RENEWABLES 2021 GLOBAL STATUS REPORT
TRANSPORT IN FOCUS

Transforming the Air, Sea, and Land Freight Transport Sector - SWC50 Webinar
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Hannah E. Murdock
REN21 Research Direction – Policy, Transport
hannah.murdock@ren21.net

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THE ONLY GLOBAL RENEWABLE ENERGY MULTI-STAKEHOLDER COMMUNITY

GOVERNMENTS
Afghanistan, Austria, Brazil, Denmark, Dominican Republic, Germany, India, Mexico, Norway, Republic of Korea, South Africa, Spain, UAE, USA

NGOs
CAN-I, CLASP, CCA, Club-ER, CC35, Energy Cities, EHP, FER, Global 100%RE, GFSE, Greenpeace Intl, GWNET, ICLEI, IEC, ISEP, JVE, MFC, Power for All, REEEP, REI, RGI, SCI, SLOCAT, SEforAll, WCRE, WFC, WRI, WWF

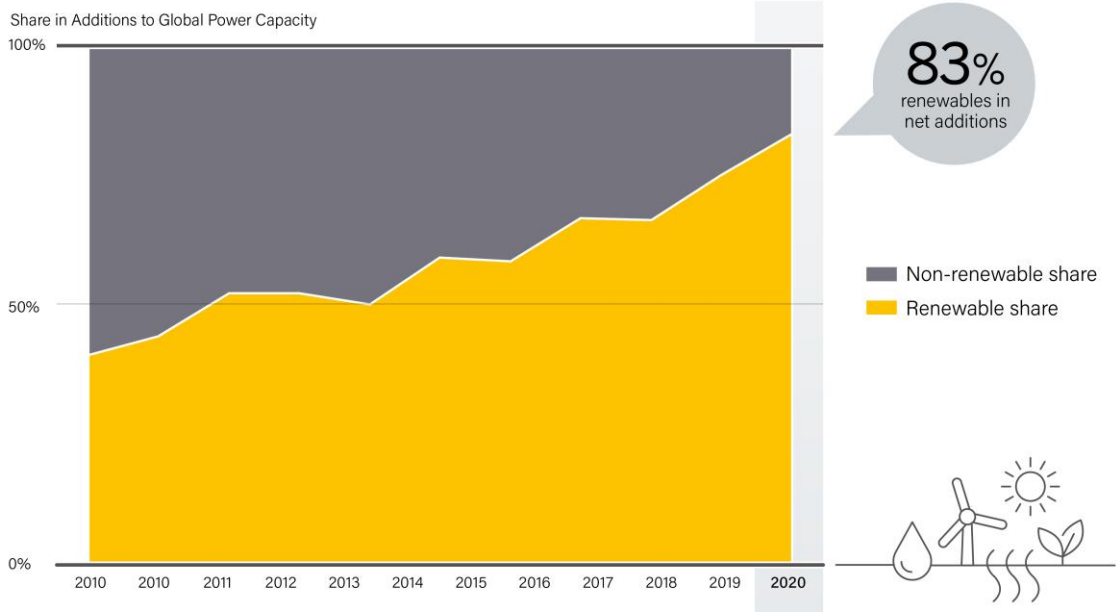
SCIENCE & ACADEMIA
AEE INTEC, CEEW, Fundacion Bariloche, Higher School of Economics (Russia), IIASA, ISES, NREL, SANEDI, TERI

INTERGOVERNMENTAL ORGANISATIONS
ADB, APERC, ECREEE, EC, GEF, IEA, IRENA, IsDB, RCREEE, UNDP, UNEP, UNIDO, World Bank

INDUSTRY ASSOCIATIONS
ACORE, AMDA, ALER, ARE, APREN, CREIA, CEC, EREF, GOGLA, GSC, GWEC, IREF, IGA, IHA, RES4Africa, Solar Power Europe, WBA, WWEA

MORE RENEWABLE POWER ADDED THAN FOSSIL FUEL & NUCLEAR

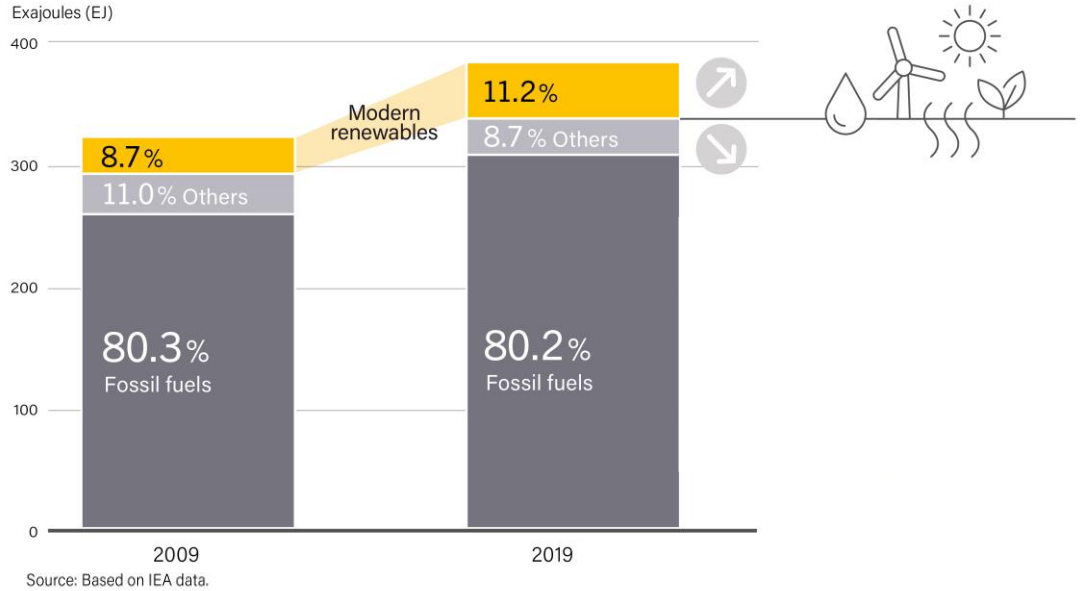
Shares of Net Annual Additions in Power Generating Capacity
2010-2020



Renewable power generation capacity additions remain ahead for **the sixth year in a row**.

INCREASING ENERGY DEMAND AND FOSSIL FUEL USE

Estimated Renewable Share of Total Final Energy Consumption
2009 and 2019

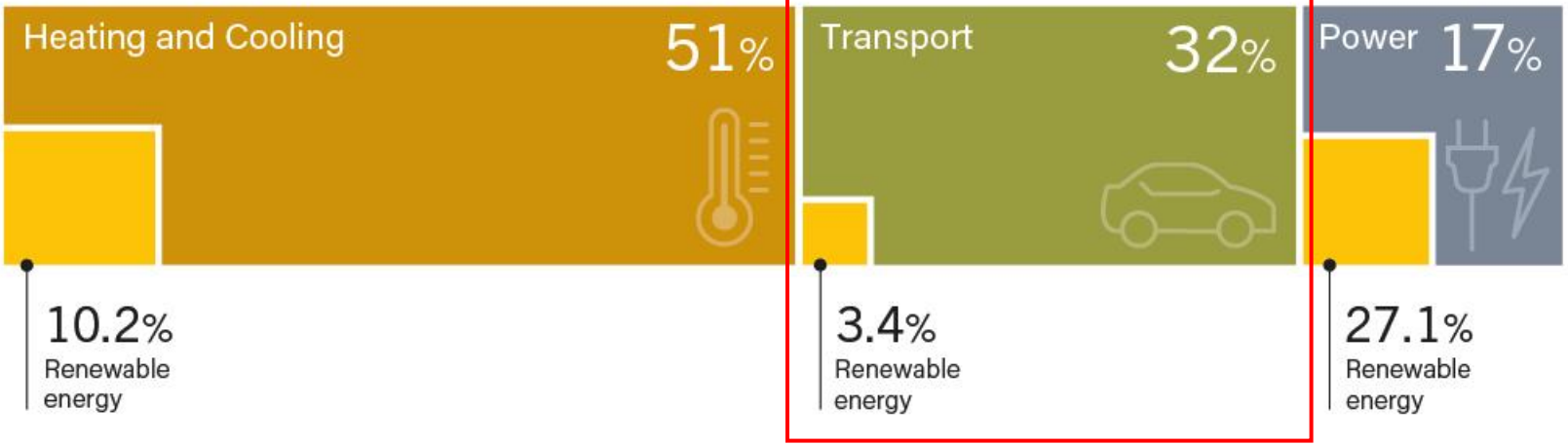


Source: Based on IEA data.

The share of fossil fuels in final energy demand has **barely changed over the past decade**.

TRANSPORT HAS THE LOWEST SHARE OF RENEWABLE ENERGY

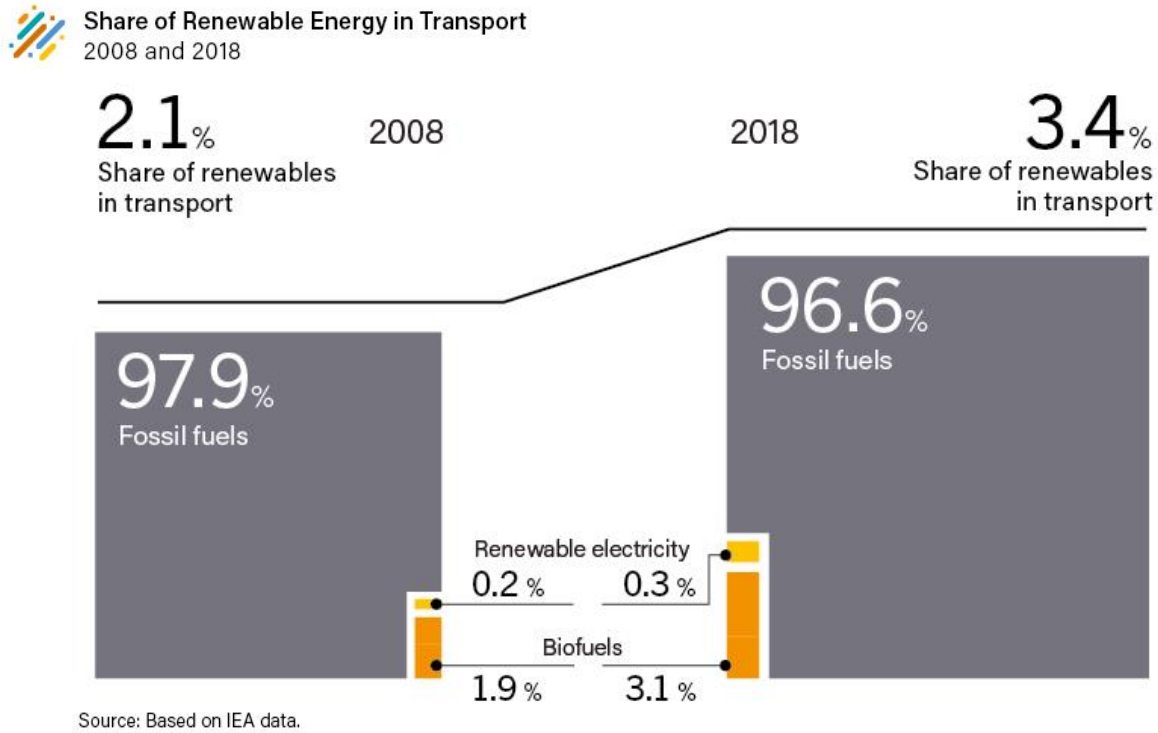
Renewable Energy in Total Final Energy Consumption
by Final Energy Use, 2018



Note: Data should not be compared with previous years because of revisions due to improved or adjusted methodology.

Source: Based on IEA data.

LITTLE PROGRESS IN TRANSPORT OVER THE PAST DECADE

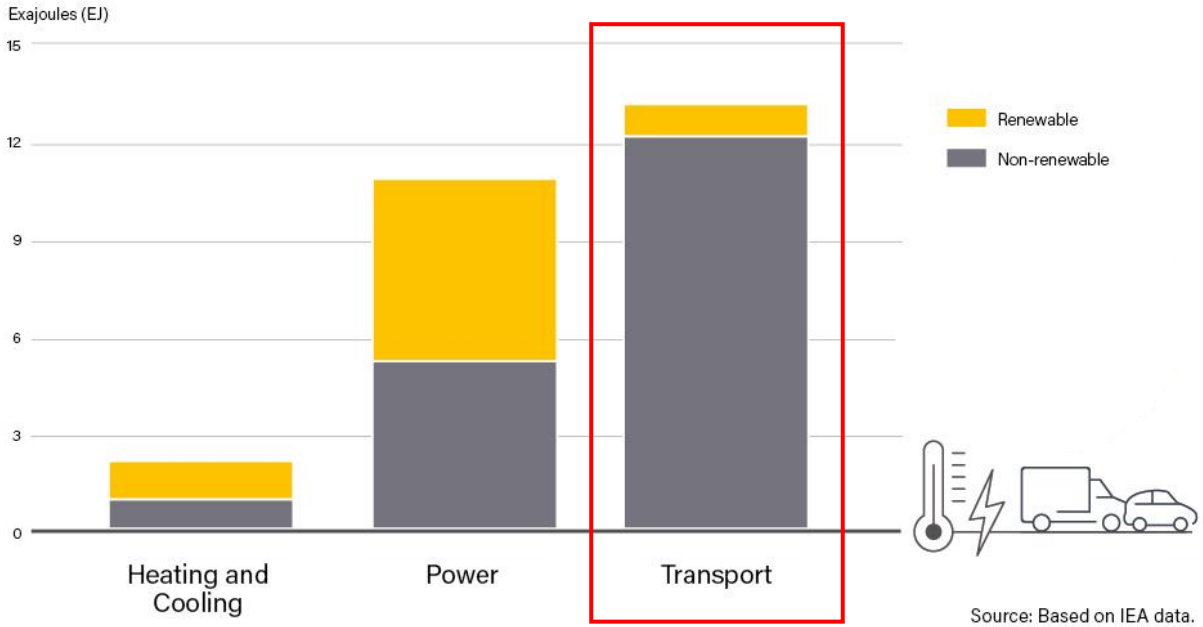


The fossil fuels share in transport has decreased **only 1 percentage point over the past decade**.

At the same time, transport energy **demand has grown more than 22%**.

HIGHEST DEMAND GROWTH IN TRANSPORT, 93% MET BY FOSSIL FUELS

Renewable Contribution to Energy Demand Growth, by Sector
2013-2018

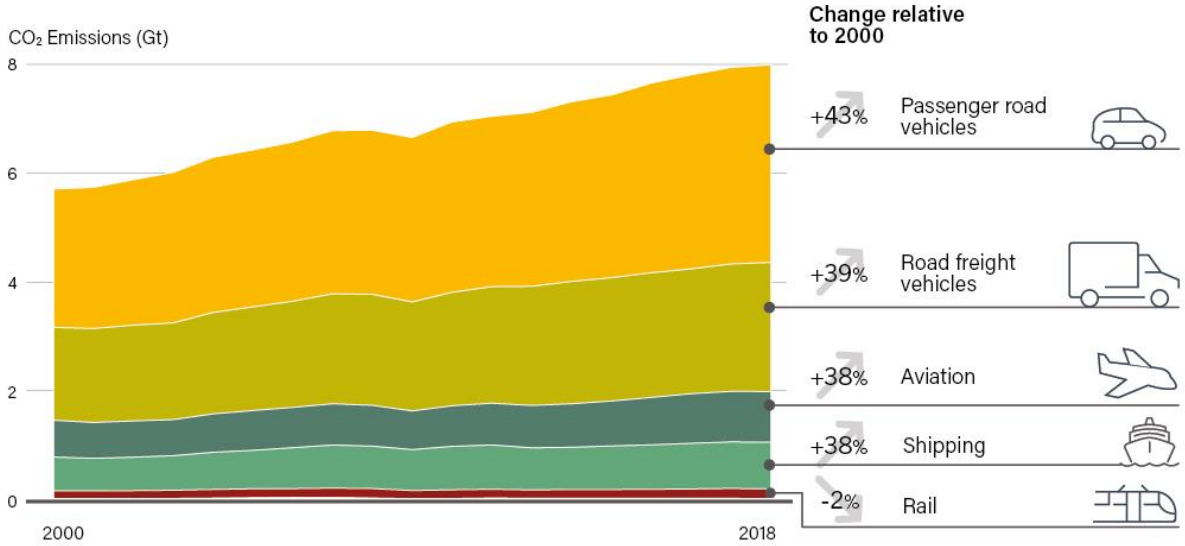


Source: Based on IEA data.

Energy demand has grown much more for transport than other sectors and was met **almost entirely by fossil fuels**.

TRANSPORT EMISSIONS CONTINUE TO GROW

Global CO_2 Emissions from the Transport Sector, by Mode
2000-2018

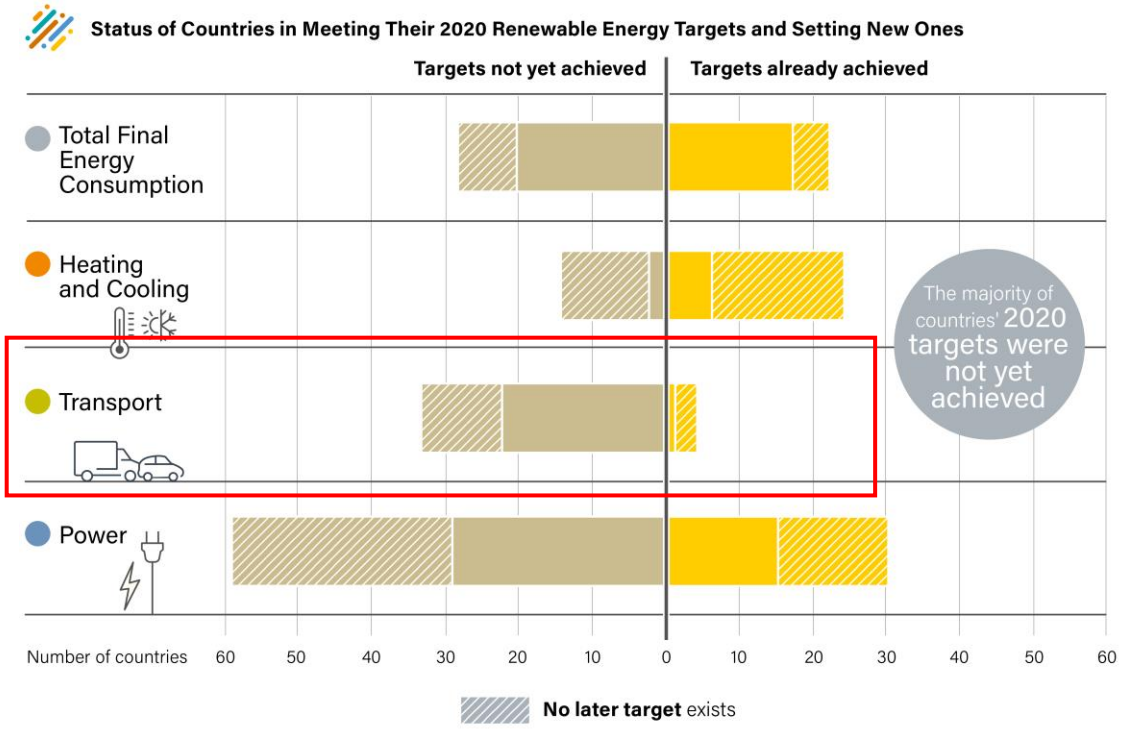


Note: Other pipeline and non-specified transport increased 28% during this period.

Source: SLOCAT and IEA.

Transport emissions are rapidly expanding in almost every sector.

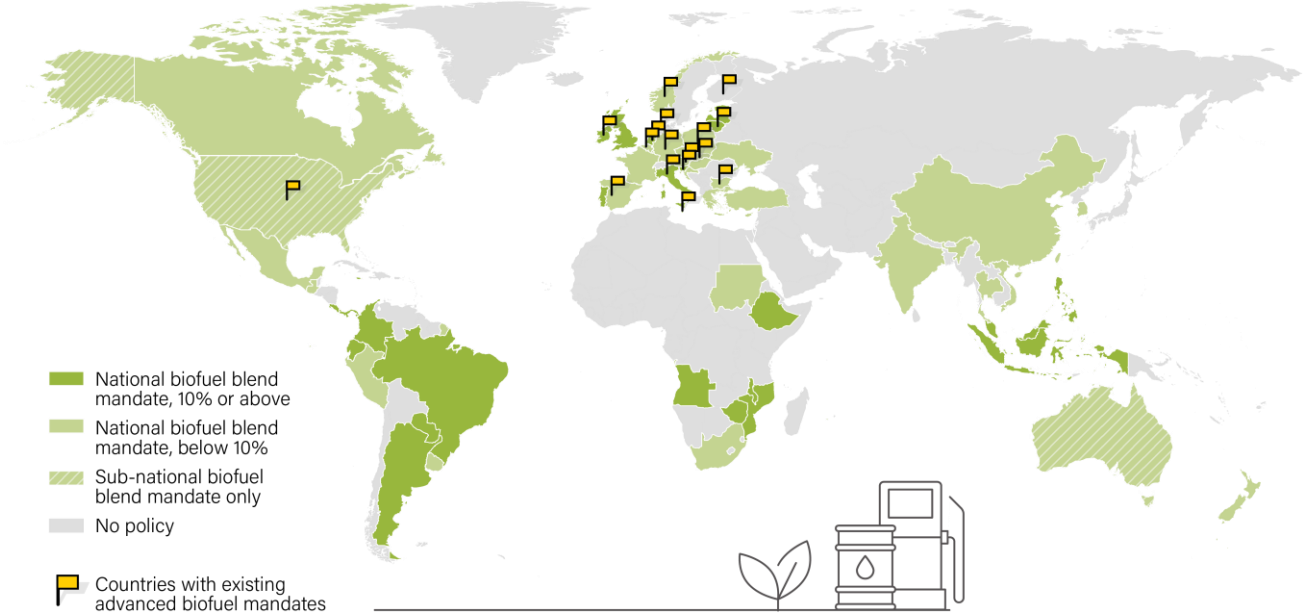
MOST 2020 TRANSPORT TARGETS NOT ACHIEVED



The transport sector has seen **the least progress in achieving 2020 targets**.

POLICY ATTENTION FOR TRANSPORT REMAINS FLAT

National and Sub-National Renewable Transport Mandates
End-2020



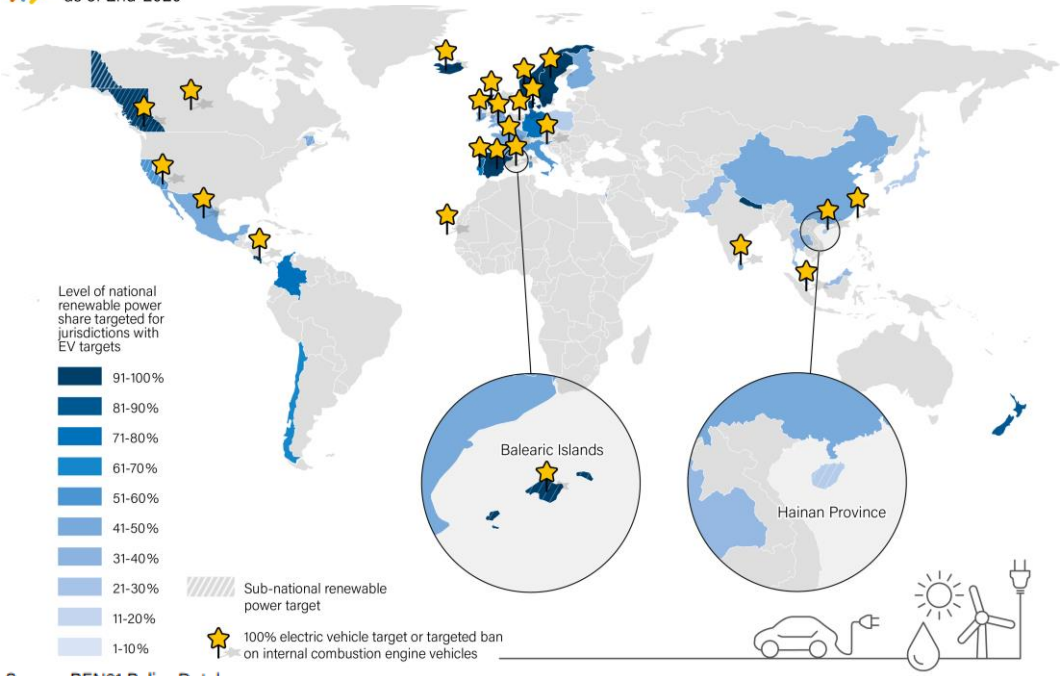
Source: REN21 Policy Database.

Support for biofuels in transport in only **65 countries**.

Targets for advanced biofuels in only **11 countries**.

FEW COUNTRIES HAVE TARGETS FOR BOTH EVS & RENEWABLES

Targets for Renewable Power and Electric Vehicles
as of End-2020

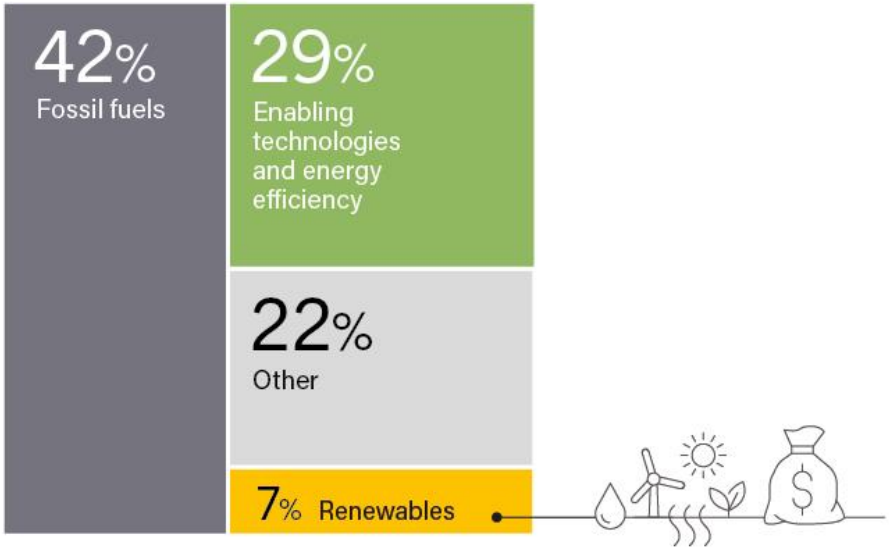


Source: REN21 Policy Database.

Only 8 countries with targeted bans on internal combustion engine vehicles have 100% renewable power targets.

6X MORE RECOVERY FUNDING FOR FOSSIL FUELS

Energy Investments in COVID-19 Recovery Packages of 31 Countries
January 2020 to April 2021

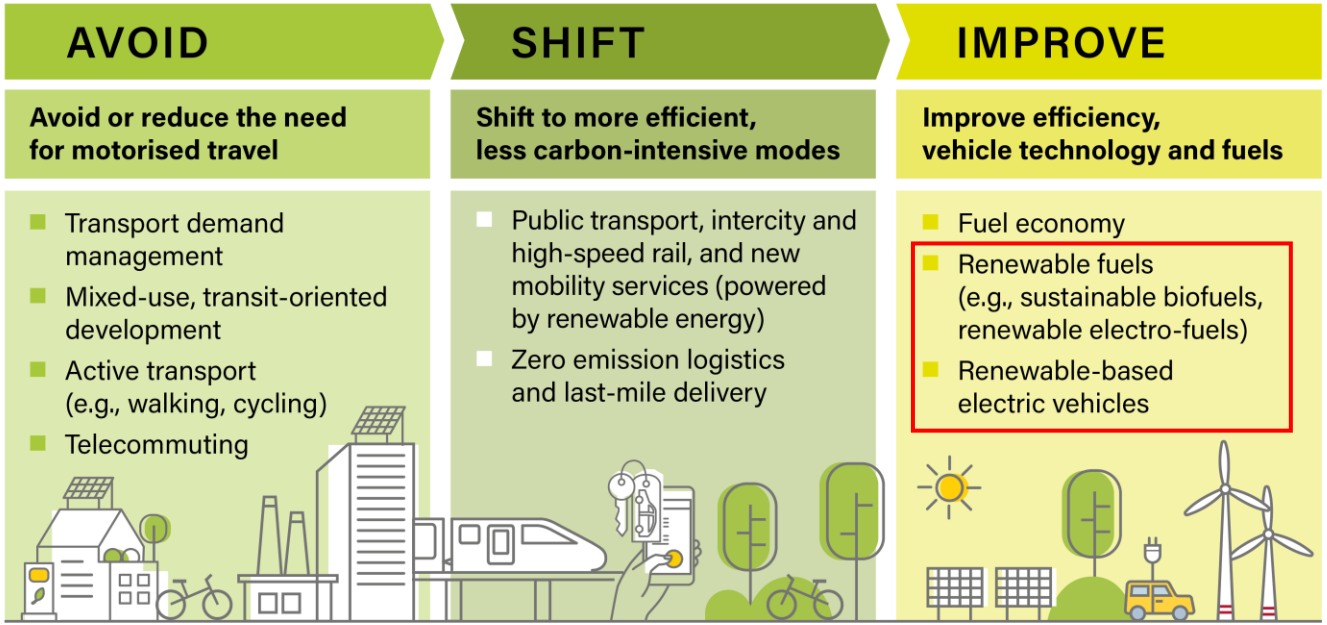


Source: EnergyPolicyTracker.org.

...early 2021, **only** ...COVID recovery ...ing was allocated ...ewables.

RENEWABLE ENERGY CRITICAL IN THE TRANSPORT TRANSITION

Avoid-Shift-Improve Framework in the Transport Sector



STRUCTURAL SHIFT TO RENEWABLES REQUIRED

- **Rapid** transition needed from fossil fuels to a renewable energy-based system
- **Net zero targets** have to be backed up by renewable energy targets and support policies
- **Measure progress** towards global climate and sustainable development goals with **the right indicator**: the share of renewable energy
- Integrate the renewable energy share as a KPI at **every level of decision making**

WHAT WILL THE FUTURE OF TRANSPORT LOOK LIKE?

- Next edition of the Renewables Global Futures Report (GFR) will ask: "**What will be the role of renewables in decarbonising the transport sector?**"
- Part of NDC Transport Initiative for Asia
- For more info + to sign up to participate: ren21.net/GFR
  - Survey
  - Interviews
  - Workshops
  - Peer review
  - Outreach

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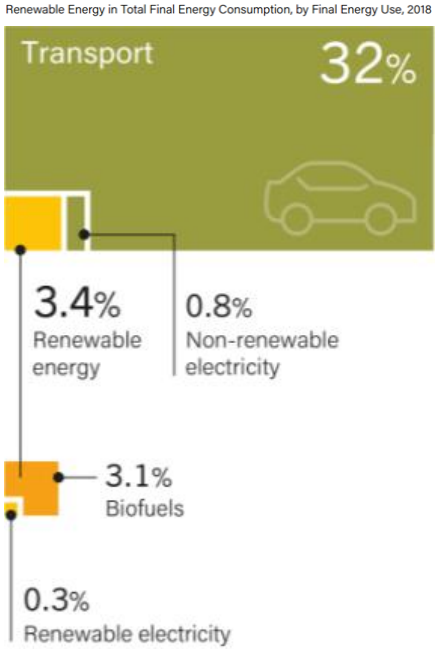
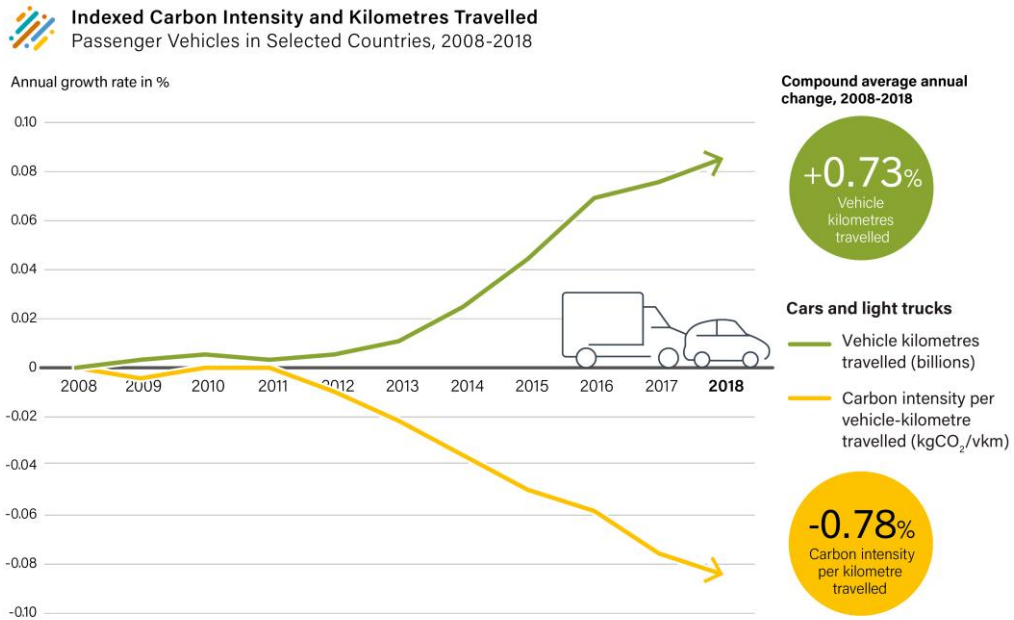
SLOW GROWTH IN RENEWABLE TRANSPORT

KEY BARRIERS

- Sector heavily relying on fossil fuel
  - Fossil fuel subsidies – no level playing field
- Demand increasing fasting than other sectors
- Lack of policy support frameworks
  - Holistic strategies missing
  - Direct linking between EVs and renewables is limited
  - Avoid-Shift-Improve often missing renewable energy
- Investment in supporting infrastructure needed (e.g., EV charging)
- Technological advances needed for renewables in advanced biofuels, maritime and aviation sectors

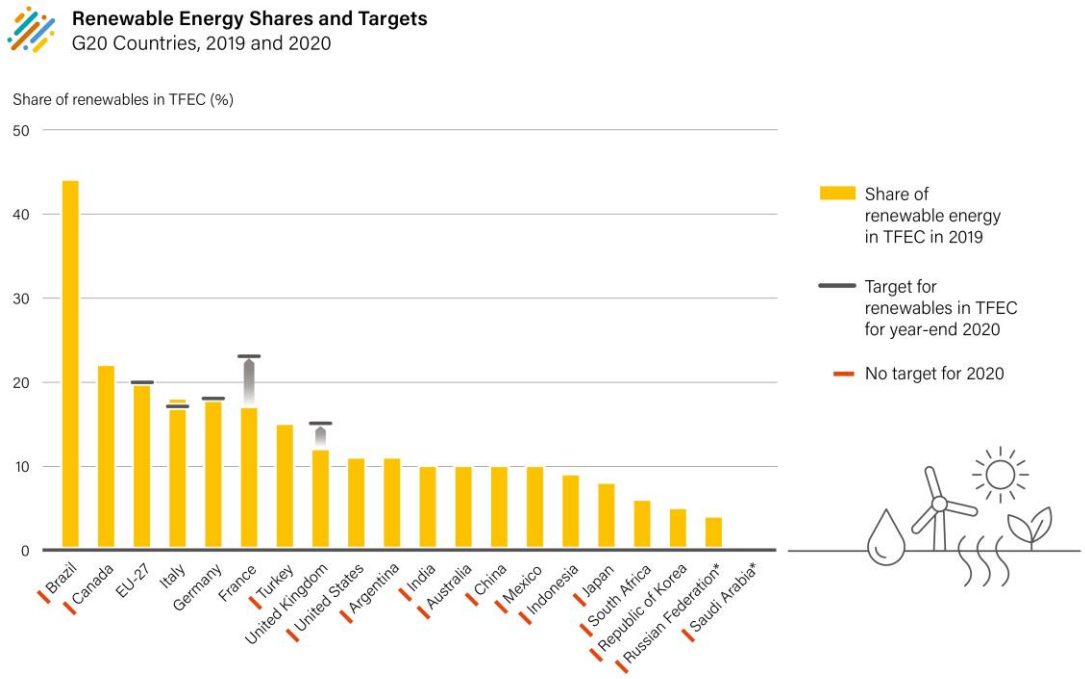


TRANSPORT CARBON INTENSITY IMPROVING SLOWLY



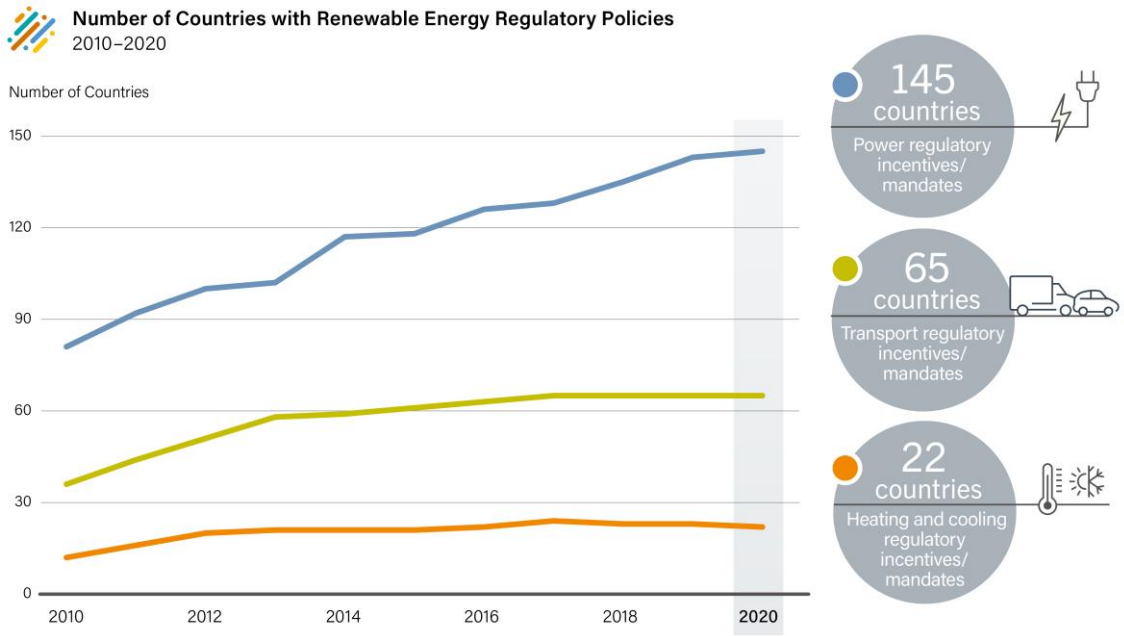
In OECD countries, the **carbon intensity of transport improved at an annual rate of 0.64%** between 2008 and 2017.

G20 COUNTRIES LACK TARGETS FOR RENEWABLES



Only 5 G20 countries had 2020 targets for renewables in final energy, while **none has a target for renewable energy in transport**.

MOST POLICY ATTENTION STILL FOR POWER SECTOR



For the first time ever, the number of countries with **renewable energy support policies did not increase**.

6X MORE RECOVERY FUNDING FOR FOSSIL FUELS

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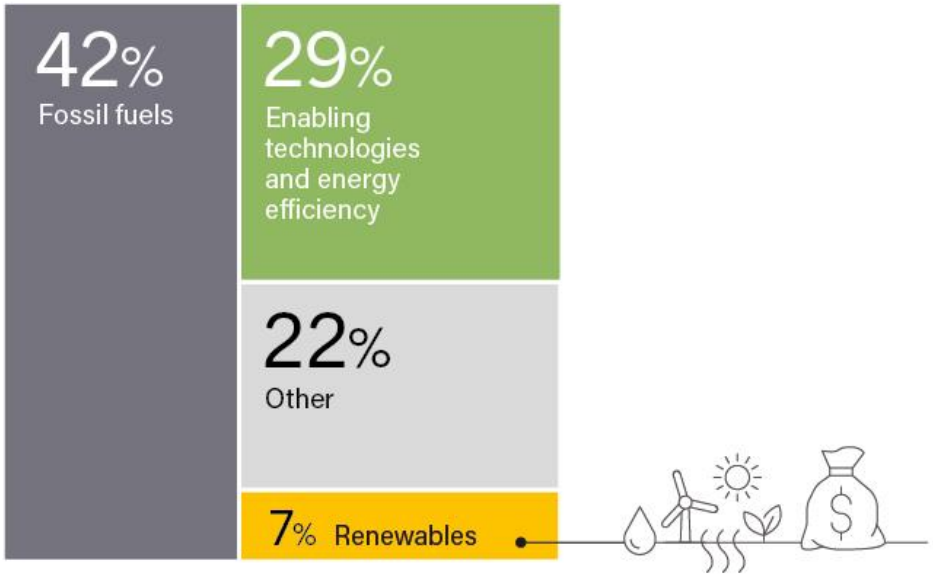
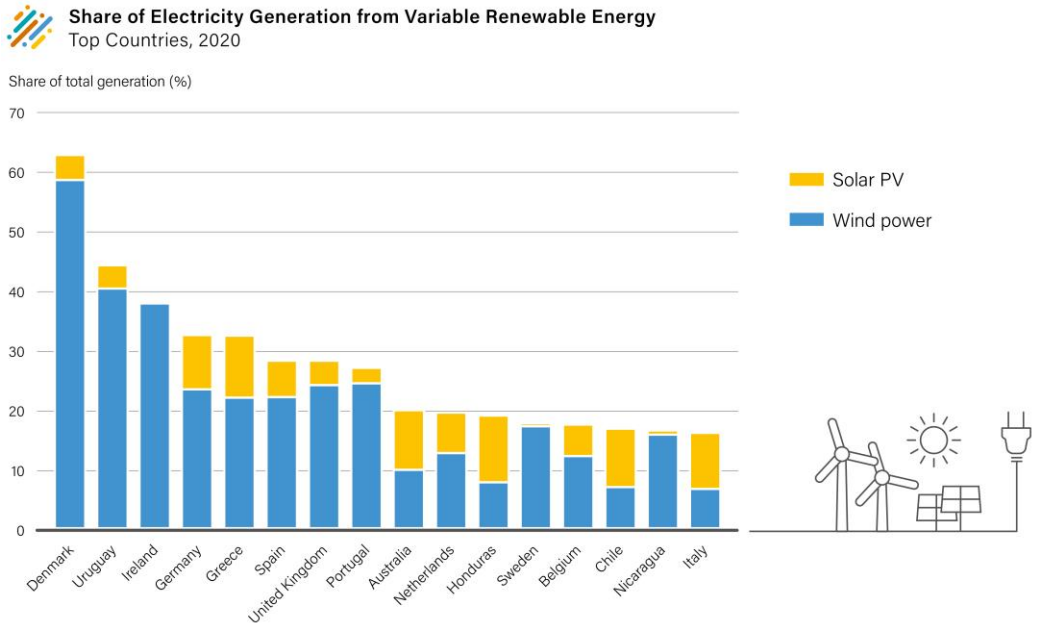


As of early 2021, **64%** of COVID recovery spending was allocated to **fossil fuels or other non-sustainable energy sources**.

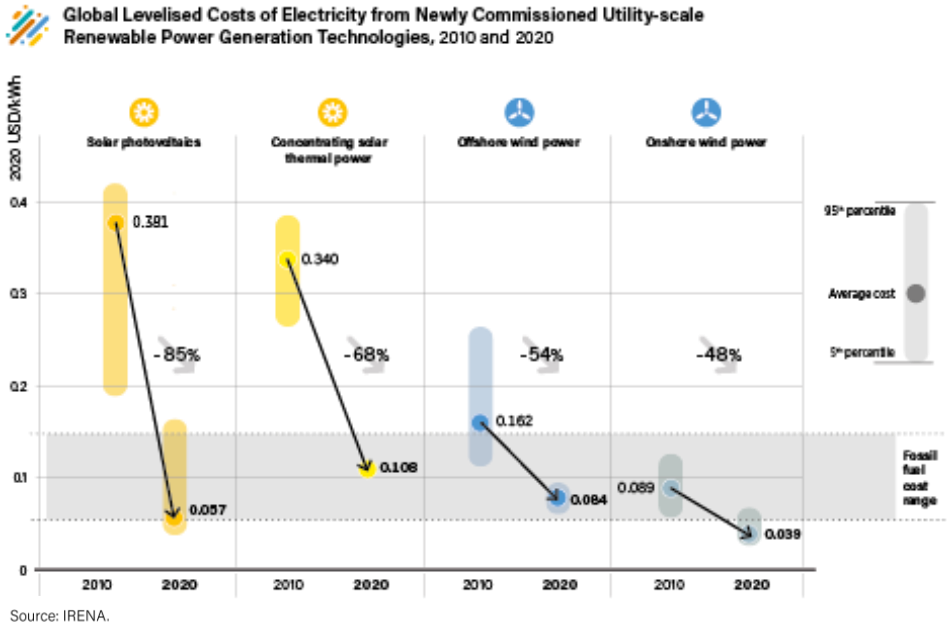
Source: EnergyPolicyTracker.org.

VARIABLE RENEWABLE ELECTRICITY CONTINUED TO RISE



At least **nine countries produced more than 20% of their electricity generation from VRE** in 2020

RENEWABLE POWER COSTS KEEP FALLING



Source: IRENA.

Costs for solar PV and CSP as well as onshore and offshore wind have **fallen sharply over the past decade.**

MANY NET ZERO TARGETS ANNOUNCED IN 2020

New Net Zero Emission and Carbon-Neutral Targets Set
by Countries/Regions in 2020

Net zero emission targets

Country/region	2019 CO_2 emissions (kilotonnes)	2019 CO_2 emissions (% of world total)	Target year	Legal status
EU-27	**2,939,069**	7.73%	2050	Proposed
Austria	72,363	0.19%	2040[1]	In law/policy document
Canada	584,846	1.54%	2050	Proposed
Hungary	53,183	0.14%	2050	In law/policy document
Jamaica	7,442	0.02%	2050	Pledge
Lao PDR	6,783	0.02%	2050	Pledge
Maldives	913	<0.001%	2030[2]	Pledge
Mauritius	4,332	0.01%	2070	Pledge
Nepal	15,019	0.04%	2050	NDC
United Kingdom	364,906	0.96%	2050[3]	In law/policy document
The Vatican	N/A	N/A	2050	Pledge

Carbon-neutral targets

Country/region	2019 CO_2 emissions (kilotonnes)	2019 CO_2 emissions (% of world total)	Target year	Legal status
Argentina	199,414	0.52%	2050	NDC
Barbados	3,827	0.01%	2030	In law/policy document[4]
China	11,535,200	30.34%	2060	Pledge
Japan	1,153,717	3.03%	2050	Pledge
Kazakhstan	277,365	0.73%	2060[5]	Pledge
Korea, Republic of	651,870	1.71%	2050	NDC
Malawi	1,616	<0.001%	2050	Pledge
Nauru	N/A	N/A	2050	Pledge
Slovenia	15,365	0.04%	2050	National plan/strategy
South Africa	494,862	1.30%	2050[6]	National plan/strategy

Only about one-fifth of all announced national net zero targets are actually **in law** or have been achieved.