International Carbon Action Partnership

EMISSIONS TRADING WORLDWIDE

Infographics

Status Report 2021

EMISSIONS TRADING WORLDWIDE

International Carbon Action Partnership (ICAP) Status Report 2021

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FROM SUPRANATIONAL TO LOCAL

Emissions trading operates at every level of government

1 Supranational

EU Member States
+ Iceland
+ Liechtenstein
+ Norway

8 Countries

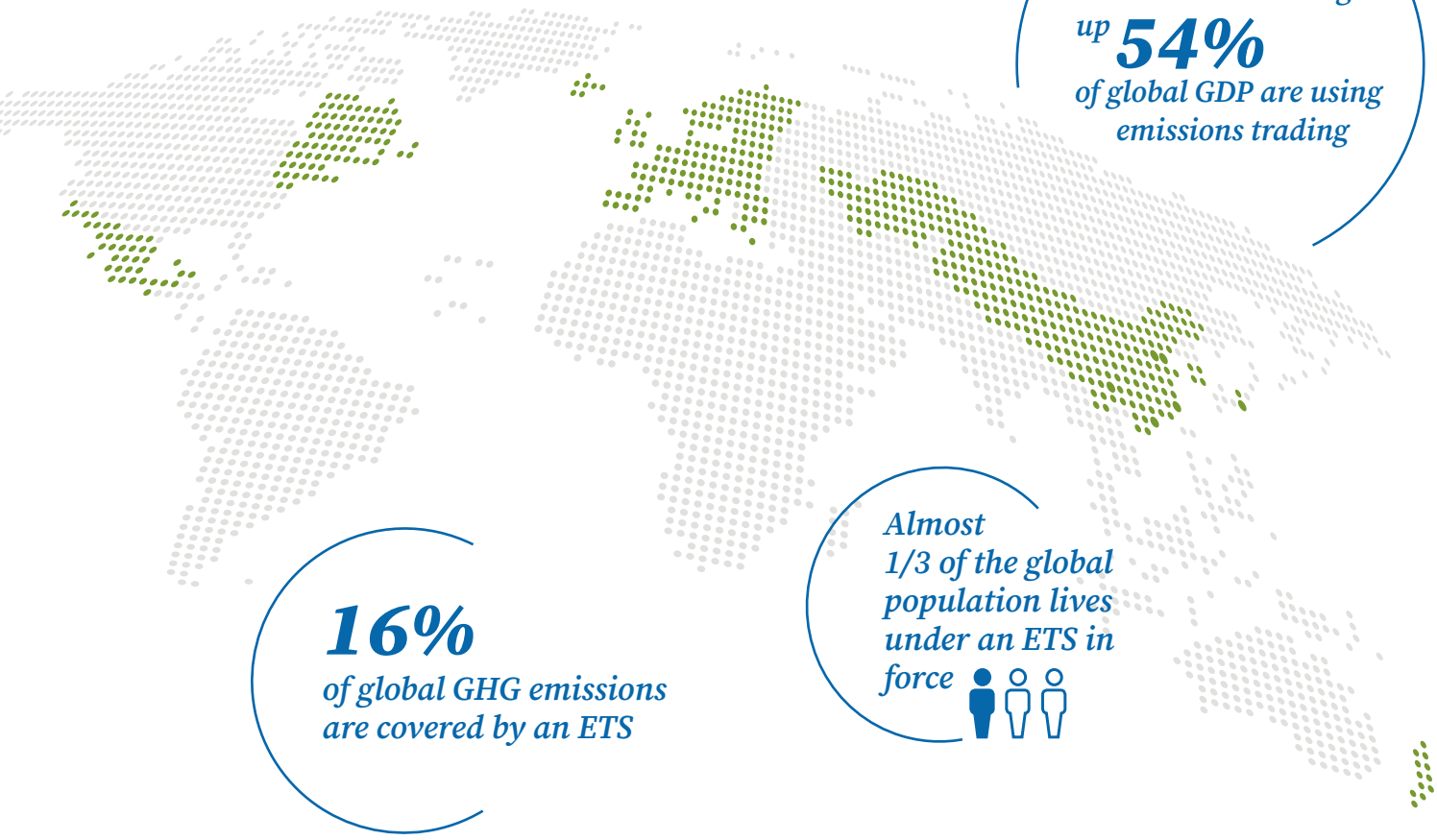
China
Germany
Kazakhstan
Mexico
New Zealand
Republic of Korea
Switzerland
United Kingdom

18 Provinces & States

California
Connecticut
Delaware
Fujian
Guangdong
Hubei
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Nova Scotia
Québec
Rhode Island
Saitama Prefecture
Vermont
Virginia

6 Cities

Beijing*
Chongqing*
Shanghai*
Shenzhen
Tianjin*
Tokyo



Jurisdictions making up ***54%*** *of global GDP are using emissions trading*

16% *of global GHG emissions are covered by an ETS*

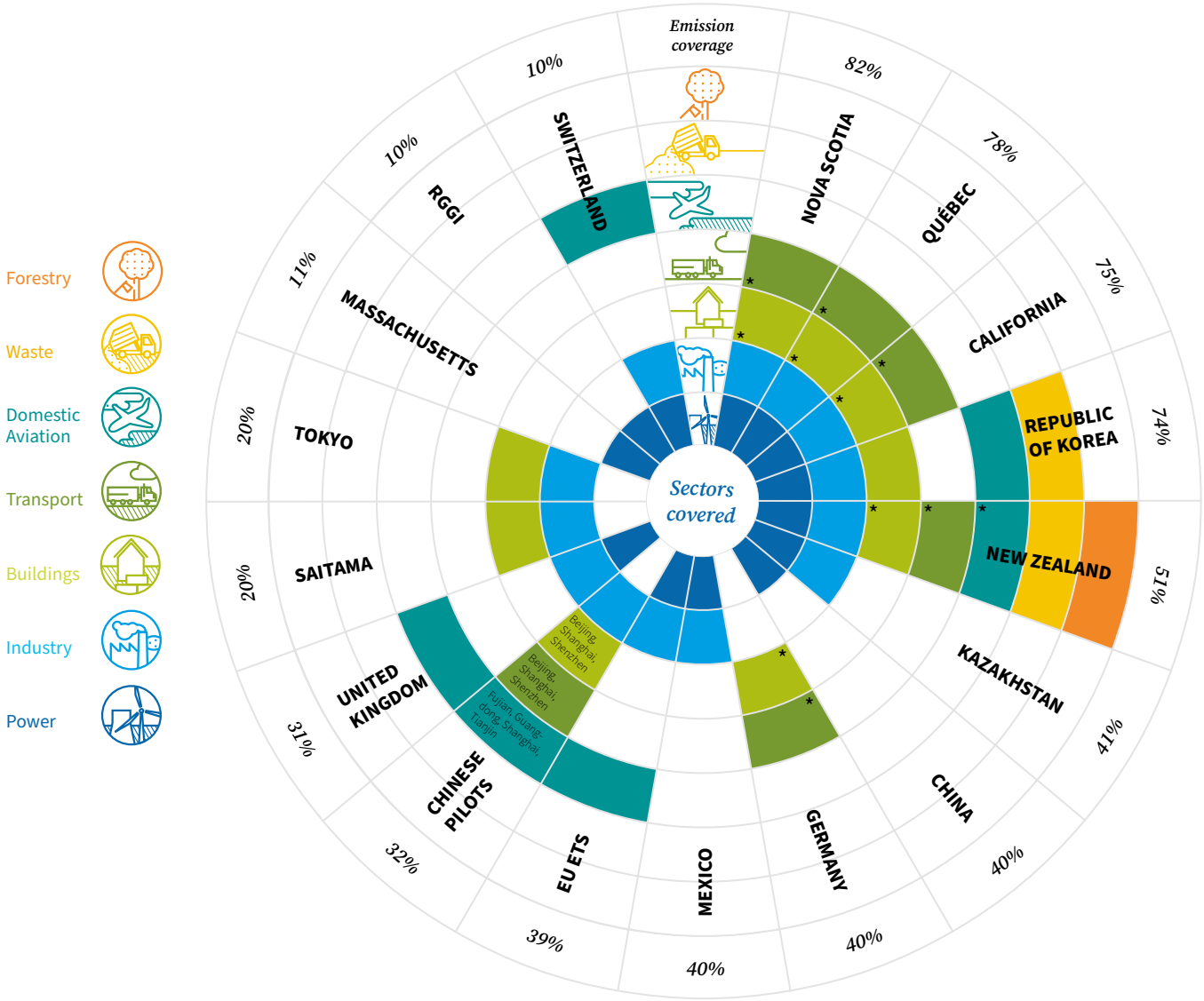
Almost 1/3 of the global population lives under an ETS in force

* *In the Chinese administrative system, Beijing, Chongqing, Shanghai and Tianjin are provincial level municipalities.*

SECTOR COVERAGE

Sectors covered by emissions trading across systems

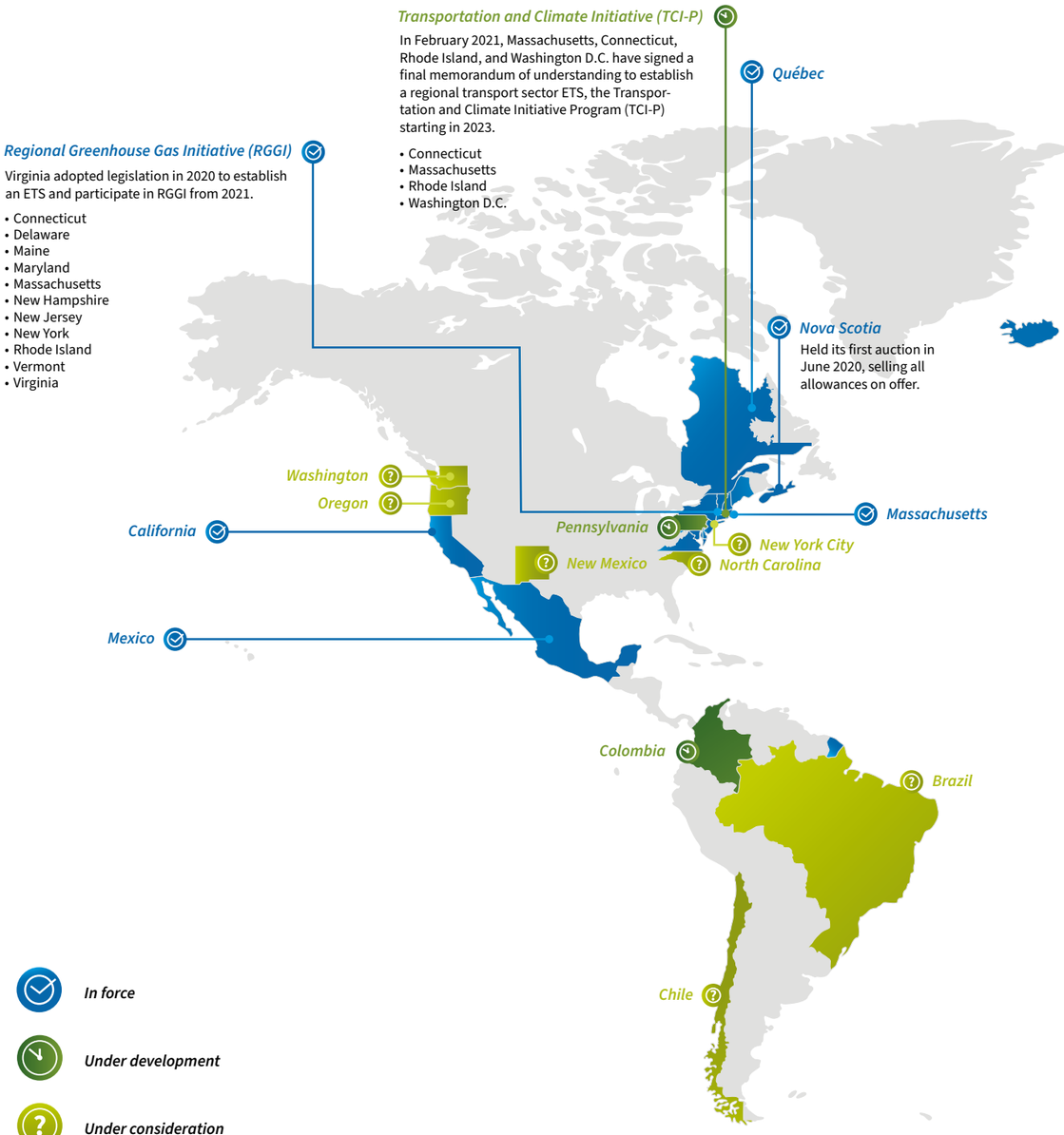
The graphic shows sectors (types of economic activity) covered by an ETS in force in 2021. Systems are listed clockwise in decreasing order of share of aggregate emissions covered, with the numbers in the outermost ring indicating the share of aggregate emissions covered by the system. Upstream coverage is indicated with an asterisk (*). Sectors are considered covered when at least some entities in the sector have explicit compliance obligations. Typically, not all facilities in the sector are regulated because of limits like inclusion thresholds. In addition, not all gases or processes of a given sector are covered. The jurisdictions' respective factsheets provide more information on system coverage. Only sectors covered by at least one ETS are included in the graphic. See "Notes on Methods and Sources" for further details.

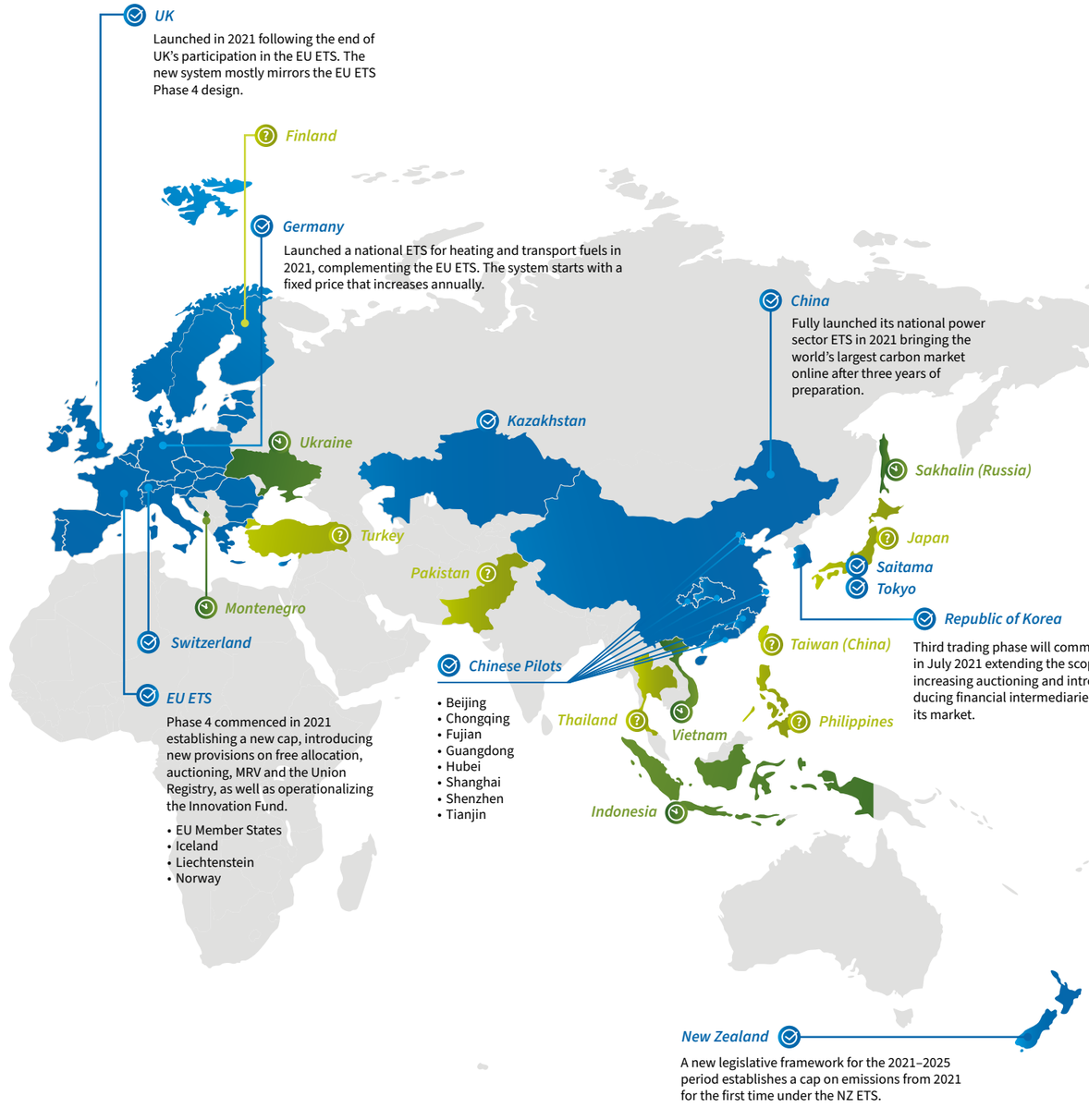


EMISSIONS TRADING WORLDWIDE

The state of play of cap-and-trade in 2021

The ICAP ETS world map depicts emissions trading systems currently in force, under development or under consideration. As of 31 January 2021, there are 24 ETS in force. Another eight are under development and expected to be in operation in the next few years. These include ETS in Colombia and the Transportation and Climate Initiative Program (TCI-P) in northeastern US States. 14 jurisdictions including Chile, Turkey and Pakistan are also considering the role an ETS can play in their climate change policy mix. If a jurisdiction has multiple systems in force or has a system in force but is at the same time developing or considering an additional system, it is depicted in blue.

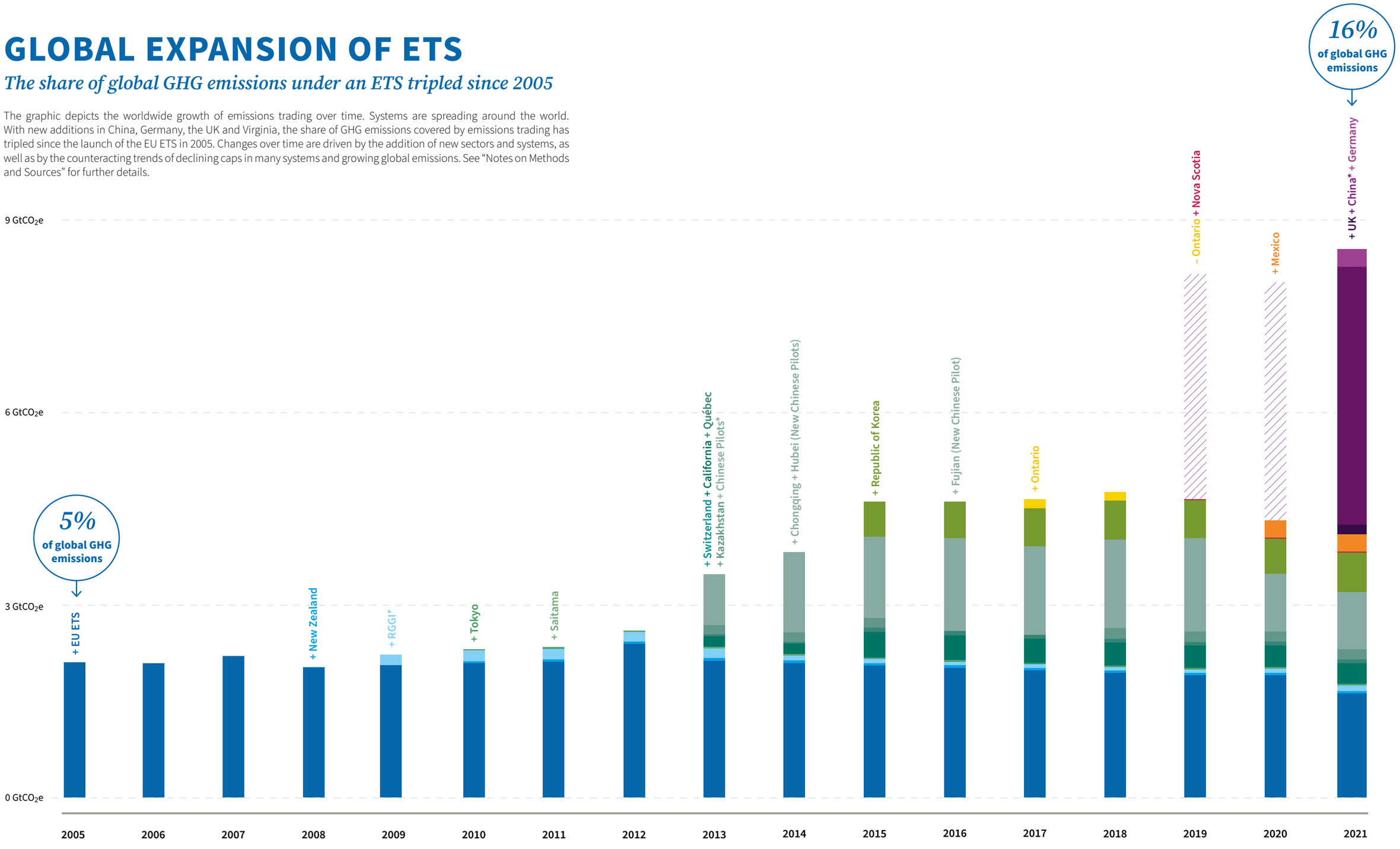




GLOBAL EXPANSION OF ETS

The share of global GHG emissions under an ETS tripled since 2005

The graphic depicts the worldwide growth of emissions trading over time. Systems are spreading around the world. With new additions in China, Germany, the UK and Virginia, the share of GHG emissions covered by emissions trading has tripled since the launch of the EU ETS in 2005. Changes over time are driven by the addition of new sectors and systems, as well as by the counteracting trends of declining caps in many systems and growing global emissions. See “Notes on Methods and Sources” for further details.



* RGGI includes New Jersey (as of 2020) and Virginia (as of 2021).

* Beijing,Guangdong, Shanghai, Shenzhen, Tianjin

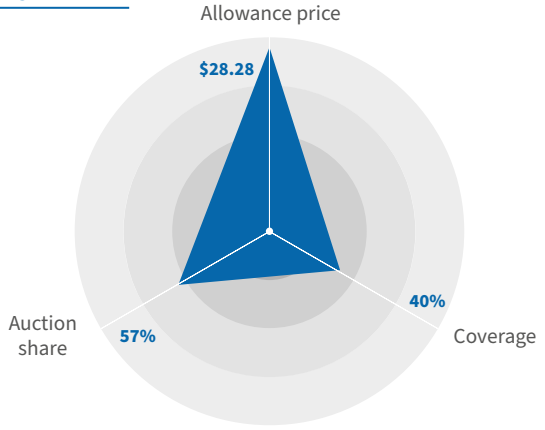
*The Chinese National ETS came into force in 2021 but has retroactive compliance obligations in 2019 and 2020, indicated above by the striped bars.

DIFFERENT SHAPES OF ETS

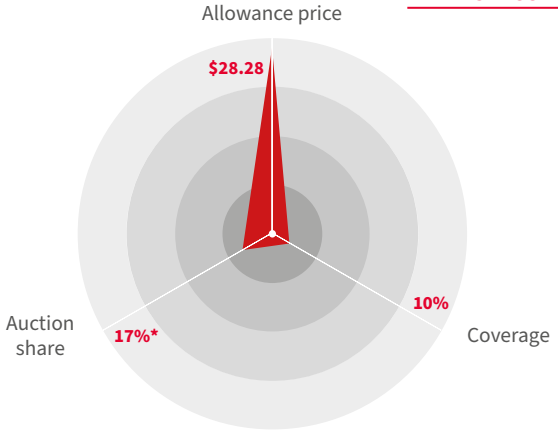
A comparative look at key metrics in six well-established systems

The axes on each graph correspond to a specific metric. Allowance price is measured in USD per metric tonne of CO_2e in each system and averaged over 2020. Coverage shows the share of the jurisdiction's emissions covered under the ETS. Auction share, expressed as a share of the 2020 cap, denotes the number of allowances that were auctioned and generated revenues for the jurisdiction's government. To aid comparison, the axes share the same scale across graphs. See "Notes on Methods and Sources" for further details.

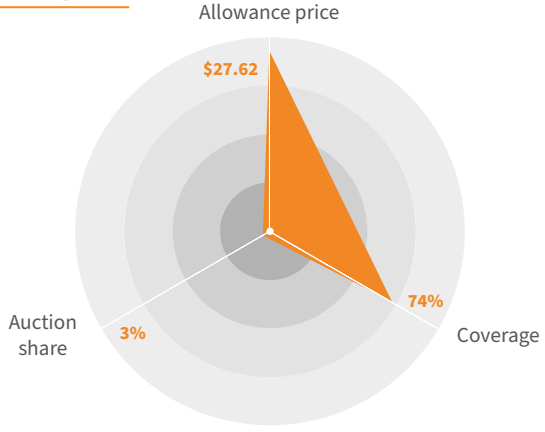
EU ETS



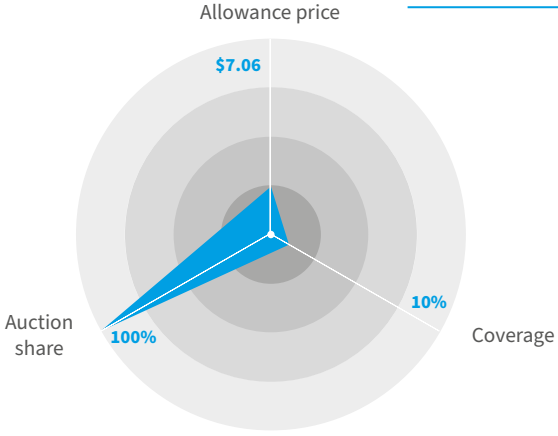
SWISS ETS



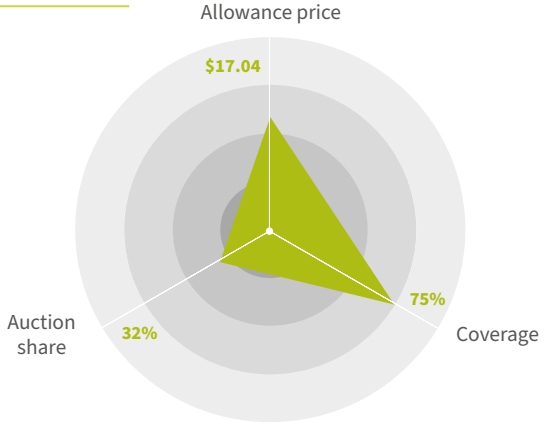
KOREA ETS



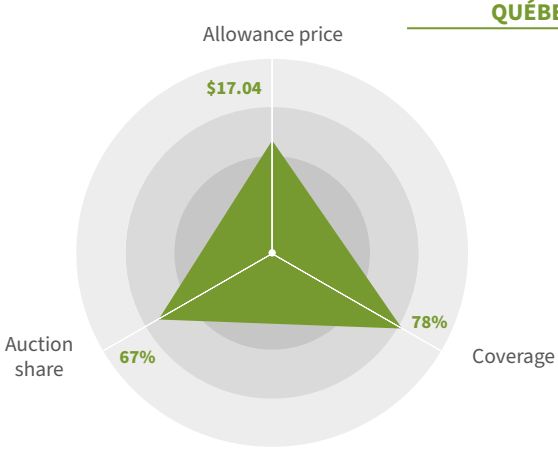
RGGI



CALIFORNIA



QUÉBEC

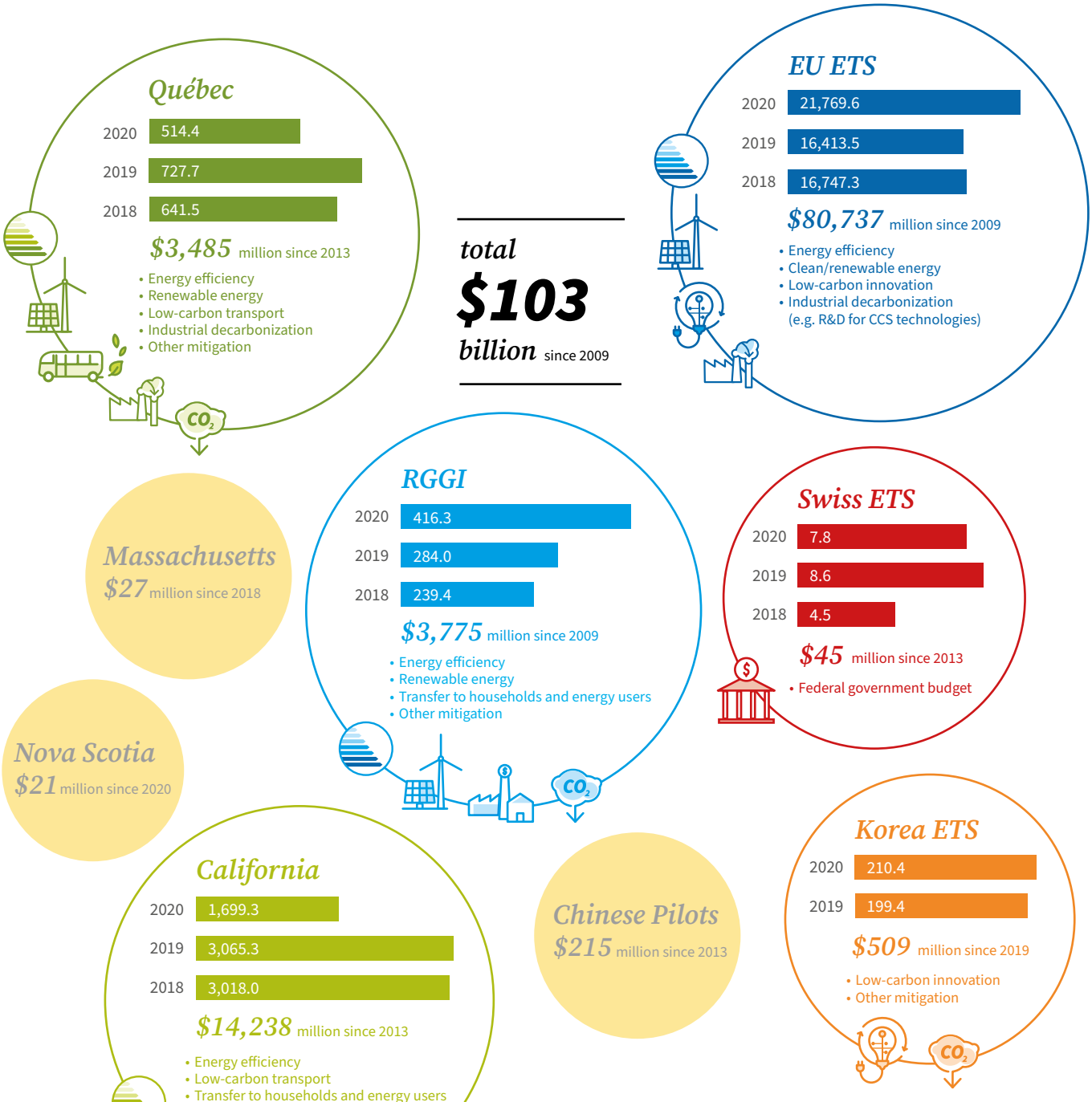


** Not considering cancelled auctions. See "Notes on Methods and Sources" for further details.*

AUCTION REVENUE

Emissions trading as an additional source of government revenue

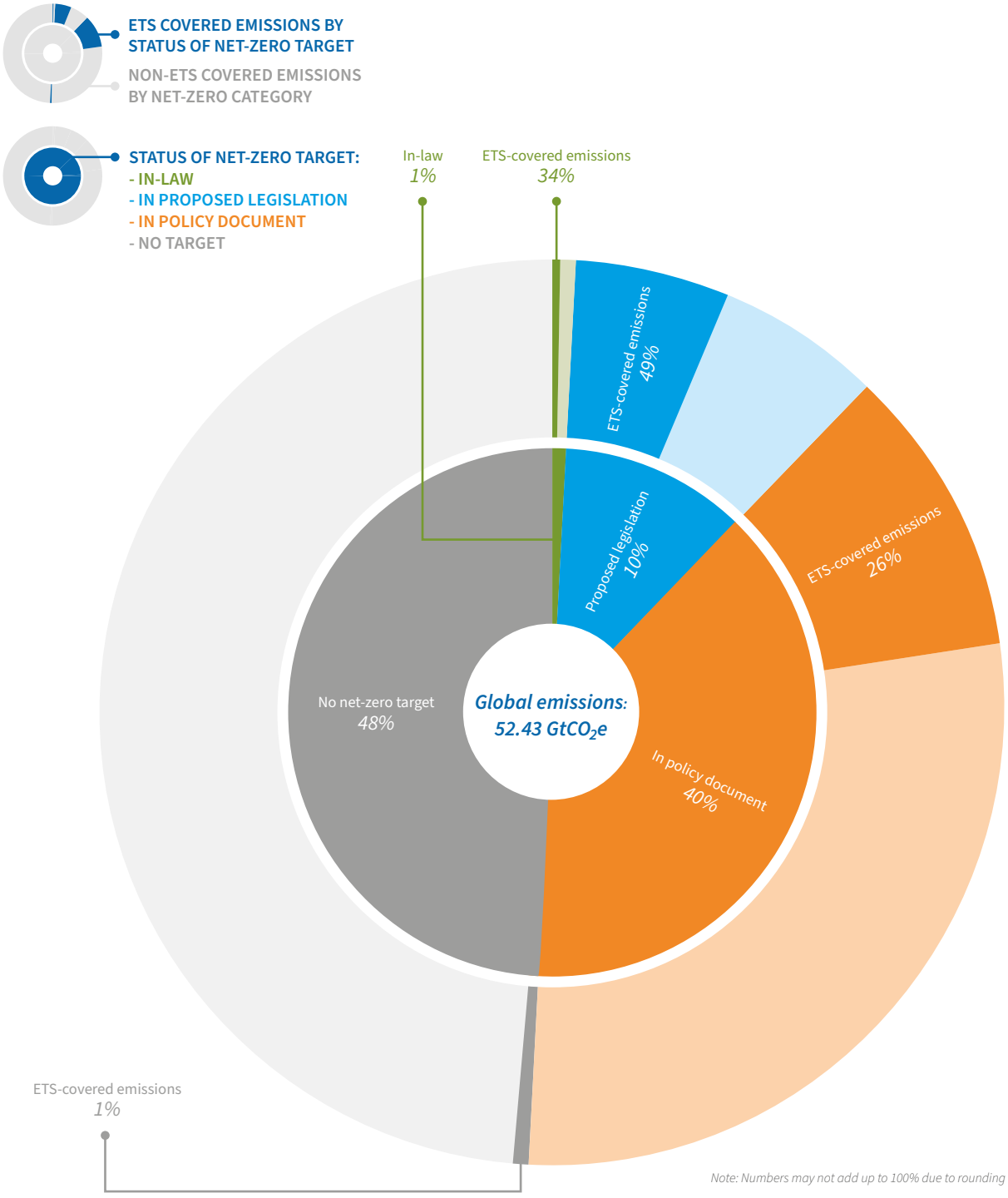
Allowance auctions generate revenue that can be used in areas reflecting jurisdictional priorities. Jurisdictions have tended to use auction revenues to fund climate programs, including on energy efficiency, low-carbon transport and renewable energy. Revenues have also been used to support energy intensive industries, as well as to assist disadvantaged and low-income groups. The amount of revenue collected depends on the jurisdiction's size, ETS coverage, share of auctioned allowances and their prices. By the end of 2020, systems worldwide raised over USD 103 billion cumulatively. See "Notes on Methods and Sources" for further details.



DEEP DECARBONIZATION AND ETS

ETS as an important policy instrument for the net-zero transition

Around the world an increasing number of jurisdictions are formally adopting mid-century net-zero emissions targets to limit global warming to 1.5°C. Emissions trading is an important component of the policy portfolios aimed at achieving these targets. The inner ring of this infographic shows the share of global GHG emissions by status of net-zero target development at the national or, for EU member states, supranational level based on the categorization from the Energy & Climate Intelligence Unit's Net Zero Tracker. For each stage of net-zero target development, the outer ring indicates the share of emissions covered by an ETS currently in force at the subnational, national or supranational level. See "Notes on Methods and Sources" for further details.

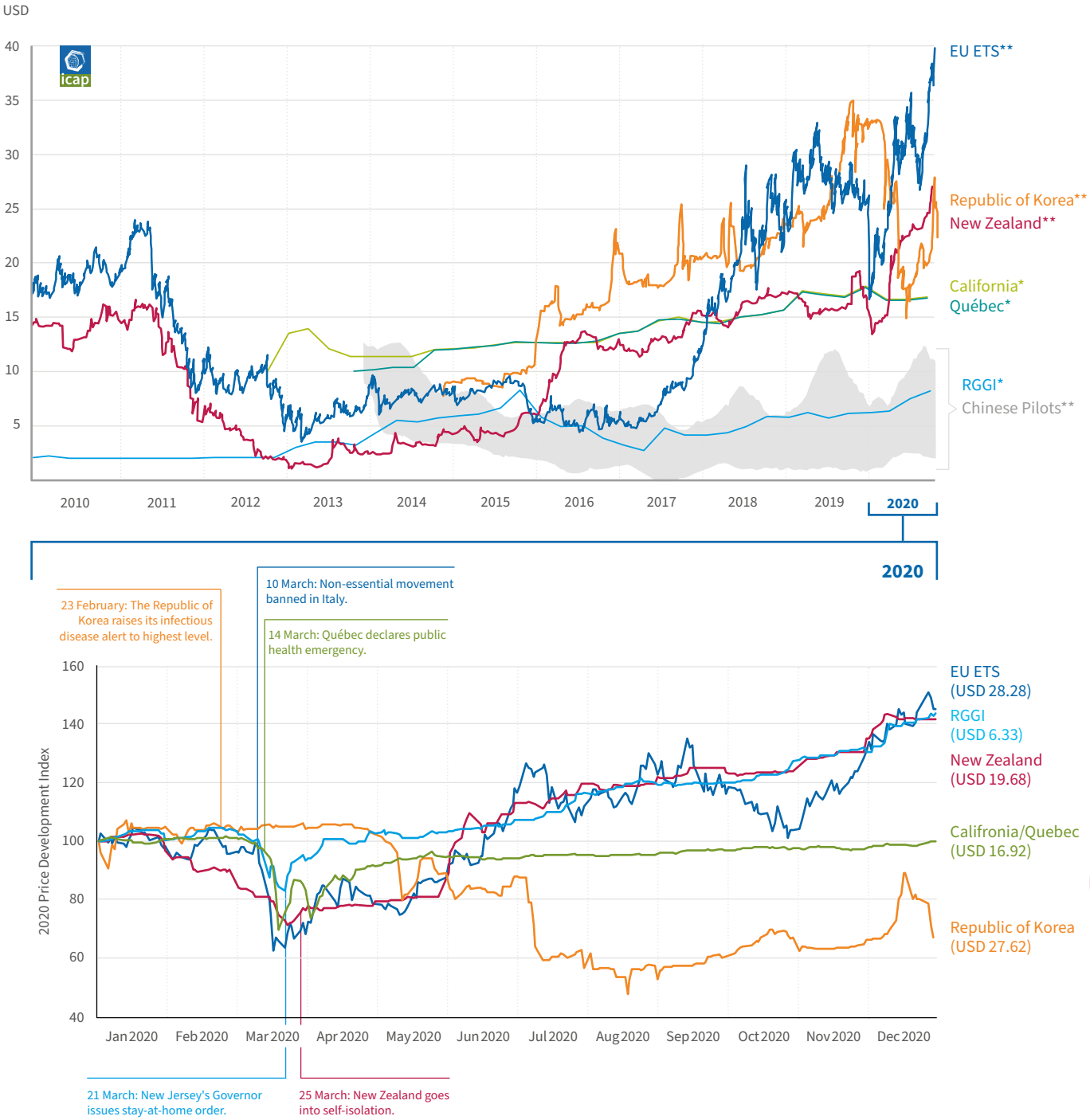


Note: Numbers may not add up to 100% due to rounding

ALLOWANCE PRICE DEVELOPMENTS

Allowance price developments since 2010

The top panel of the figure uses data from the ICAP Allowance Price Explorer to visualize price developments in primary (*) and secondary (**) markets between 2010 and 2020 in major ETSs around the world. Sustained upward trends and short-term volatility were driven by changes in current and expected future scarcity of allowances, due to variations in general economic conditions, revisions to the rules of the systems (including those governing offsets and market stability mechanisms), and interactions with other climate and energy policies. The lower panel shows an index of allowance prices in selected ETSs in 2020. The index value is set to 100 across all prices at the start of 2020 and values at other dates indicate price changes relative to this base period. Prices indicated to the right are the yearly average of the daily secondary market prices. Highlighted dates indicate the first major government announcements regarding restrictions to stop the spread of COVID-19. Although most of the displayed systems experienced a sharp price decrease early in the pandemic, prices recovered for most systems by the second half of 2020. See "Notes on Methods and Sources" for further details.



NOTES ON METHODS AND SOURCES

GENERAL NOTES

1. The report draws on a range of sources, including official ETS information and statements from governments and public authorities, data submitted to the UNFCCC, or where available, other official reporting, and information provided by ICAP members and observers, contributing authors or in-country/native experts from our network. Information on emitting sectors is based on jurisdiction-specific data sources; therefore, categories are not necessarily consistent across jurisdictions.
2. Data in the report represents the current situation as of 31 January 2021.
3. Where 2021 data is not yet available, we use the most recent available data.
4. For the purpose of this report, emissions trading systems (ETS) include mandatory cap-and-trade systems for GHGs. Systems that regulate other gases (e.g., other air pollutants) or trade other units (e.g., energy-efficiency certificates), other market-based instruments (e.g., carbon taxes, baseline-and-crediting systems) and voluntary programs do not fall under the scope of this report.
5. We use metric tonnes throughout the report, unless otherwise indicated.
6. Emissions coverage as reported in the factsheets refers to the verified emissions of entities under the ETS in a jurisdiction as a proportion of that jurisdiction's inventory. When this value is not available, an equivalent value provided by the jurisdiction, or the cap of the system, is used.
7. Average allowance prices are the mean of the allowance prices between 1 January 2020 and 31 December 2020. Values are taken from the infographic Allowance Price Developments (see below).
8. All monetary values in national currency units are converted to USD using the annual average exchange rates provided by the international financial statistics of the IMF. For monetary values that are fixed over multiple years the value reported in USD uses the most recent year's exchange rates.
9. Overall GHG emissions, the sum of the sectoral emissions, and the corresponding percentages reported in the factsheets may not add up exactly, due to rounding.
10. The following criteria are used to determine the three ETS status categories:
    a. In force: ETS is in force with implementation established in the relevant regulation or legislation.
    b. Under development: A mandate for ETS is established and ETS rules are currently being drafted.
    c. Under consideration: ETS is being considered as a potential mitigation instrument, the government or other relevant authorities have publicly sent signals towards the development of an ETS.
11. The factsheets for Montenegro and New Mexico could not be reviewed by the respective jurisdictions but were reviewed internally within the ICAP Secretariat team.

NOTES ON INFOGRAPHICS

For the infographics "From Supranational to Local", "Emissions Trading Worldwide" and "Sector Coverage", we draw on data contained in the factsheets, the online version of the ICAP ETS Map (https://icapcarbonaction.com/en/ets-map), as well as news articles from the ICAP Secretariat. For infographics involving quantitative data the following sources and methods were used:

FROM SUPRANATIONAL TO LOCAL

1. Jurisdictions' shares of global GDP and world population are calculated based on the latest annual data available before the Status Report's editorial cut-off date in February 2021. They cover 2018 or 2019 data. The population of jurisdictions with an ETS in force and the cumulative GDP of their respective economies are calculated as a share of world population and global GDP. The share of global GHG emissions covered by an ETS in force is calculated using the latest available data for the jurisdictions' official cap. In cases where the 2021 cap data were not available, estimates based on most recent data were used. Specific sources and figures are available upon request from info@icapcarbonaction.com.

SECTOR COVERAGE

1. For the purposes of this infographic, the following sector definitions are used:

SECTOR	DEFINITIONS
Power	Emissions from the combustion of fossil fuels for electricity generation, as well as large-scale centralized heat production.
Industry	Emissions from industrial activity, typically covering both energy emissions (e.g. from burning fossil fuels in furnaces), as well as process emissions (e.g. in the case of cement production). In the case of Kazakhstan, this also comprises extractive industries such as oil and gas mining.
Domestic Aviation	Emissions from fossil fuel combustion for flights arriving and departing within the jurisdiction ('domestic') which are not regulated by the International Civil Aviation Organization (ICAO).
Transport	Emissions from fossil fuel combustion for transport with the exception of aviation (domestic and international) and international maritime transport. Coverage usually is upstream with fuel distributors facing compliance obligations.
Buildings	Emissions originating from buildings. With upstream coverage, distributors of heating fuels face compliance obligations and all consumers are exposed to the carbon price. With downstream coverage, emissions of large buildings are regulated. In this case, emissions originating from other sectors (e.g. power production) may also be attributed to buildings to incentivize demand reduction and shifting towards cleaner sources of supply.
Forestry	Emissions and removals resulting from forest land use, including forest management/harvest, deforestation and re/afforestation activities.
Waste	Emissions from waste disposal and management (e.g. methane from anaerobic decomposition in landfills).

2. Agriculture is a major source of biological emissions; however, the sector does not yet face direct compliance obligations under any existing ETS. Currently, in New Zealand, agricultural emissions must be monitored and reported under the ETS, and some offset programs (e.g. California) allow for offset projects in the sector.
3. Emissions coverage of the different systems corresponds to the value that is reported in the corresponding factsheets. In the case of the Chinese pilots, the coverage was calculated by adding the most recent reported caps of all the pilots and dividing that number by the addition of the most recent reported GHG emissions of all the pilots. Note that sector coverage differs across Chinese pilots and this is indicated in the relevant slice of the infographic.

GLOBAL EXPANSION OF ETS

1. Whenever available, we use the official and most recent cap data. When those data are unavailable or when systems operate without a cap, the estimates of covered emissions in the regulated sectors are used instead.
2. EU ETS cap in 2021 has been revised down to reflect the UK leaving the system. It includes emissions covered under the aviation sector cap of the EU ETS, which in 2012 amounted to 210 $MtCO_2e$ and from 2013 to 2021 has been around 38 $MtCO_2e$ per year. For more details, see the EU ETS factsheet.
3. Chinese National ETS started operating in 2021. In early January 2021, the Ministry of Ecology and Environment (MEE) published key ETS policy documents, along with an announcement that regulated entities will need to surrender allowances pertaining to their 2019–2020 emissions in 2021. The infographic reflects the start date of the Chinese National ETS in 2021, while also indicating the retroactive coverage of the system in 2019 and 2020. The caps for the Chinese National ETS and Pilots are estimated values provided by domestic ETS experts.
4. There are two cases where an existing and a scheduled system regulate the same emissions. In those cases, we made the following assumptions:
    a. Massachusetts ETS & RGGI: Massachusetts' system covers the same emissions as RGGI does, so it is excluded from the infographic to avoid double counting.
    b. Chinese National ETS & Pilots: According to the Chinese National ETS rules, Pilots that have already allocated allowances for 2019 and/or 2020 for the power sector will remain under the pilots for those years. This implies the power sector entities that are subject to overlapping regulation will be covered under the pilots in 2020 and move to the national ETS starting 2021. Accordingly, the infographic reduces the Chinese Pilots' cap in 2020 and 2021 by 550 $MtCO_2e$ based on estimates provided by domestic ETS experts.

5. Global emissions data refer to GHG emissions in CO_2e excluding LULUCF. The values for 2020 and 2021 are calculated based on the observation in 2019 and assuming a constant 1.62% growth rate, which is the average growth rate of global GHG emissions between 2016 and 2019 and likely overestimates the actual growth rate of emissions considering the ongoing COVID-19 pandemic. Global GHG emissions data are from Olivier and Peters (2020): Trends in Global CO_2 and Total Greenhouse Gas Emissions; 2020 Report. PBL Netherlands Environmental Assessment Agency, The Hague. URL: https://www.pbl.nl/sites/default/files/downloads/pbl-2020-trends-in-global-co2-and_total-greenhouse-gas-emissions-2020-report_4331.pdf
6. Percentages of global emissions covered are rounded to the nearest full percentage. They are slightly above 5% and 16% in 2005 and 2021, respectively.
7. For the German National ETS, we assume that the cap will approximately equal the sum of emissions from transport, residential and commercial/institutional sectors in 2018 from Umweltbundesamt (2020): Nationale Trendtabellen für die deutsche Berichterstattung atmosphärischer Emissionen 1990–2018. URL: https://www.umweltbundesamt.de/themen/klima-energie/treibhausgas-emissionen.

DIFFERENT SHAPES OF ETS

1. **Coverage:** The figure indicates the percentage of the jurisdiction's total emissions that is covered by the ETS. The data is taken from the factsheets and refers to the latest emissions coverage figures available for each system.
2. **Allowance Price:** For the EU ETS, the price is the average of all 2020 spot prices (settlement prices) at the European Energy Exchange. The prices for EU and Swiss ETS are depicted as equal due to the link between the two systems becoming active in 2020. For RGGI, Québec and California, the clearing prices of all auctions conducted in 2020 are averaged. The prices for California and Québec systems are depicted as equal due to the link between them. In the case of RGGI where short tons are the standard unit, the price is converted to the price per metric tonne. For the Korean system, the price is based on end-of-day trading prices on the secondary-market exchange, averaged for 2020. Where necessary local currency prices were converted using the yearly exchange rate as published by the IMF Financial Statistics.
3. **Auction share:** This figure indicates the share of auctioned allowances in the cap. The consignment auctions in California are not included in calculating the auction share. In the case of the Swiss ETS, the figure shows the remainder of the allowances allocated for free as a proportion of the cap, as 2 out of the 4 scheduled auctions in 2020 were cancelled due to the COVID-19 pandemic.
4. The previous editions of ICAP the Status Report featured a fourth metric/axis titled "Cap trajectory". This aspect is not included in the current edition because geographical scope changes in the EU ETS and RGGI as well as sectoral scope changes in K-ETS make the calculation of this metric in 2021 assumption laden.

AUCTIONING REVENUE

1. Auction revenues for the 15 systems (including the 8 Chinese pilots) were calculated using data from the European Commission; California Air Resources Board; Québec Ministry of Sustainable Development, Environment, and Fight Against Climate Change; Regional Greenhouse Gas Initiative; European Energy Exchange; the Intercontinental Exchange and Swiss Emissions Registry; Massachusetts Department of Environmental Protection; the website of the Korea Exchange (KRX) as well as from the factsheets of the Chinese pilot systems (links available upon request, info@icapcarbonaction.com).
2. Auction revenue for the EU ETS includes revenue from the domestic aviation sector.
3. For the California cap-and-trade system, the proceeds from consignment auctions are excluded.
4. For the Québec cap-and-trade system, joint auctions involve currency conversion for part of the proceeds. The rate and transaction fees on the date of conversion can affect the amount deposited to the Green Fund. As a result, the product of the number of permits sold and the settlement price may slightly differ from the actual amount deposited. The estimated percentage of auctioned allowances for the California and Québec cap-and-trade systems are calculated based on the vintage year, not by the year when allowances were or would actually be auctioned.
5. The Massachusetts quarterly reports are published by Potomac Economics, which is the official market monitor for the Massachusetts Department of Environmental Protection.

DEEP DECARBONIZATION AND ETS

1. Information on the status of net-zero target development (i.e. "in law", "in proposed legislation" and "in policy document") is drawn from the Energy & Climate Intelligence Unit's Net Zero Tracker, accessible at https://eciu.net/netzerotracker. National jurisdictions which are not covered under one of these categories are grouped under the fourth category "no net-zero target". The categorization is accurate as of 10 March 2021.
2. For simplicity, the EU is treated as a single supranational jurisdiction and is categorized under "in proposed legislation". It is important to note that there are individual EU Member States with national net-zero targets that are "in law" (e.g. France); "in proposed legislation" (e.g. Spain); "in policy document" (e.g. Finland); or "no net-zero target" (e.g. Bulgaria).
3. Data on national GHG emissions are the most recent available and have been retrieved either from country reports incorporated into the Status Report factsheets, from the UNFCCC National Inventory Submissions 2020 (https://unfccc.int/ghg-inventories-annex-i-parties/2020) as well as the National Communication submissions from Non-Annex I Parties (https://unfccc.int/non-annex-I-NCs). Data on ETS-covered emissions are from the Status Report factsheets.

ALLOWANCE PRICE DEVELOPMENTS

1. The top panel of the infographic displays the allowance prices between 1 January 2010 and 31 December 2020.
2. An allowance represents the right to emit one tonne of CO_2e in the jurisdiction(s) that accept it for compliance. However, allowances from different systems cannot be treated as a single commodity because of differences in system design. Allowance prices are not directly comparable across systems.
3. In the top panel of the infographic, price series for California, Québec and RGGI are obtained from the primary market and are reported at the same frequency as the respective auctions in these systems. All other price series are obtained from the secondary market and are reported for each trading day for which data are available.
4. All data are in USD and are converted using the average exchange rate of the corresponding month as reported by the IMF.
5. For the infographic covering price developments in 2020, the data underlying the indices, including those for WCI (California/Québec) and RGGI, are obtained from the secondary market and are reported for each trading day for which data are available.
6. For the infographic covering price developments in 2020, the data for WCI (California/Québec) and RGGI allowance prices that underlie the graph were provided by the Independent Commodity Intelligence Services (ICIS), with data from the Intercontinental Exchange (ICE).
7. Where allowance prices reflect auction settlement prices, the observations from two successive auctions are connected linearly.
8. Secondary market prices reflect settlement prices and do not capture intra-day trade variation.
9. RGGI allowance prices are in short tons and have been converted to metric tonnes for the purposes of this infographic.
10. Where allowances have a limited vintage, the time series data compiles these vintages in a way that reflects the compliance cycle.
11. A 90-day moving average was used to smooth out the variability in calculating the price range for the Chinese pilots. Note that the variability may be driven by changes in market fundamentals as well as absence of price data from a given system on a given day.
12. For information on sources for allowance prices and exchange rates see https://icapcarbonaction.com/en/documentation-allowance-price-explorer.
13. Different jurisdictions took a variety of public health measures to address the spread of the SARS-CoV-2 virus during the first months of 2020. Measures obeyed to different domestic circumstances and their scope is not always immediately comparable. For the infographic covering price developments in 2020, the following sources were used for the public health measures taken by the jurisdictions:
    a. **European Union Members:**
    Hirsch, C. (2020 March 31). Europe's coronavirus lockdown measures compared. Politico, https://www.politico.eu/article/europes-coronavirus-lockdown-measures-compared/
    b. **New Zealand:**
    New Zealand COVID-19 Alert System. (2020). History of the COVID-19 Alert System. https://covid19.govt.nz/alert-system/history-of-the-covid-19-alert-system/
    c. **Republic of Korea:**
    Ministry of Health and Welfare (2020 February 23). Briefing on the pan-governmental meeting for COVID-19. https://www.mohw.go.kr/eng/nw/nw0101vw.jsp?PAR_MENU_ID=1007&MENU_ID=100701&page=1&CONT_SEQ=353124
    d. **Québec:**
    Rowe, D. J. (2020 April 12). COVID-19 in Quebec: A timeline of key dates and events. CTV News. https://montreal.ctvnews.ca/covid-19-in-quebec-a-timeline-of-key-dates-and-events-1.4892912
    e. **United States:**
    Centers for Disease Control and Prevention. (2020 September 4). Timing of State and Territorial COVID-19 Stay-at-Home Orders and Changes in Population Movement — United States, March 1–May 31, 2020. https://www.cdc.gov/mmwr/volumes/69/wr/mm6935a2.htm
    f. **RGGI:**
    Mendelson, L. (2020 May 20). Stay on Top of "Stay At Home" – A List of Statewide Orders. https://www.littler.com/publication-press/publication/stay-top-stay-home-list-statewide

LIST OF ACRONYMS

AB	Assembly Bill
AFOLU	Agriculture, Forestry and other Land Use
AIC	Allowances in Circulation
ANSI	American National Standards Institute
APCR	Allowance Price Containment Reserve
ARP	Auction Reserve Price
ASSET	Advanced Technologies Promotion Subsidy Scheme with Emission Reduction Targets
BAU	Business as Usual
BMU	Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit (German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety)
BPU	Board of Public Utilities
CAD	Canadian Dollar
CAR	Clean Air Rule
CARB	California Air Resources Board
CBAM	Carbon Border Adjustment Mechanism
CBIO	Brazilian decarbonization credits
CCC	Climate Change Committee
CCER	Chinese Certified Emission Reduction
CCM	Cost Containment Mechanism
CCR	Cost Containment Reserve
CCS	Carbon Capture and Storage
CDM	Clean Development Mechanism
CEP	Clean Energy Plan
CER	Certified Emission Reduction
CFCs	Chlorofluorocarbons
CH_4	Methane
CHF	Swiss Franc
CLEF	Carbon Leakage Exposure Factor
CNY	Chinese Yuan Renminbi
CO_2	Carbon Dioxide
COP26	26th Conference of the Parties
CORSIA	Carbon Offsetting and Reduction Scheme
COVID-19	2019 novel coronavirus
CPA	Carbon Pricing in the Americas
CPS	Carbon Price Support
DEBS	Direct Environmental Benefits
DEE	Department of Ecology and Environment
DEMNR	Department of Energy, Minerals, and Natural Resources
DENR	Department of Environment and Natural Resources
DEP	Department of Environmental Protection
DEQ	Department of Environmental Quality
DHC	District Heating and Cooling
DRC	Development and Reform Commission
EC	European Commission
ECCC	Environment and Climate Change Canada
ECR	Emissions Containment Reserve
EEA	European Economic Area
EEB	Ecology and Environment Bureau
EEX	European Exchange
EITE	Emission-Intensive and Trade-Exposed
EO	Executive Order
ERU	Emissions Reduction Units
EQB	Environmental Quality Board
EQC	Environmental Quality Commission
ERU	Emissions Reduction Unit
ESR	European Effort Sharing Regulation
ETS	Emissions Trading System or Emissions Trading Scheme
EU	European Union
EU ETS	European Union Emissions Trading System
EUR	Euro
FFCER	Fujian Forestry Certified Emission Reduction
FPO	Fixed Price Option
FY	Fiscal Year
FYP	Five Year Plan
GBP	British Pound Sterling
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIR	Greenhouse Gas Inventory and Research Center of Korea
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Cooperation)
GJ	Giga Joule
$GtCO_2e$	Giga Tonnes of Carbon Dioxide equivalent
GVA	Gross Value Added
HB	House Bill
HCFCs	Hydrochlorofluorocarbons
HFCs	Hydrofluorocarbons
HFC-23	Fluoroform
ICAO	International Civil Aviation Organization
ICAP	International Carbon Action Partnership
IEA	International Energy Agency
IMF	International Monetary Fund
INECC	National Institute for Ecology and Climate Change
INDC	Intended Nationally Determined Contribution
IPCC	Intergovernmental Panel on Climate Change
ITMOs	Internationally Transferred Mitigation Outcomes
JCM	Joint Crediting Mechanism
JI	Joint Implementation
JPY	Japanese Yen
KAZ ETS	Kazakhstan Emissions Trading Scheme
KAU	Korean Allowance Unit
KCU	Korean Credit Unit
K-ETS	Korea Emissions Trading System
KOC	Korean Offset Credit
KRW	South Korean Won
KRX	Korea Exchange
kWh	Kilowatt hour

KZT	Kazakhstani Tenge
LDCs	Least Developed Countries
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
LULUCF	Land Use, Land-Use Change and Forestry
MassDEP	Massachusetts Department of Environmental Protection
MBI	Market-based Instrument
MEE	Ministry of Ecology and Environment
MEP	Ministry of Environmental Protection
MMC	Mine Methane Capture
MOE	Ministry of Environment
MOEF	Ministry of Economy and Finance
MOF	Ministry of Finance
MONRE	Ministry of Natural Resources and Environment
MOS	Mayor's Office of Sustainability
MOU	Memorandum of Understanding
MOST	Ministry of Strategy and Finance
MRV	Monitoring, Reporting and Verification
MSR	Market Stability Reserve
$MtCO_2e$	Million Tonnes of Carbon Dioxide equivalent
MW	Megawatt
MWe	Megawatt equivalent
MWh	Megawatt hour
N_2O	Nitrous Oxide
NOx	Nitrogen Oxide
NAMA	Nationally Appropriate Mitigation Actions
NDC	Nationally Determined Contribution
NDRC	National Development Reform Commission
nEHS	Nationales Emissionshandelssystem (German National ETS)
NER	New Entrants Reserve
NF_3	Nitrogen Trifluoride
NMED	New Mexico Environment Department
NOX	Nitrogen Dioxide
NYC	New York City
NZ	New Zealand
NZ ETS	New Zealand Emissions Trading Scheme
NZD	New Zealand Dollar
NZU	New Zealand Unit
NZX	New Zealand Exchange
OBPS	Output-Based Pricing System
OTC	Over-the-Counter
PCF	Pan-Canadian Framework on Green Growth and Climate Change
PDR	People's Democratic Republic
PFCs	Perfluorocarbons
PHCER	Pu Hui Certified Emission Reductions
PMI	Partnership for Market Implementation
PMR	Partnership for Market Readiness
PNCTE	Programa Nacional de Cupos Transables de Emisión de Gases de Efecto Invernadero (National Program of Greenhouse Gas Tradable Emission Quotas)
PoMuC	Climate Change Policy Program
Q1/Q2/Q3/Q4	Quarter 1/Quarter 2/Quarter 3/Quarter 4
RBOB	Reformulated Blendstock for Oxygenate Blending
RCI	Residential/Commercial/Industrial emissions
RENAMI	Registro Nacional de Acciones de Mitigación (National Mitigation Actions Registry)
Renare	Registro nacional de reducción de emisions de GEI (National Emission Reductions Registry)
RENE	Registro Nacional de Emisiones (Mexico National Emissions Register)
RGGI	Regional Greenhouse Gas Initiative
RGGI COATS	RGGI CO_2 Allowance Tracking System
R&D	Research and Development
SAM	Supply Adjustment Mechanism
SB	Senate Bill
SCC	Standards Council of Canada
SEMARNAT	Secretaría del Medio Ambiente y Recursos Naturales (Ministry of Environment and Natural Resources of Mexico)
SF_6	Sulfur Fluoride
SO_2	Sulfur Dioxide
SOE	State-owned Enterprise
tce	Tonne of Coal equivalent
TCI	Transportation and Climate Initiative
TCI-P	Transportation and Climate Initiative Program
tCO_2	Tonne of Carbon Dioxide
tCO_2e	Tonne of Carbon Dioxide equivalent
TEPA	Taiwanese Environmental Protection Administration
TGO	Thailand Greenhouse Gas Management Organization
TIER	Technology Innovation and Emissions Reduction Regulation
TMG	Tokyo Metropolitan Government
TMS	Target Management System
TNAC	Total Number of Allowances in Circulation
TRP	Technical Reserve Price
Turk-SIM	Turkish ETS simulation game
UK	United Kingdom
UK ETS	UK Emissions Trading Scheme
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
USD	US Dollar
US EPA	US Environment Protection Agency
V-ETS	Thailand Voluntary Emissions Trading Scheme
WCI	Western Climate Initiative
ZEV	Zero Emissions Vehicle

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