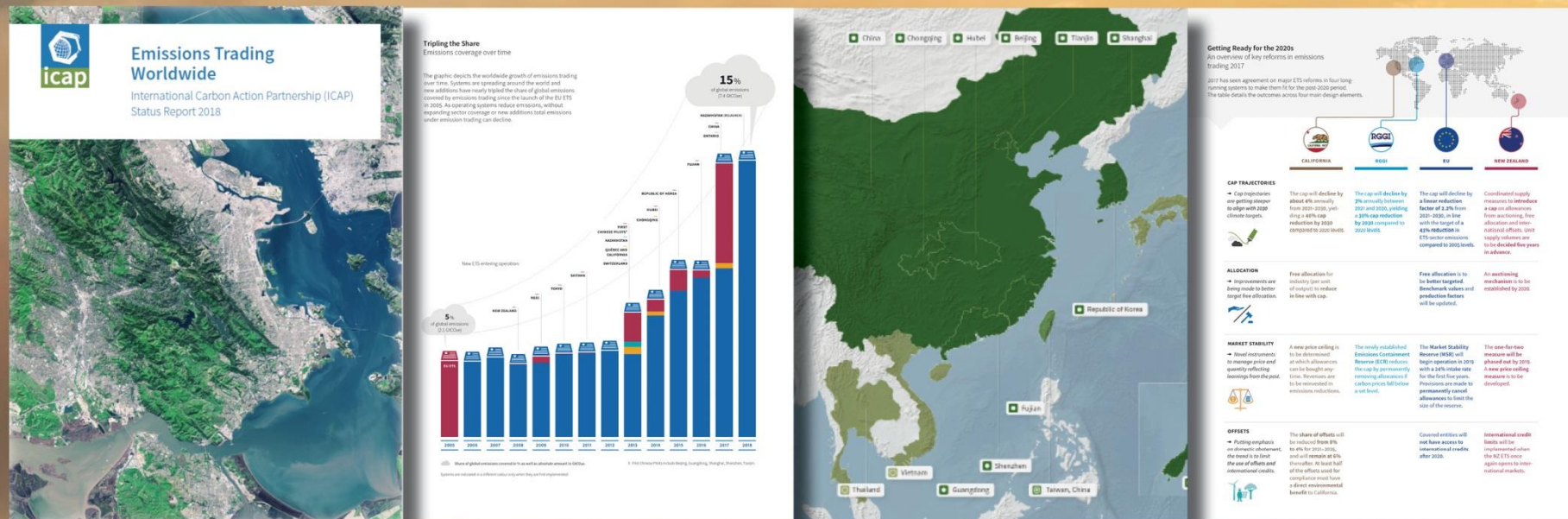


Emissions Trading in 2018

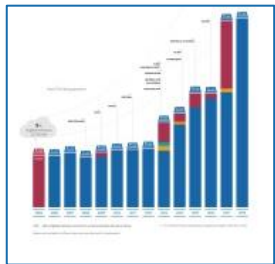


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ETS Presentation

1. Key messages: 2018 ICAP Status Report
 - a. Growth in emissions coverage
 - b. Globalization of emissions trading
 - c. Getting ready for the 2020s
2. The role of offsets in emissions trading

Status Report 2018: Key Messages



Growth in emissions coverage



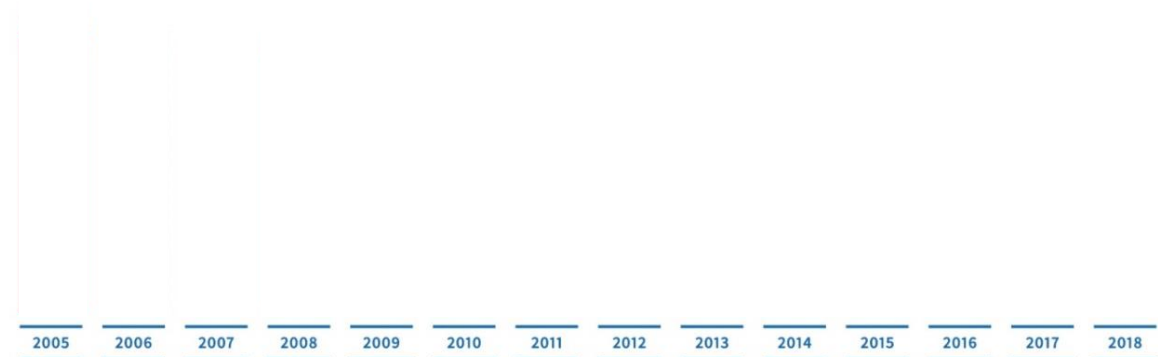
Globalization of emissions trading

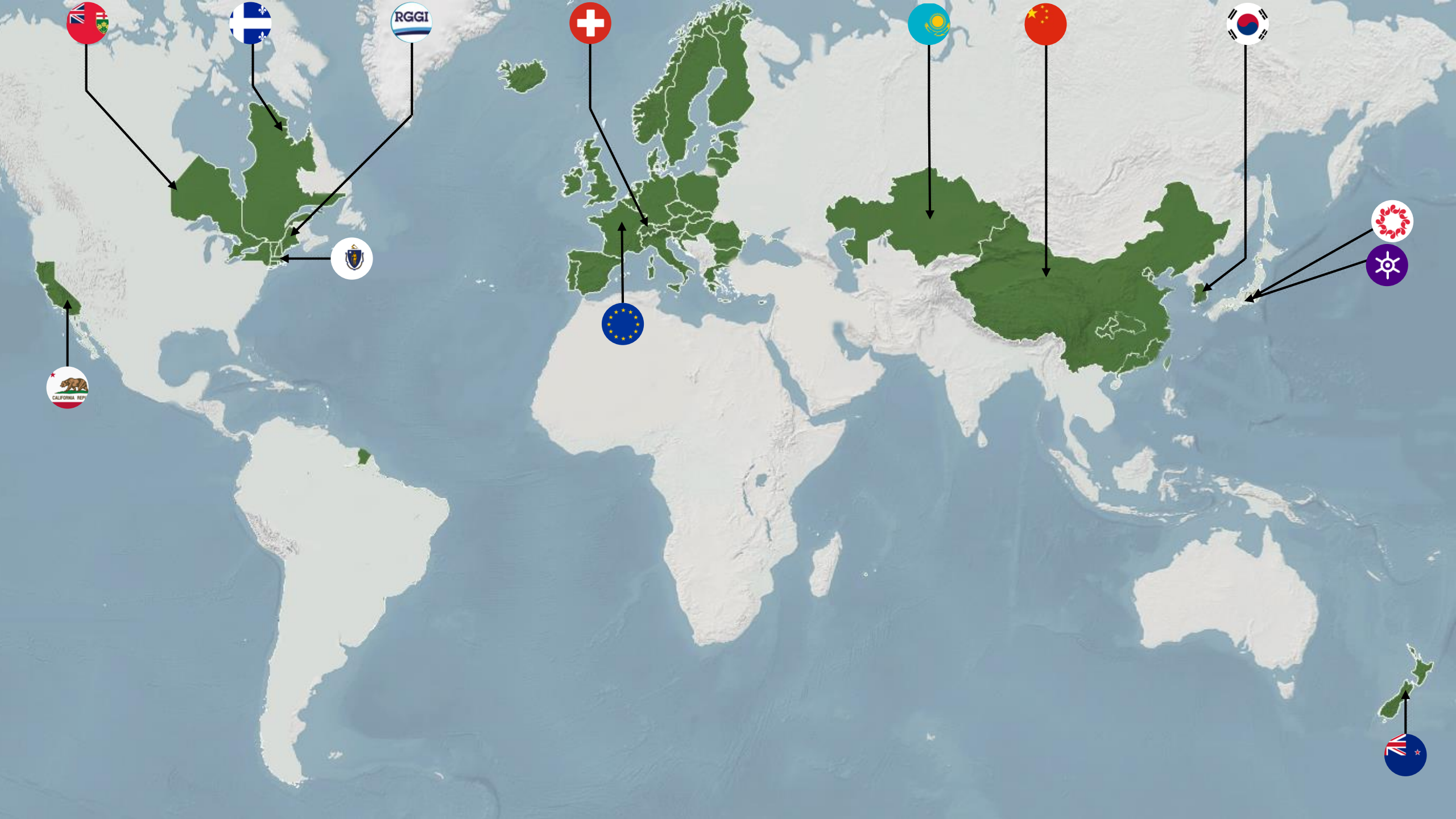


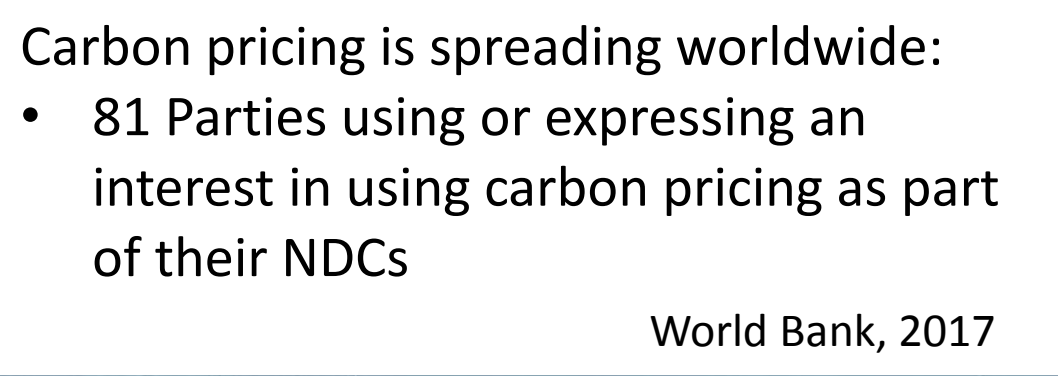
Getting ready for the 2020s

Tripling the Share

Emissions coverage
over time









1. Steeper **cap trajectories** for the 2020s



2. A more targeted approach to **free allocation**



3. Innovation in **market stability** instruments



4. Limited role for **offsets**



Key reforms in 2017



CALIFORNIA



RGGI



EU



NEW ZEALAND

CAP TRAJECTORIES

→ *Cap trajectories are getting steeper to align with 2030 climate targets.*



The cap will **decline by about 4% annually** from 2021–2030, yielding a **40% cap reduction by 2030** compared to 2020 levels.

The cap will **decline by 3% annually** between 2021 and 2030, yielding a **30% cap reduction by 2030** compared to 2020 levels.

The cap will decline by a **linear reduction factor of 2.2%** from 2021–2030, in line with the target of a **43% reduction** in ETS-sector emissions compared to 2005 levels.

Coordinated supply measures to **introduce a cap** on allowances from auctioning, free allocation and international offsets. Unit supply volumes are to be **decided five years in advance**.

ALLOCATION

→ *Improvements are being made to better target free allocation.*



Free allocation for industry (per unit of output) to **reduce in line with cap**.

Free allocation is to be **better targeted**. **Benchmark values and production factors** will be updated.

An **auctioning mechanism** is to be established by 2020.

Key reforms in 2017



CALIFORNIA



RGGI



EU



NEW ZEALAND

MARKET STABILITY

→ *Novel instruments to manage price and quantity reflecting learnings from the past.*



A new **price ceiling** is to be determined at which allowances can be bought any-time. Revenues are to be reinvested in emissions reductions.

The newly established **Emissions Containment Reserve (ECR)** reduces the cap by permanently removing allowances if carbon prices fall below a set level.

The **Market Stability Reserve (MSR)** will begin operation in 2019 with a 24% intake rate for the first five years. Provisions are made to **permanently cancel allowances** to limit the size of the reserve.

The **one-for-two measure** will be **phased out by 2019**. A new **price ceiling measure** is to be developed.

OFFSETS

→ *Putting emphasis on domestic abatement, the trend is to limit the use of offsets and international credits.*



The **share of offsets** will be reduced from 8% to 4% for 2021–2025, and will remain at 6% thereafter. At least half of the offsets used for compliance must have a **direct environmental benefit** to California.

Covered entities will **not have access to international credits** after 2020.

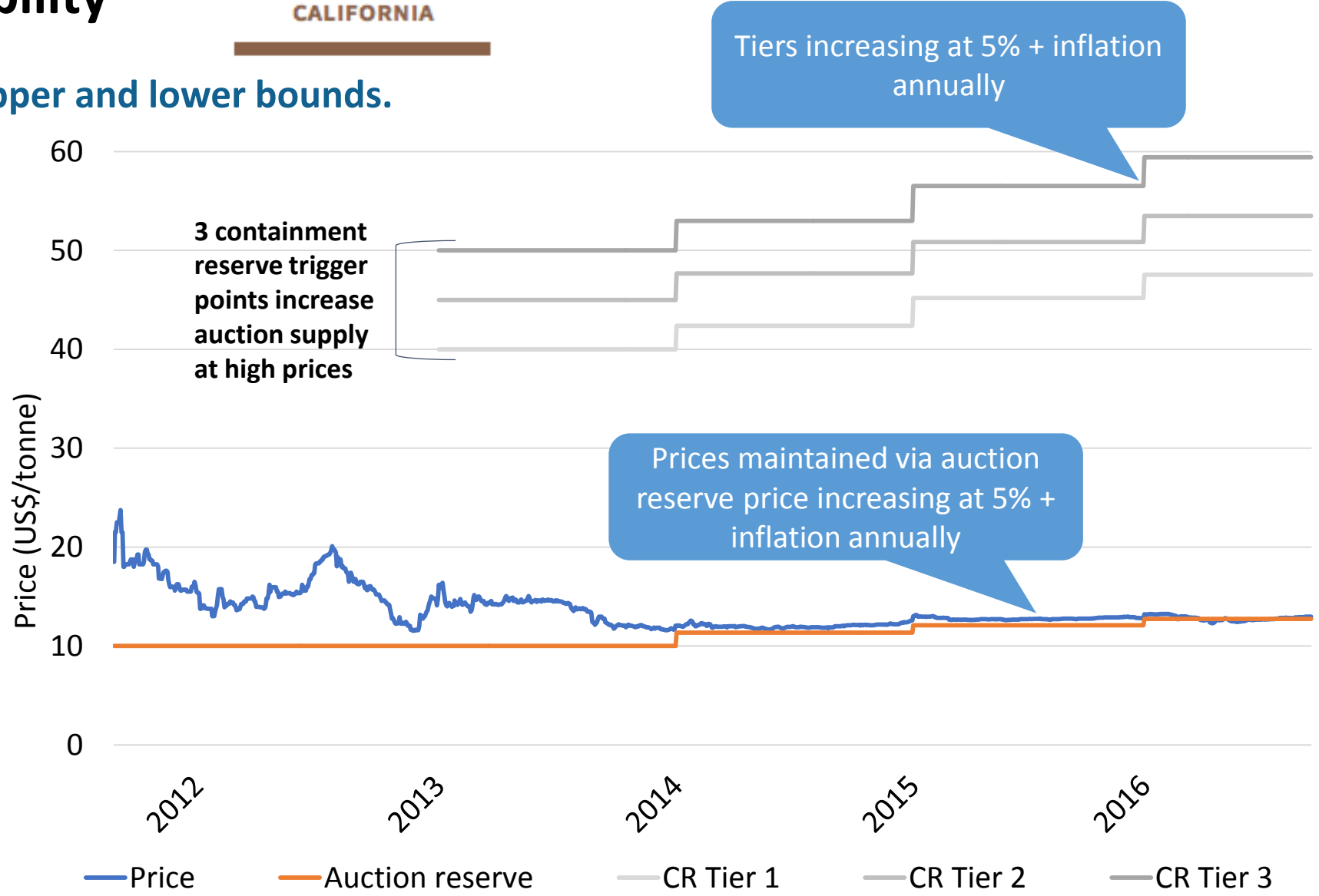
International credit limits will be implemented when the NZ ETS once again opens to international markets.

Deep dive: pre-2021 Market Stability



CALIFORNIA

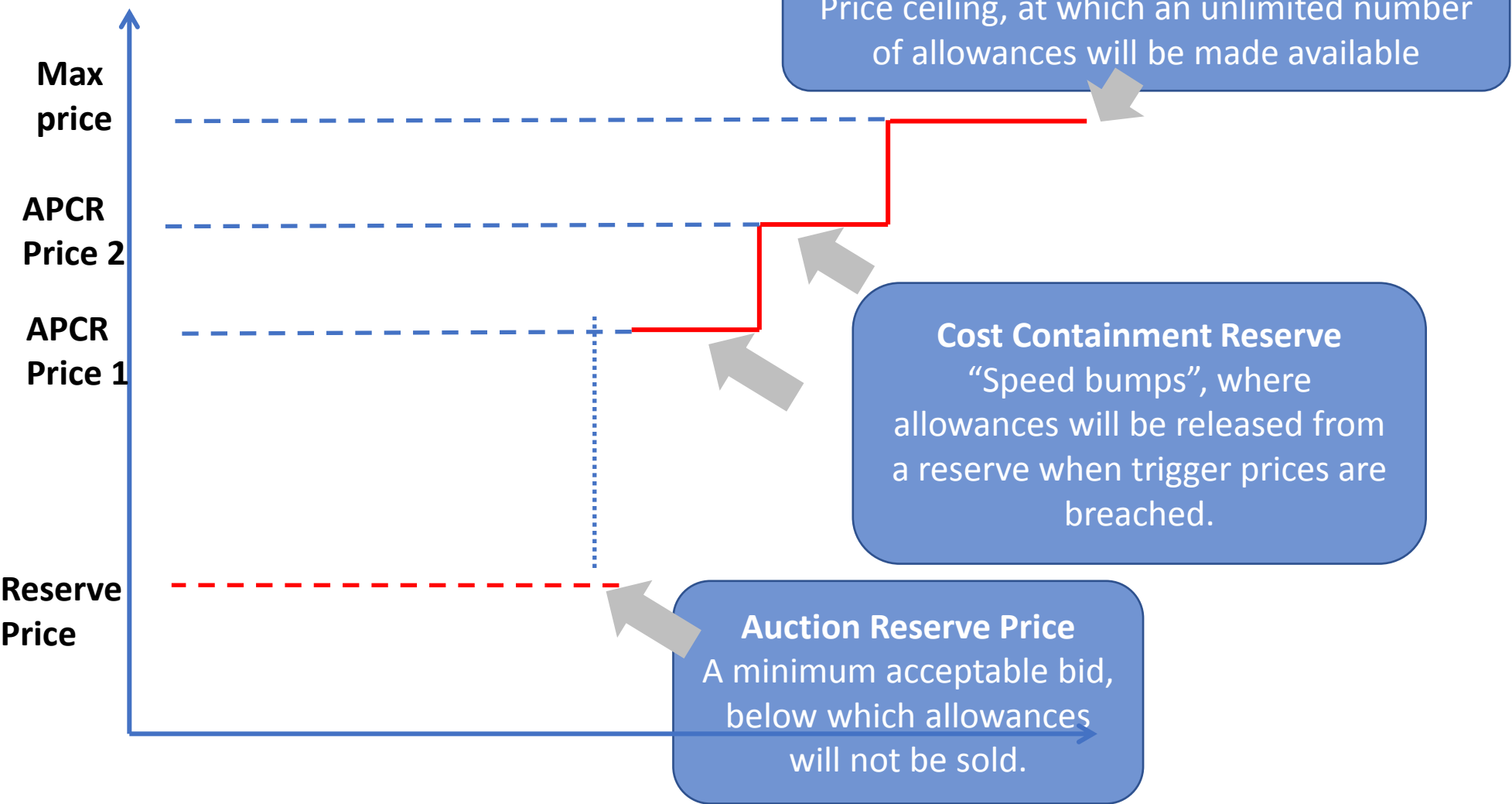
Relies on soft upper and lower bounds.



Deep dive: post-2021 Market Stability



Will add a “hard” price cap to existing soft price controls

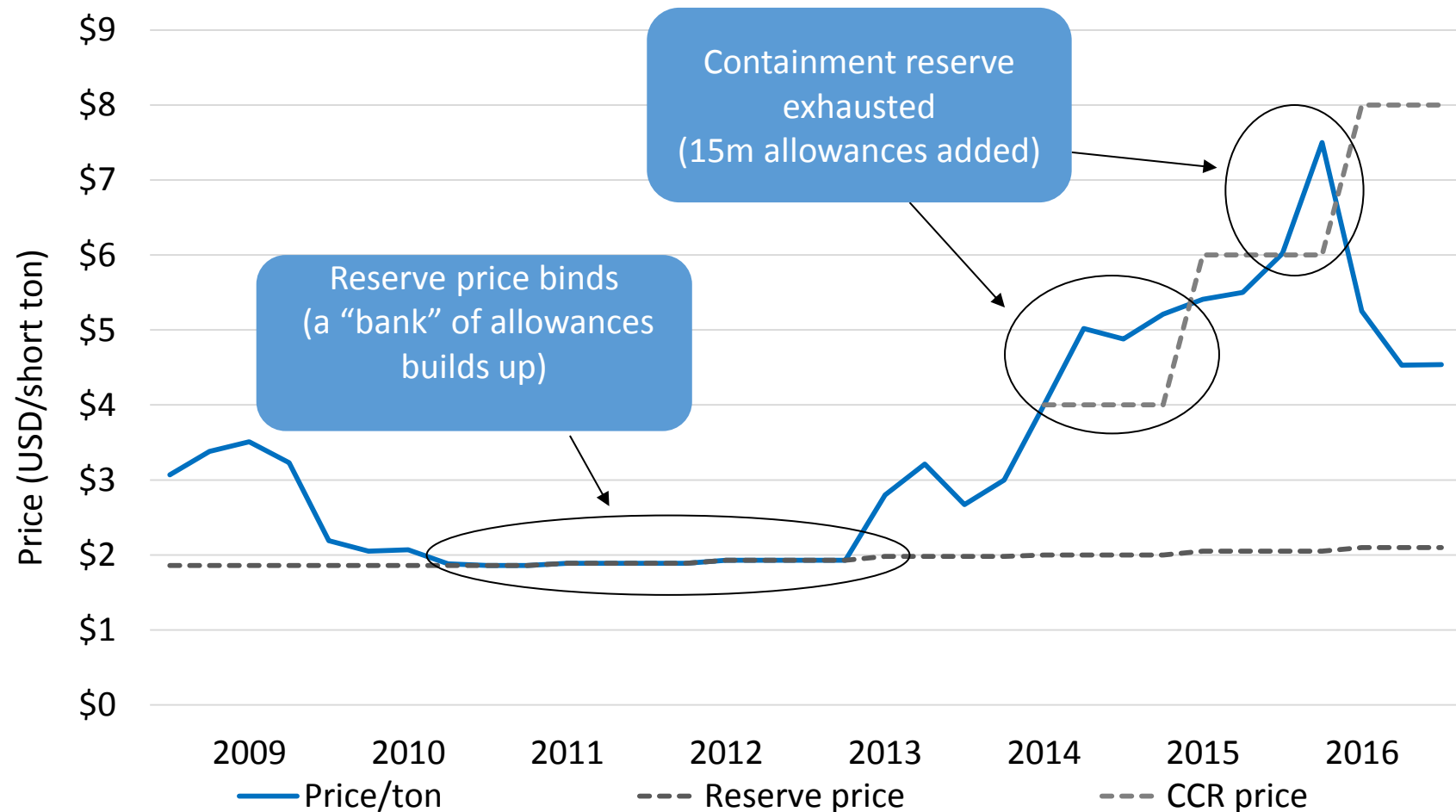


Deep dive: pre-2021

Market Stability



Both the upper and lower bounds have been triggered in the past.

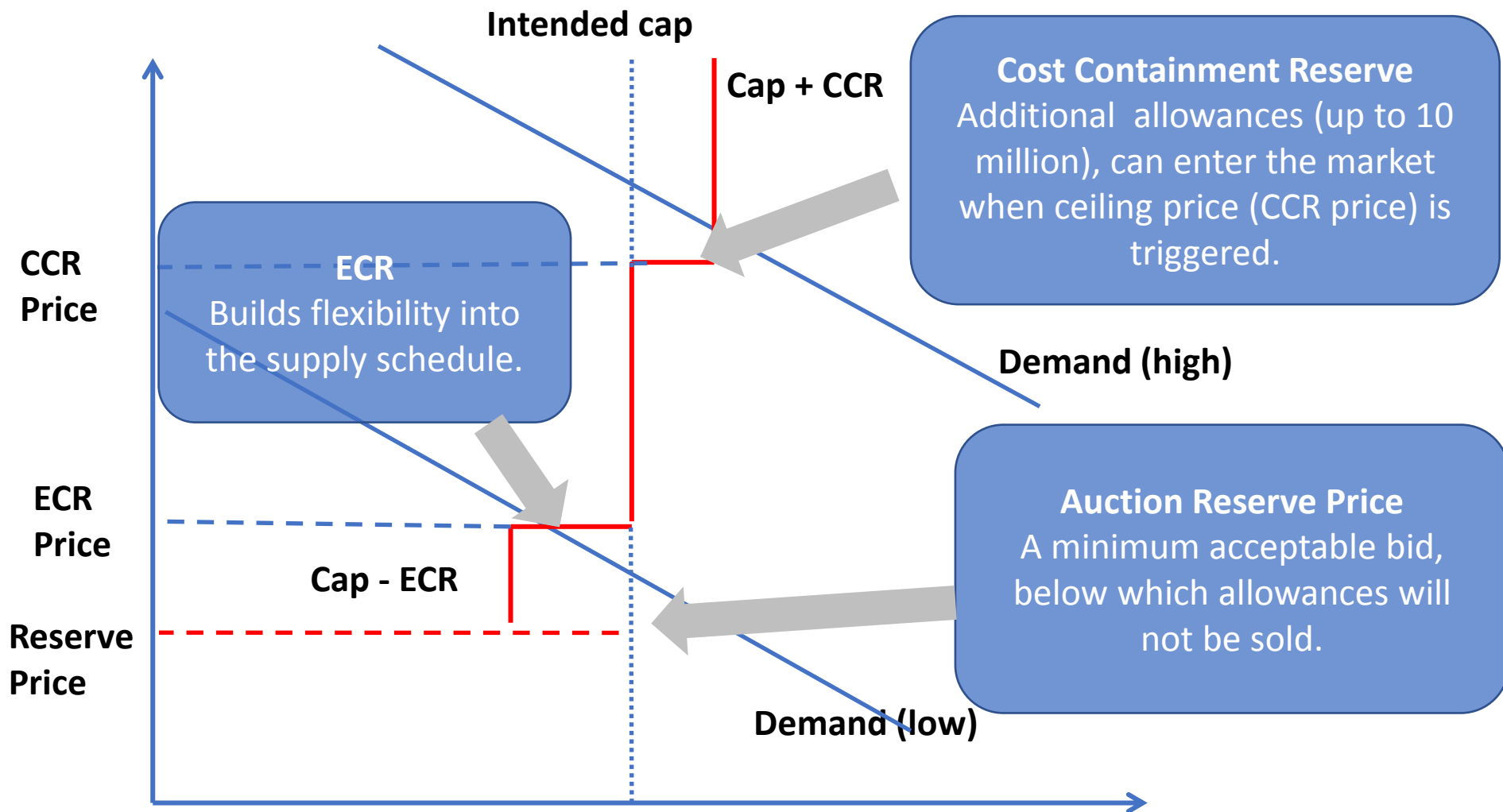


Deep dive: post-2021 Market Stability



RGGI will introduce an Emissions Containment Reserve from 2021.

- **What:** introduces “steps” to the price floor. When the auction price fall below a certain threshold, a fixed number of allowances are withheld from the market.
- **When:** to be implemented in 2021.
- **How:** the trigger price will start at \$6.00/tCO₂e in 2021 and rise 7% annually to \$11.03/tCO₂e in 2030.
- **Why:** allows RGGI to undertake more emissions reductions, when costs turn out to be lower than expected (tech change, companion policies in member states, etc).



Carbon Market Connections

Legend:

ETS in force

ETS scheduled

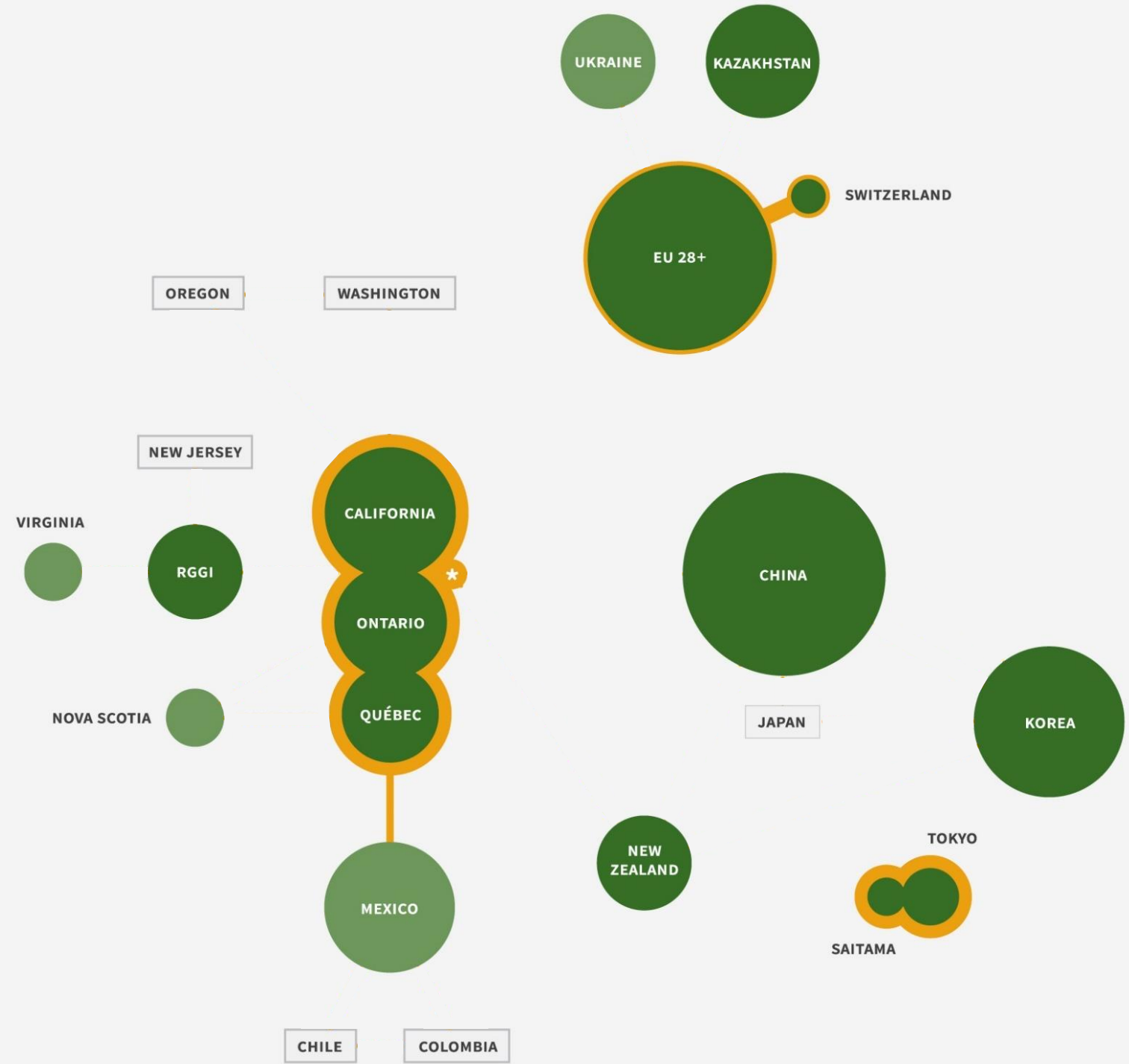
ETS considered

Existing Link

Planned Link

Memorandum of Understanding (MoU)

Talks



The role of offsets in ETSs

WHAT

Emissions reduction activities outside the scope of the ETS, these can be generated internationally or domestically.

DESIGN

- Domestic or international
- International protocols or develop domestic ones
- Quantitative limits
- Qualitative limits (e.g. project type)



California, Québec and Ontario allow offsets mutually sourced from linked jurisdictions

*The EU ETS plans to no longer use offsets in Phase IV starting from 2020

**Up until June 2015, New Zealand allowed the unlimited use of international offsets.

Risks and benefits of offset use

BENEFITS

- **Lowers compliance cost** for regulated entities
- Offers **abatement incentives** / benefits from mitigation outside the ETS
- Political and environmental **co-benefits**
- **Learning and engagement** among uncovered sources
- Drive **low-carbon investments**, particularly in developing countries

RISKS

- May hamper investments and mitigation within ETS
- Predicting future offset supply?
- **Environmental integrity concerns**
- Offsets increase emissions under the cap so they have to lead to real reductions elsewhere
 - How: Restrict use, environmental integrity accounts/buyers liability in the WCI

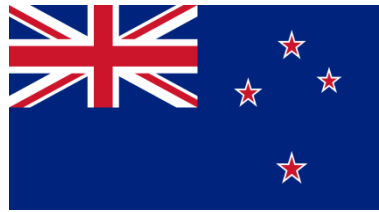


Trends in offset use in ETSs

- Almost all systems allow for a **restricted use** of offsets
- Gradually **tightening provisions** on offset use over time



Credits from LDCs
Phase 4: No intl credit
use foreseen
EU target is domestic
only



Since 2015: Domestic only
Review: future intl offset
use given limited domestic
reduction potential &
nature of emissions profile
(large land use/ag, clean
power sector)



Half offsets
provide direct
env benefits for
the state

- **North America:** Domestic offset programs only – regulators develop a limited number of protocols that projects must be in compliance with in order to get credits. They rely on standardized methodologies rather than individual baselines.
 - E.g. projects cannot be required by law, beyond common practice in the respective geographic area
 - More upfront effort and cost → more streamlined/objective approval process?
- **WCI:** Own domestic offset protocols focusing on gases with high GWP (e.g. in waste, agriculture, ozone depleting substances) and forestry
 - 6 in CAL, 5 in QC, in development in ONT
- **RGGI:** 5 offset types (only 1 project approved to date)

Deep dive: California



In the CAL/QC registry (ICIS):

335 California projects in total with 105.2m California credits issued (most from US Forestry protocol), 11 QC projects in total with 0.56m QC credits issued

Demand and use: 4.5% in first compliance period

Generally share surrendered has been lower than the limit (8%) with prices trading 2 USD lower than allowance price

Environmental integrity: CAL can later invalidate offsets that don't meet protocol requirement. Entity must replace that offset with a valid compliance instrument. Buffer account for unintentional reversals in forest offset projects

Starting in the next phase: What is a direct environmental benefit?

- Reduce/avoid air pollutants in the state or reduce/avoid pollutants that could have an adverse impact on state waters
- What does this mean for out of state credits?
- Will we see further changes or adaptation to the offset protocol as a result?

Trends in offset use in ETSs in Emerging Economies

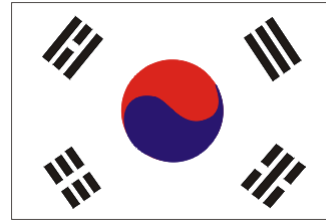
New generation of markets:

- Developing countries are becoming offset purchasers and learning from their CDM experiences



CCERs: Development draws on CDM methodologies, lifeline to offset projects developed for intl market

Currently used in pilots (1-10%) with varying project types/eligibility criteria



Next Phase: intl credits, CERs from projects developed by Korean companies. Up to 5% of entity's compliance obligation

Currently only allows domestic offsets from projects in line with intl standards (10% compliance obligation)



Can use a level of offsets for carbon tax compliance

MX: 20% of tax liability from domestic CER projects

COL: regulation out on domestic offset but currently project based and not linked to any instrument in particular

	% limits	Qualitative limits
EU	Total use for Phases 2 & 3 may amount up to 50% of overall reduction under the EU ETS in that period	Newly generated (post-2012) international credits may only come from projects in LDCs. Projects from industrial gas credits (projects involving the destruction of HFC-23 and N2O) are excluded
Switzerland	11% of five times the average emissions allowances allocated in the voluntary phase	Most categories of credits from CDM projects in LDCs are allowed.
California	8%	6 offset types in US forestry, urban forests, livestock, ozone depletion substances, mine methane capture and rice cultivation
Quebec	8%	5 offset types including CH4 destruction, landfill sites and destruction of ozone depleting substances
Ontario	8%	Finalized landfill gas capture and destruction protocol, working on others
RGGI	3.3%	5 offset types from landfills, carbon sequestration, agriculture, energy efficiency & SF6
New Zealand		Forestry removal and other removal activities, No intl credits
Tokyo	Depends on offset type	4 offset types from SMEs, RE credits, outside Tokyo & Saitama credits
Saitama	Depends on offset type	5 offset types from SMEs, forestry, RE credits, outside Tokyo & Saitama credits
Republic of Korea	10%	Domestic credits that meet international standards
China		CCERs allowed at some point in phase 3. Allowed in pilots with varying limits and project types
Kazakhstan		Domestic offsets



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Status Report 2018:

<http://bit.ly/2nYqll5>