

EMISSIONS TRADING IN PRACTICE

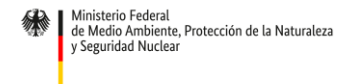
Why Emissions Trading

William Acworth

Taller de Capacitación en Mecanismos de Emisión
Transables



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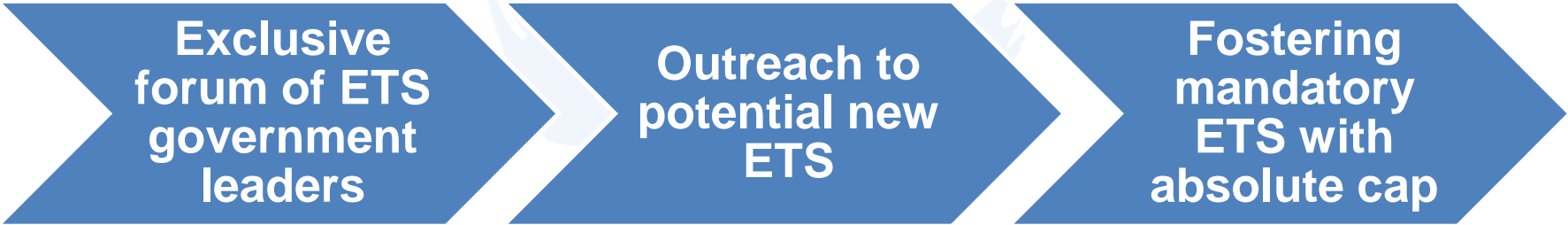


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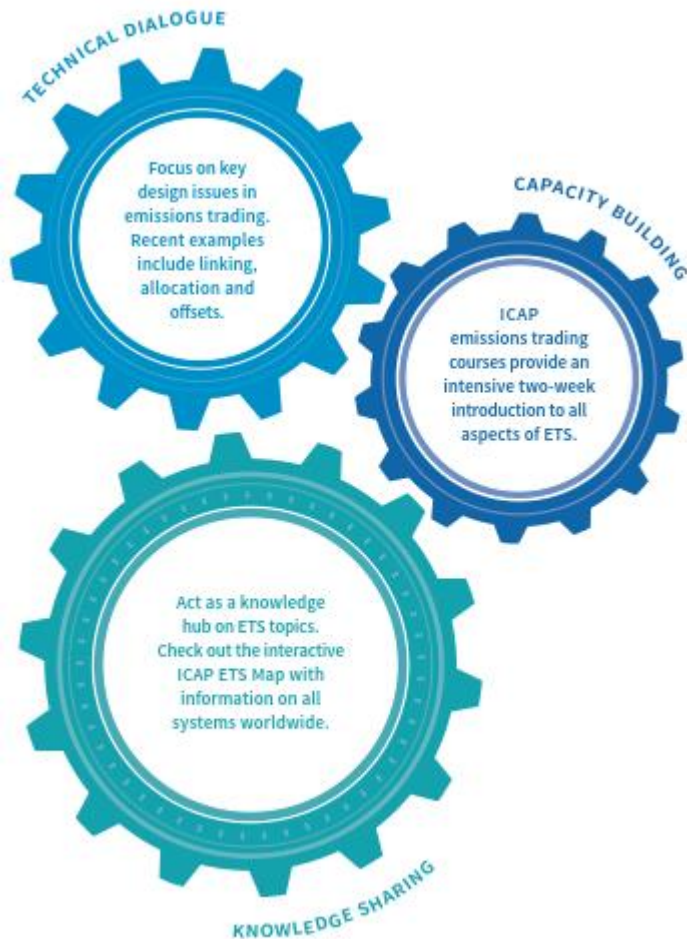


ICAP's Mission

- Share **best practice** and learn from each others' experiences;
- Ensure that **design compatibility issues** are recognized at an early stage;
- Help to **make possible future linking** of trading programs; and
- Highlight the **key role of cap and trade** as an effective climate policy response.



ICAP Activities



Membership

- 31 Members and 4 observers (including Ukraine)

ICAP ETS Training Courses

- 16 courses since 2009

ICAP Knowledge products

- Annual ETS Status Report
- Quarterly newsletter in 5 languages
- ICAP interactive ETS Map
- ETS “how to” Handbook
- Range of ETS publications

Outline

1. Why ETS
2. ETS in the policy mix
3. ETS around the world

Tackling climate change is an urgent and fundamental challenge

- Unmanaged climate change threatens every aspect of development, large-scale migration and sustained and severe conflicts, and threaten the prosperity of countries at every income level.
- “Global recognition of the scale of the problem is what lead to the Paris Agreement reached in December 2015 that laid down the target of “well below 2°C.”
Stiglitz-Stern Carbon Pricing Commission, 2017.



Why limit emissions?

- **A case of market failure** – pollution costs are not reflected in the market decisions of producers and consumers.
- Prices do not reflect the **true price of consumption and production.**
- Allocation of resources is **inefficient** and long term growth is unlikely **sustainable.**
- Regulation required to **fix the market failure.**

Options for intervention

- **Command and control measures**
 - Legislative or administrative regulations/standards that prescribe a certain outcome.
 - Normally firm specific and target outputs (minimum standards, maximum outputs etc)
- **Market based measures**
 - Instruments that internalize the cost of pollution by altering relative market prices.
 - Provides flexibility as to **‘where’** and **‘when’** firm specific activities take place.

Why emissions trading

- **Place a quantity constraint on emissions** – consistent with the “carbon budget” approach
- **Achieves emission reduction targets at least cost**
 - **Static efficiency:** marginal abatement costs are equivalent across covered entities.
 - **Dynamic efficiency:** discounted marginal abatement costs are equivalent through time.
- **Sets in place a clear reduction pathway and “communicates” to investors that high emission investments will not be profitable over the long run.**

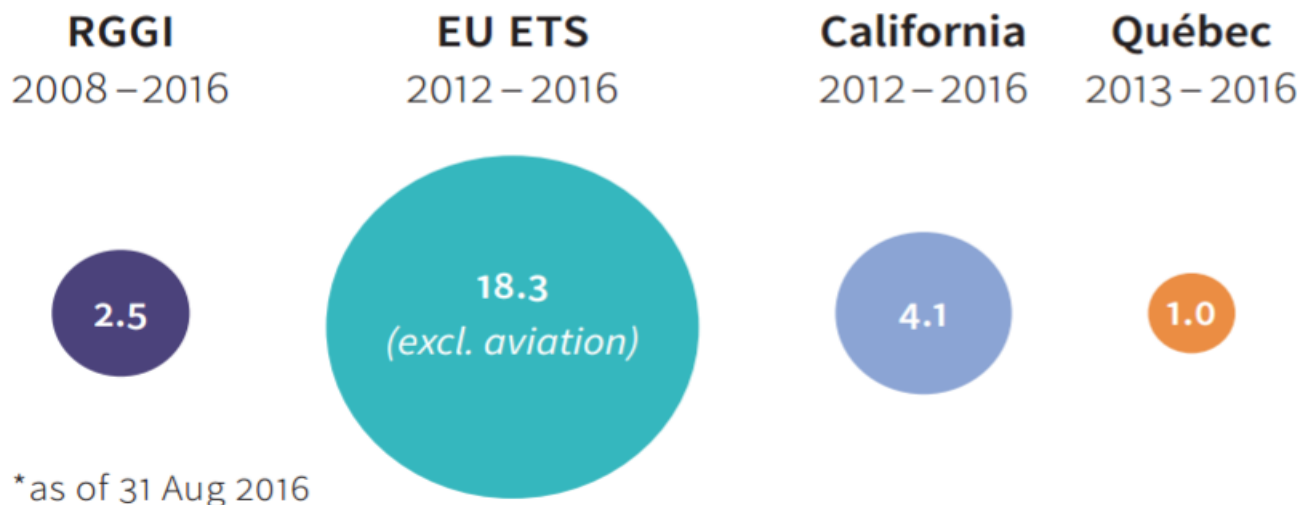
The allowance price signal can deliver (in theory) an economy wide price signal.

- **1. Production** – producers have an incentive to use less carbon intensive materials
- **2. Consumption** – consumers have an incentive to consume less carbon intensive goods and services
- **3. Investment** - investors are encouraged to invest in less carbon intensive activities, as the value from doing so is diminished.
- **4. Innovation** – provides a financial incentive to develop new products, processes and technologies that are less emissions intensive.

An ETS can generate auctioning revenues . .



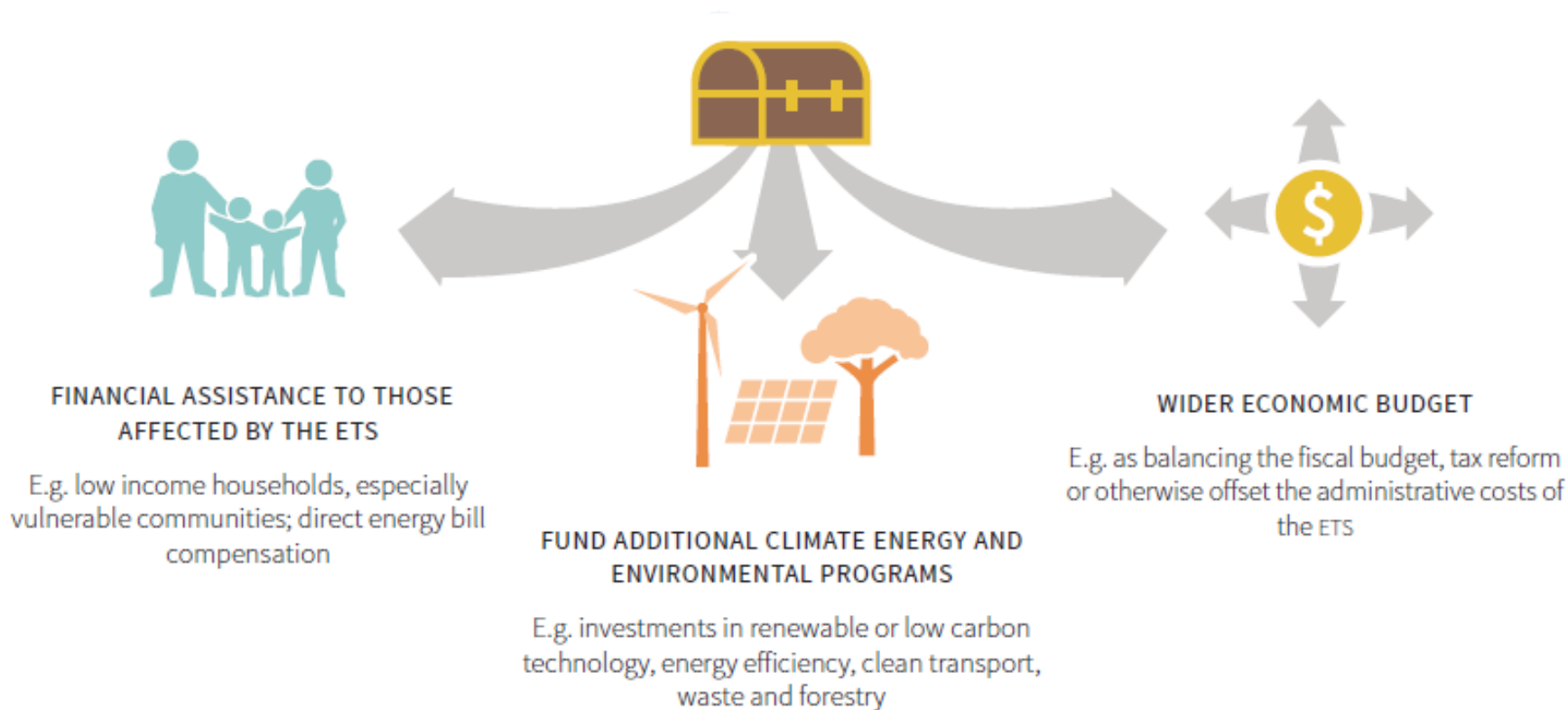
Total Auction Revenues in USD Billions



- The amount of revenue depends on the quantity of auctioned permits and the auctioning price
- By 2015, ETS jurisdictions raised more than USD 26 billion from auctioning emission permits
- With the emergence of new ETSs and the increasing share of auctioned permits, this number is expected to grow further

.... Which can be used for climate action

Auctioning revenue can be used in many ways. Most commonly, it has been used for:



ETS provides additional co-benefits

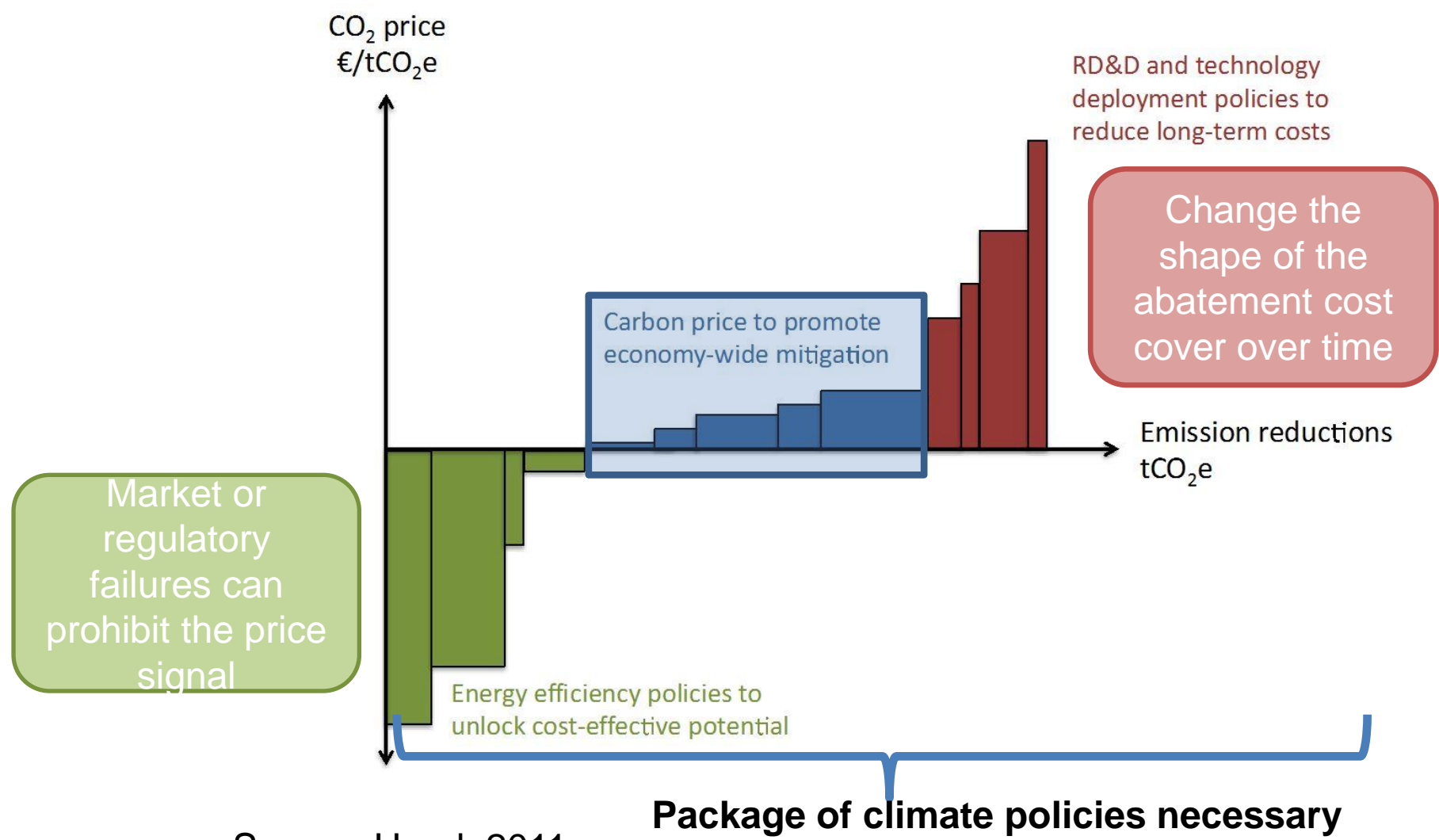
- **Improved local air quality** –health benefits from reduced air pollutants.
- **Preserved local environments** – improved habitat and forest environments when forestry sector covered.
- **Other co-benefits** - increased energy security from a more diverse fuel mix, the creation of g lower traffic congestion and accidents from reduced use of passenger vehicle



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An ETS operates in concert with additional companion policies . .



Source: Hood, 2011.

Four domains for complimentary policies

- **1. Energy Sector** – the interaction of carbon pricing and the other power market policies that increase the effectiveness of the carbon price.
- **2. Infrastructure** – i.e to connect decentralized renewables to the grid or improve public transport
- **3. Non-price market barriers** – for example principal agent problems in buildings or information asymmetries
- **4. Improving access to finance** – high capital costs of renewables makes it harder to secure long term financing.

Overlapping policies

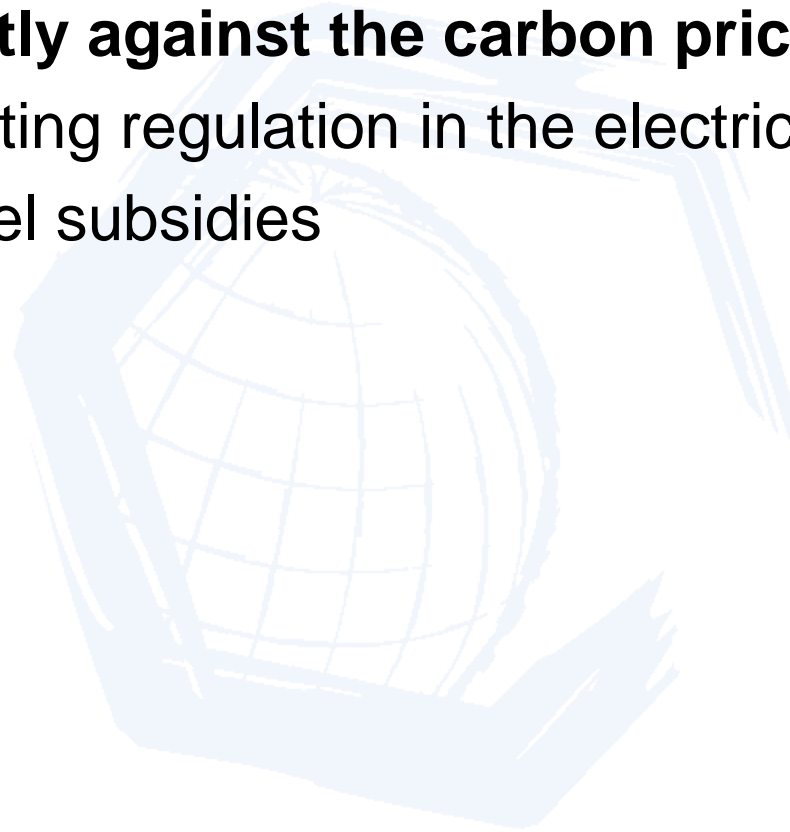
- **Operate in parallel and independent to carbon pricing**
 - Renewable support schemes, green certificates, fuel standards etc.
- **Keep (some) economists up at night!!**
 - Select emission reductions away from the efficiency frontier
 - May not be additional
 - Push down allowance prices and interfere with market signals for investors

Overlapping policies

- **Are both unavoidable and necessary**
 - Carbon pricing is likely to follow from companion policies
 - Play additional roles to carbon pricing
 - Provide long term certainty
 - Industrial policy
 - Technology policy
 - We must design ETS in a way that it is compatible with and benefits from overlapping policies

Countervailing policies

- **Work directly against the carbon price**
 - Price setting regulation in the electricity sector
 - Fossil fuel subsidies

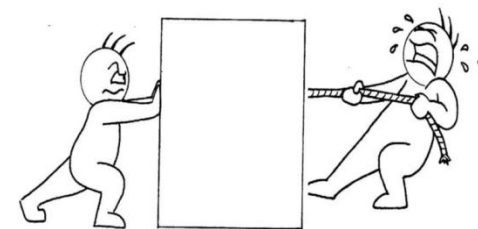


Summary: ETS can play different roles in the policy mix

1. Central pillar combined with enabling policies (**EU ETS**) or
2. ETS ensures a background price signal which can be increased over time (**California ETS**).

Key considerations

- One policy instrument for each policy objective.
- Limits to carbon pricing which can be enabled through complimentary policies.
- Renewable policy can assist in specific decarbonisation goals.
- Consider potential interactions.

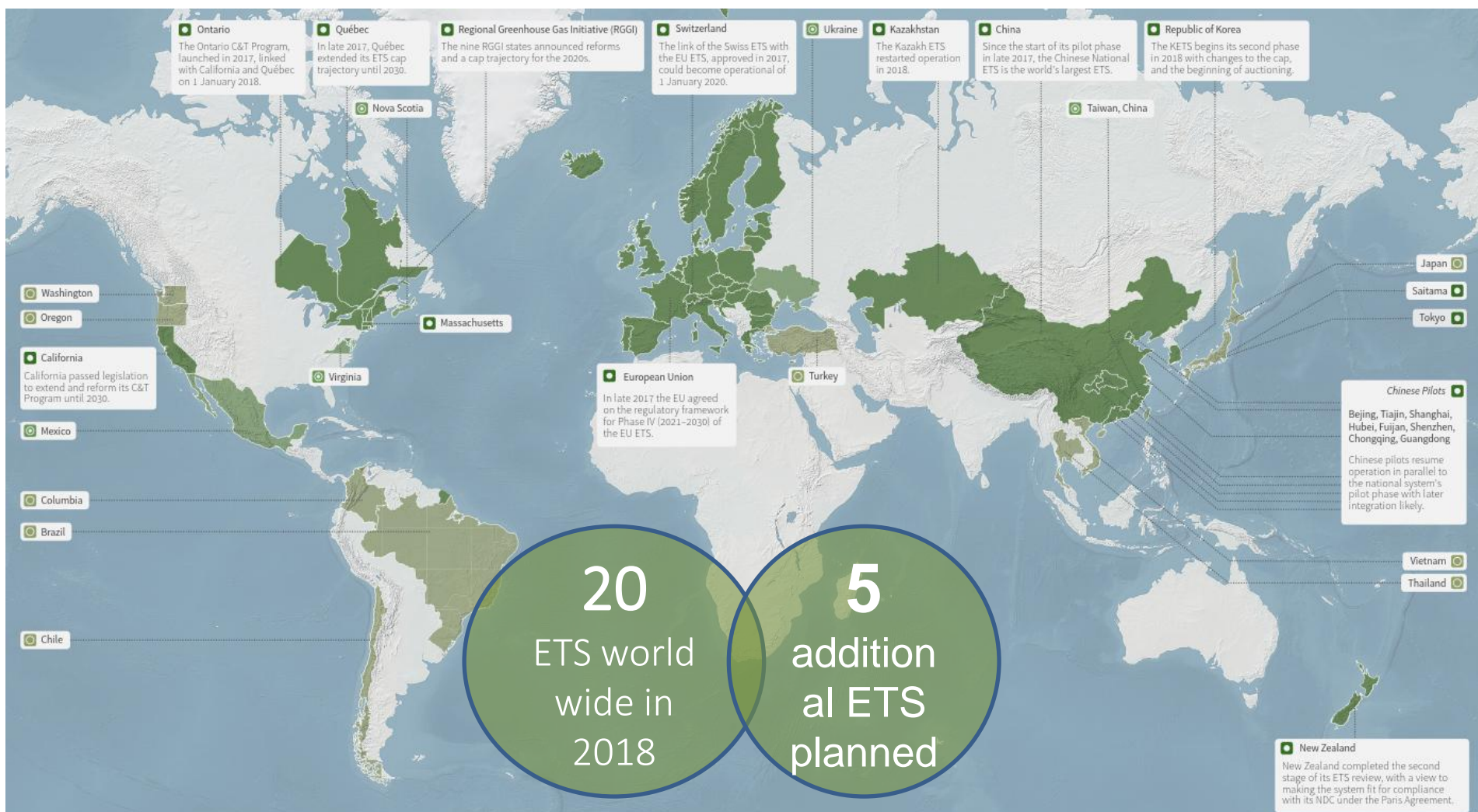


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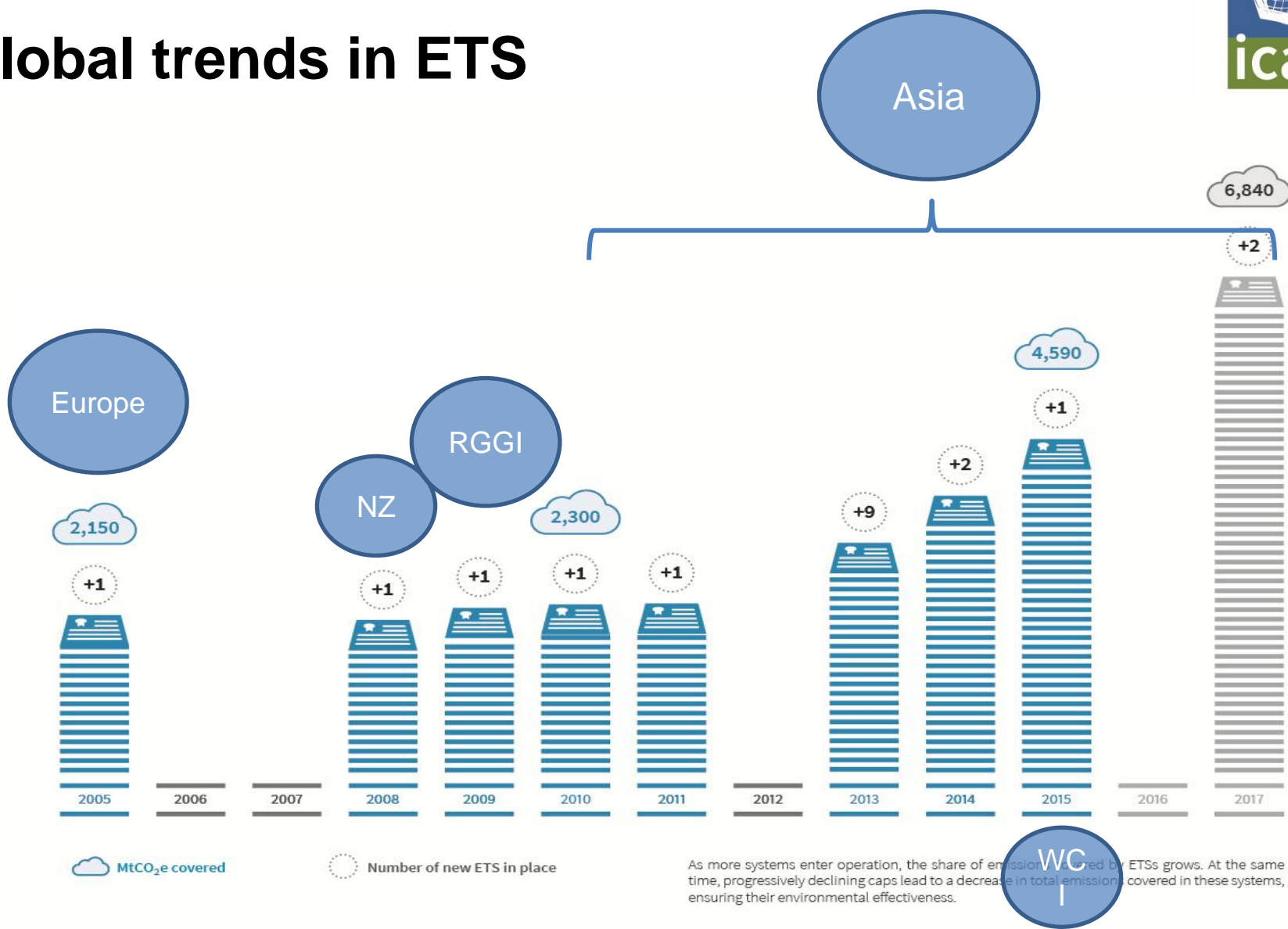
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Global ETS, 2018

- 20 ETS worldwide, regulating emissions from more than 7 billion tons CO₂e.



Global trends in ETS



Note: RGGI stands for Regional Greenhouse Gas Initiative, NZ stands for New Zealand, WCI stands for Western Climate Initiative.

Getting ready for the 2020's: reforms across key existing ETS

1. **Increases in ambition** – ratcheting up of cap decline factors.
2. **Allocation** – increasing auctioning and better targeting free allocation to those sectors that need it most
3. **Market Stability** – the introduction of new instruments to manage either allowance quantity or price, reflecting the experience of the past.
4. **Offsets** – increasing the emphasis on domestic abatement – at least in the short-term.

Outlook for ETS in 2018 and beyond

- **China national scheme** – launched in 2017, will initially focus on the power sector before expanding to the industrial sectors. Estimated coverage of 3,000 – 4,000Mt.
- **Canada and the Western Climate Initiative** – Ontario to retreat from the WCI and sue the national government regarding the carbon pricing backstop. National elections in 2019.
- **Ukraine & Turkey** – Planning an ETS with an eye to Europe. Currently focusing on MRV and legal framework.
- **Thailand** – voluntary ETS launched in 2014, ETS scheduled before 2020
- **Mexico** – finished a carbon market simulation, will publish rules for a pilot phase later this year.
- **Colombia** – passed a new law providing the legal basis for an ETS.
- **New Jersey and Virginia** – potentially to join RGGI

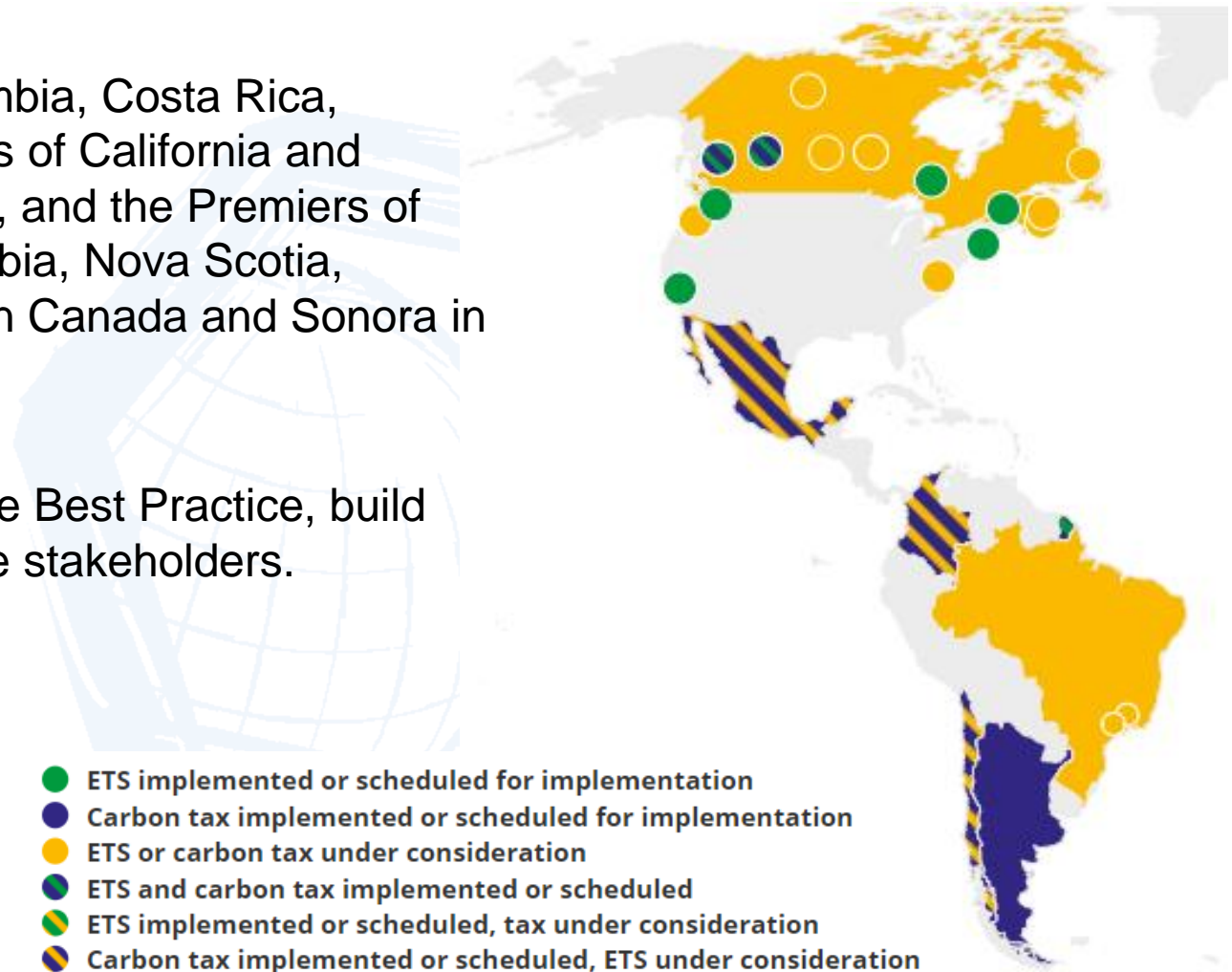
Carbon Pricing in the Americas

Jurisdictions:

Canada, Chile, Colombia, Costa Rica, México, the Governors of California and Washington in the US, and the Premiers of Alberta, British Columbia, Nova Scotia, Ontario and Quebec in Canada and Sonora in Mexico.

Objectives:

Strengthen MRV, Share Best Practice, build capacities, and engage stakeholders.



WHY ETS FOR CHILE?

- ETS will **not survive** without broad (multi-party) support.
- As important as effective design, is an **effective narrative** for the policy that connects with the people of Chile.
- Climate threats and damages, while important, are not always sufficient for securing support.
- What can a broader, **positive narrative** for an ETS in Chile look like?
 - Revenues?
 - Energy Security?
 - Latin American Leadership?
 - Air pollution and other co-benefits?

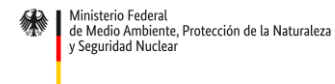
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