainable construction and "sustainable mining."



Industrial emissions need to be reduced by 65-90% from 2010 levels by 2050.

Rogelj et al., 2018



Share of industry in energy-related CO<sub>2</sub> emissions.

# Industry emissions intensity<sup>7</sup>

(tCO<sub>2</sub>e/USD2015 GVA) in 2017



Industry emissions intensity: 5-year trend (2012-2017)

Argentina

-16.45%

G20 average

Enerdata, 2021; World Bank, 2021

# Carbon intensity of steel production8

(kgCO<sub>2</sub>/tonne product) in 2016



Steel production and steelmaking are significant GHG emissions sources, and challenging to decarbonise.

World Steel Association, 2018

# **POLICY ASSESSMENT**

# **Energy efficiency**



There are no mandatory energy efficiency standards for the industrial sector as a whole. Argentina has, however, enacted policies to incentivise industrial producers to use energy more efficiently through introducing a carbon tax and offering lower electricity prices to companies that implement energy management systems. The government has also introduced a labelling law for LDVs and a number of provincial laws and pilot projects on housing energy efficiency.

El Senado y Cámara de Diputados de la Nación Argentina, 2017; Ministerio de Energía y Minería, 2017; New Climate Institute, 2020

# **LAND USE SECTOR**

Emissions from changes in the use of the land



LULUCF emissions, contributed only 8% of Argentina's overall emissions in 2016, and the native forest area continues to shrink. To stay within the 1.5°C limit, Argentina needs to make this sector a net sink of emissions, which would be facilitated by enforcing the National Law on Native Forests.

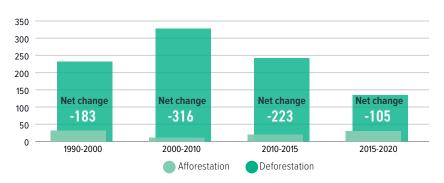


Global deforestation needs to be halted and changed to net CO, removals by around 2030.

Rogelj et al., 2018

#### Annual forest expansion, deforestation and net change

Forest area change in 1,000 ha/year



Between 2015-2020, Argentina lost 105 kha of forest area. While this is less deforestation than in previous periods, more progress is needed to convert Argentina's native forests into a net sink to help mitigate against rising emissions in the energy, transport and agricultural sectors.

Global Forest Resources Assessment, 2020

 $Note: There \ is \ a \ change \ of source \ and \ methodology \ for \ measuring \ this \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ from \ last \ year's \ profiles, \ which \ indicator \ year's \ profiles, \ which \ indicator \ year's \ profiles, \ year's \ pr$ means the two years may not be directly comparable.

#### **POLICY ASSESSMENT**

#### Target for net zero deforestation



#### Medium

The 2007 National Forests Law set ambitious LULUCF sector goals, outlining protection for native forests and biodiverse areas against deforestation; however, enforcement was not sufficiently funded.

At the 2019 UN Climate Summit, Former President Mauricio Macri announced Argentina's intent to achieve net zero deforestation, but this statement was never enshrined in law. In April 2021, during the Leaders' Summit, current President, Alberto Fernández, stated that there would be a stronger emphasis on eradicating illegal deforestation, declaring it an environmental crime, but has so far not acted on this.

Argentina Forestal, 2019; Climate Action Tracker, 2020; El Senado y Cámara de Diputados de la Nación Argentina, 2007; Secretaría de Ambiente y Desarrollo Sustentable, 2019; Secretariat of Environment and Sustainable Development, 2015

# AGRICULTURE SECTOR

**Emissions from agriculture** 



Argentina's agricultural emissions are mainly from livestock, in the form of enteric fermentation, particularly from cattle, as well as livestock manure. A 1.5°C 'fair-share' compatible pathway requires a transformation of the agricultural production system towards more sustainable practices with lower emissions.

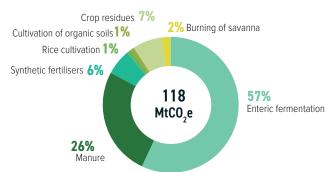


Methane emissions (mainly enteric fermentation) need to decline by 10% by 2030 and by 35% by 2050 (from 2010 levels). Nitrous oxide emissions (mainly from fertilisers and manure) need to be reduced by 10% by 2030 and by 20% by 2050 (from 2010 levels).

Rogelj et al., 2018

#### **Emissions from agriculture (excluding energy)**

Emissions from the agriculture sector in 2018



In Argentina, the largest sources of GHG emissions in the agriculture sector is enteric fermentation from livestock, mainly cattle, accounting for 57% of agricultural emissions in 2018. Livestock manure also plays a significant role, accounting for 26% of agricultural emissions. Behavioural and dietary shifts towards less meat consumption nationally could also contribute from a demand perspective.

FAO, 2021

Due to rounding, some graphs may sum to slightly above or below 100%

#### **MITIGATION: TARGETS AND AMBITION**

**WARMING OF** 

The combined mitigation effect of Nationally Determined Contributions (NDCs) assessed by April 2021 is not sufficient and will lead to a warming of 2.4°C by the end of the century. This highlights the urgent need for all countries to submit more ambitious targets by COP26, as they agreed to do in 2015, and to urgently strengthen their climate action to align to the Paris Agreement's temperature goal.

Climate Action Tracker, 2021a

#### **AMBITION: 2030 TARGETS**

#### **Nationally Determined Contribution (NDC): Mitigation**

#### TARGETS

Unconditional mitigation target to reach emission levels of 359 MtCO<sub>2</sub>e (including LULUCF) by 2030, or 313 MtCO<sub>2</sub>e excluding LULUCF

#### ACTIONS

Not mentioned

#### Climate Action Tracker (CAT) evaluation of targets and actions

#### **ARGENTINA'S OVERALL RATING**

1.5°C Paris Agreement compatible

Almost sufficient

Insufficient

**HIGHLY INSUFFICIENT** 

Critically insufficient

This CAT evaluation is a **new, overall rating**, that combines the several, separately rated elements, of policies and actions, domestic and internationally supported targets, 'fair-share target' and the country's contribution to climate finance. The CAT rates Argentina's climate targets and policies together as "Highly insufficient". Several sub-elements are rated to create the overall rating: policies and actions, domestic targets, 'fair-share' and contribution to climate finance.

The CAT rates Argentina's 2030 climate target "Insufficient" when compared to modelled domestic emissions pathways, and "Highly insufficient" when compared with its 'fair-share' contribution to climate action. Argentina's policies and actions are also rated as "Highly insufficient" as they lead to rising, rather than falling, emissions. Overall, Argentina's climate targets and policies are not stringent enough to limit warming to 1.5°C and need substantial improvement. For the full assessment of the country's target and actions, and the explication of the methodology see www.climateactiontracker.org

Climate Action Tracker, 2021

Note: This assessment includes our policy analysis from 30 July 2020 translated into our new rating methodology without new analysis of Argentina's climate policies since then, except the NDC update submitted in April 2021

#### TRANSPARENCY: FACILITATING AMBITION

Countries are expected to communicate their NDCs in a clear and transparent manner in order to ensure accountability and comparability. The NDC Transparency Check has been developed in response to Paris Agreement decision 1/CP.21 and the Annex to decision 4/CMA.1, which sets out the "information to facilitate clarity, transparency and understanding" as crucial elements of NDCs.

#### NDC Transparency Check recommendations

Argentina submitted its NDC to the UNFCCC in November 2016 and updated it on 30 December 2020. A comparison of the two NDCs reveals that Argentina has provided additional information in its NDC update, including:

- Explicitly stating the time frame and period of implementation.
- Including detail on the mitigation co-benefits resulting from adaptation actions for most of the sectors.

There is still room to improve comparability, transparency, and understanding in Argentina's future NDCs by:

- Comparing the categories and gases covered in its current NDC with the previous mitigation target(s), and providing explanations for omissions or
- Including emissions reduction analysis to substantiate the assertion that the NDC represents a progression compared to the previous one, and is a fair contribution to the global mitigation effort.

# **AMBITION: LONG-TERM STRATEGIES**

The Paris Agreement invites countries to communicate mid-century, long-term, and low-GHG emissions development strategies by 2020. Long-term strategies are an essential component of the transition toward net zero emissions and climate-resilient economies.

Status	Announced, not yet submitted to UNFCCC				
Interim steps	Interim steps not yet published				
Sectoral targets	Not yet published				
Net zero target	Yes				
Net zero year	Not yet announced				

For more visit www.climate-transparency.org/ndc-transparency-check

# FINANCE | MAKING FINANCE FLOWS CONSISTENT WITH CLIMATE GOALS



Make finance flows consistent with a pathway towards low-GHG emissions and climate-resilient development.



In 2019, Argentina spent just over USD 5bn on fossil fuel subsidies, two-thirds of it on oil (76%). While less USD was spent than previous years, the devaluation of the currency implies that every year Argentina spends more pesos on fossil fuel subsidies. Argentina introduced a carbon tax in 2018 for liquid fuels but does not tax the fossil fuel most used in the country, natural gas.



Investment in green energy and infrastructure needs to outweigh fossil fuel investments by 2025.

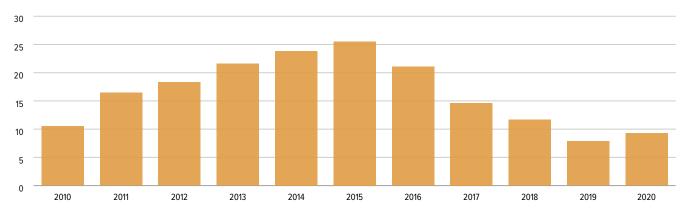
Rogelj et al., 2018

# **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 the price.

#### **Fossil fuel subsidies**

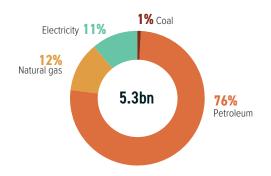
(USD billions)



#### Ministerio de Economía, 2021

# Fossil fuel subsidies by fuel type

USD in 2019



Over the past decade (2010-2019), Argentina's fossil fuel subsidies peaked in 2014 and then steadily declined, reaching their minimum historical value of USD 5.3bn in 2019. Over this period, most of the subsidies were directed to supporting the production and consumption of petroleum, followed by natural gas production and consumption, and the consumption of fossil-fuelled electricity.

Comparable data is not available yet for 2020. However, according to the Energy Policy Tracker data, during 2020 Argentina pledged at least USD 1.36bn to fossil fuel energy as part of its energy-related funding commitments and COVID-19 economic response. This includes the earmarking of 25% of the revenue from the extraordinary once-off tax imposed on the wealthiest in the context of the COVID-19 pandemic (*Proyecto de Ley de Aporte Solidario y Extraordinario para ayudar a morigerar los efectos de la Pandemia*) to support gas extraction and exploration by the stateowned enterprise Yacimientos Petrolíferos Fiscales (YPF). The tax contribution to the gas sector is estimated to be in the order of USD 1.06bn.

Energy Policy Tracker, 2021; OECD-IEA Fossil Fuel Support database, 2020 Due to rounding, some graphs may sum to slightly above or below 100%

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#### **CORONAVIRUS RESPONSE AND RECOVERY**

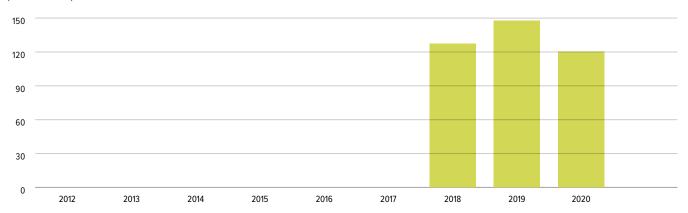
In June 2021, Argentina was selected as one of the first five countries to receive green recovery support funds from the UN's

Partnership Action for the Green Economy (PAGE) programme for its proposal to include "green industry", climate change policy and circular economic policies in its green recovery planning. However, a recent ranking on "greenness" of stimulus measures for countries around the world ranked Argentina as having an overall negative contribution, mainly due to the country's intent to continue subsidising fossil fuels post-pandemic.

UN PAGE, 2021; Vivid Economics, 2020

#### Carbon pricing and revenue

(USD millions)



Argentina implemented a carbon tax in 2018. The tax covers most liquid fuels except for the fossil fuel most used in the country, natural gas. The carbon tax is, therefore, estimated to cover only 20% of the country's emissions and is established and fixed in Argentinean pesos equivalent to USD 10/tCO<sub>2</sub>e at the moment of approval. After continuous currency depreciation in 2020, the carbon tax rate was equivalent to USD 6.77/  $tCO_2$ e, generating USD 120m revenue – exactly the opposite situation as fossil fuel subsidies.

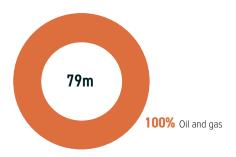
I4CE, 2021; Energy Policy Tracker, 2021

#### **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.

#### Public finance for fossil fuels

USD per annum (2018-19 average)



In 2018, Argentina provided USD 79m in public finance for the Arroyo Seco and Timbúes power plants through its DFI Banco de Inversión y Comercio Exterior (BICE). There was no evidence of public finance for fossil fuels in 2019 from public credit institutions. The country also has no recorded public finance for coal; however, there is evidence that the government has consistently provided public finance for coal outside of the institutions included in this data, such as for stateowned coal enterprise Yacimientos Carboníferos Río Turbio.

Oil Change International, 2020

Due to rounding, some graphs may sum to slightly above or below 100%

#### Provision of international public support

Argentina is not listed in Annex II of the UNFCCC and is, therefore, not formally obliged to provide climate finance. While Argentina may channel international public finance towards climate change via multilateral and other development banks, it has not been included in this report.

#### **FINANCIAL POLICY AND REGULATION**

#### Financial policy and regulation

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.



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. Argentina has only recently started taking steps in

terms of greening its financial system. In January 2021, Argentina's National Securities Commission (CNV) approved a public consultation on the creation of a new special regime for sustainable investment instruments.

Green Finance for Latin America and the Caribbean, 2021

In May 2021, the Ministry of Economy participated in a new meeting of the Technical Roundtable on Sustainable Finance (MTFS), led by Ministry of Economy and coordinated by the International Affairs Management and Coordination Unit. In the meeting, the Roadmap for the development of sustainable finance in the country was approved. The framework will undertake the analysis of taxonomies on sustainable finance; the promotion and deepening of the social, green and sustainable bond market; and the design of the National Sustainable Finance Strategy.

# **Nationally Determined Contribution (NDC): 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

#### **ENDNOTES**

Where referenced, "Enerdata, 2021" refers to data provided in July 2021. Argentina's data has been augmented by country-specific datasets and is therefore not in line with the global data used for comparing the G20 countries. For more detail on sources and methodologies, please download the Technical Note at: www.climatetransparency. org/g20-climate-performance/g20report2021

- The '1.5°C compatible pathway' is derived from global cost-effective pathways assessed by the IPCC's SR15, selected based on sustainability criteria, and defined by the 5th-50th percentiles of the distributions of such pathways achieving the long-term temperature goal of the Paris Agreement. Negative emissions from the land sector and novel negative emissions technologies are not included in the assessed models, which consider one primary negative emission technology (BECCS). In addition to domestic 1.5°C compatible emissions pathways. the 'fair-share' emissions reduction range would almost always require a developed country to provide enough support through climate finance, or other means of implementation, to bring the total emissions reduction contribution of that country down to the required 'fair-share' level.
- 2 'Land use' emissions is used here to refer to land use, land use change and forestry (LULUCF). The Climate Action Tracker (CAT) derives historical LULUCF emissions from the UNFCCC Common Reporting Format (CRF) reporting tables data converted to the categories from the IPCC 1996 guidelines, in particular separating Agriculture from LULUCF, which under the new IPCC 2006 Guidelines is integrated into Agriculture, Forestry, and Other Land Use (AFOLU).
- 3 The Decarbonisation Ratings assess the current year and average of the most recent five years (where available) to take account of the different starting points of different G20 countries.
- The selection of policies rated and the assessment of 1.5°C compatibility are primarily informed by the Paris Agreement and the IPCC's 2018 SR15. The table below displays the criteria used to assess a country's policy performance.
- The 1.5°C 'fair-share' ranges for 2030 are drawn from the CAT, which compiles a wide range of perspectives on what is considered fair, including considerations such as responsibility, capability, and equality. Countries with 1.5°C 'fair-share' ranges reaching below zero, are expected to achieve such strong reductions by
- domestic emissions reductions, supplemented by contributions to global emissions reduction efforts via, for example, international finance. On a global scale, negative emissions technologies are expected to play a role from the 2030s onwards, compensating for remaining positive emissions. In order to maintain comparability across all countries, this report harmonises all data with PRIMAP, 2021 dataset to 2018 However, note that Common Reporting Format (CRF) data is available for countries which have recently updated GHG inventories. Where countries submitted updated NDC targets before August 2021, these have been analysed and included.
- 6 This indicator adds up emissions from domestic aviation and international aviation bunkers in the respective country. In this Country Profile, however, only a radiative forcing factor of 1 is
- This indicator includes only direct energyrelated emissions and process emissions (Scope 1) but not indirect emissions from electricity.
- This indicator includes emissions from electricity (Scope 2) as well as direct energy-related emissions and process emissions (Scope 1).

On endnote 4.	Low	Medium	High	Frontrunner
Renewable energy in power sector	No policies to increase the share of renewables	Some policies	Policies and longer-term strategy/ target to significantly increase the share of renewables	Short-term policies + long-term strategy for 100% renewables in the power sector by 2050 in place
Coal phase-out in power sector	No targets and policies in place for reducing coal	Some policies	Policies + coal phase-out decided	Policies + coal phase-out date before 2030 (OECD and EU28) or 2040 (rest of the world)
Phase out fossil fuel cars	No policies for reducing emissions from light-duty vehicles	Some policies (e.g. energy/emissions performance standards or bonus/ malus support)	Policies + national target to phase out fossil fuel light-duty vehicles	Policies + ban on new fossil fuel- based light-duty vehicles by 2035 worldwide
Phase out fossil fuel heavy-duty vehicles	No policies	Some policies (e.g. energy/emissions performance standards or support)	Policies + strategy to reduce absolute emissions from freight transport	Policies + innovation strategy to phase out emissions from freight transport by 2050
Modal shift in (ground) transport	No policies	Some policies (e.g. support programmes to shift to rail or non-motorised transport)	Policies + longer-term strategy	Policies + longer-term strategy consistent with 1.5°C pathway
Near zero energy new buildings	No policies	Some policies (e.g. building codes, standards or fiscal/financial incentives for low-emissions options)	Policies + national strategy for near zero energy new buildings	Policies + national strategy for all new buildings to be near zero energy by 2020 (OECD countries) or 2025 (non- OECD countries)
Energy efficiency in industry	No policies	Mandatory energy efficiency policies cover more than 26-50% of industrial energy use	Mandatory energy efficiency policies cover 51–100% of industrial energy use	Policies + strategy to reduce industrial emissions by 75-90% from 2010 levels by 2050
Retrofitting existing buildings	No policies	Some policies (e.g. building codes, standards or fiscal/financial incentives for low-emissions options)	Policies + retrofitting strategy	Policies + strategy to achieve deep renovation rates of 5% annually (OECD) or 3% (non-OECD) by 2020
Net zero deforestation	No policies or incentives to reduce deforestation in place	Some policies (e.g. incentives to reduce deforestation or support schemes for afforestation/ reforestation in place)	Policies + national target for reaching net zero deforestation	Policies + national target for reaching zero deforestation by 2020s or for increasing forest coverage

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