

# Regional carbon tax policies

Existing regulations, proposed policies, and current debates


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**Producer**

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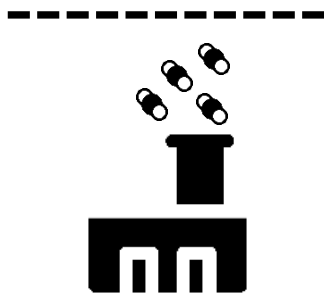
# Roadmap

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- Carbon pricing overview
  - Existing regulations
  - Proposed state carbon pricing policies
  - Debate

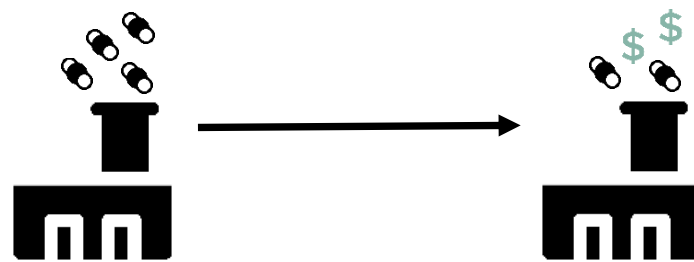
# What is cap and trade?

Emissions trading, or **cap and trade**, creates market incentives for businesses to reduce pollutants and greenhouse emissions. Two key components:

1. A limit (cap) on the amount of pollutants businesses can emit in a given period



2. Tradable allowances, or “carbon credits,” earned when a company's emissions fall below the limit, that can be sold to another firm that surpasses it

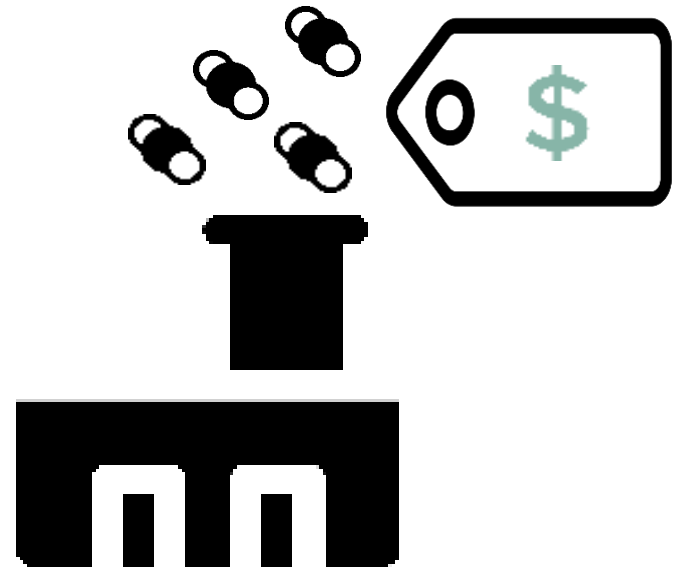


Cap and trade systems allow the market to determine the price of carbon. Its cost drives investment decisions and catalyzes innovations in emissions reduction technology and practices.


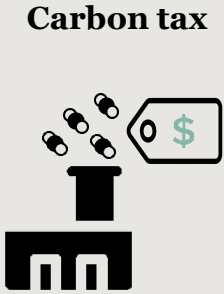
# What is a carbon tax?

A carbon tax is a fee governments place a carbon emissions. How it works:

- 1** The government sets the price for each ton of greenhouse gas emissions businesses emit
- 2** The price burden of a carbon tax is either born by the business or placed on the consumer
- 3** This price increase incentivizes businesses and consumers to favor clean energy and explore new emission reducing technologies in order to avoid paying the tax
- 4** The generated tax revenue is either given back to taxpayers as tax dividends or investment in clean energy job training and technology




# How are the two systems different?

	 <p><b>Cap and trade</b></p>	 <p><b>Carbon tax</b></p>
<b>Price certainty</b>	The price of emissions is determined by market forces	The price of the tax fee per ton of carbon is determined by the government
<b>Environmental certainty</b>	Determines an emissions limit that decreases over time, ensuring overall emission reductions	Greenhouse gas emissions are not predetermined and are reliant on market forces
<b>Revenue destination</b>	Revenues remain within the market as credits are bought and sold between businesses	Tax revenue is either given back to taxpayers or invested into energy infrastructure
<b>Compliance flexibility</b>	Businesses have the flexibility to make compliance planning decisions on a multi-year basis	Businesses decide how much to reduce their emissions and subsequently how much tax to pay
<b>Economic impact</b>	Provides a self-adjusting price, high when the economy is doing well and low when the economy is not	Is not self-adjusting, government action needed to change the tax
<b>Global market</b>	Provides opportunities for linkages among regional, national, or international markets. Global carbon markets, however, would require the development of a global price for carbon	Far fewer regional examples of carbon taxes have been implemented and an international carbon tax has been considered but widely rejected
<b>Implementation</b>	The cornerstone of many emission reduction initiatives in Europe and North America	There are a few local examples in the U.S., Canada and Europe

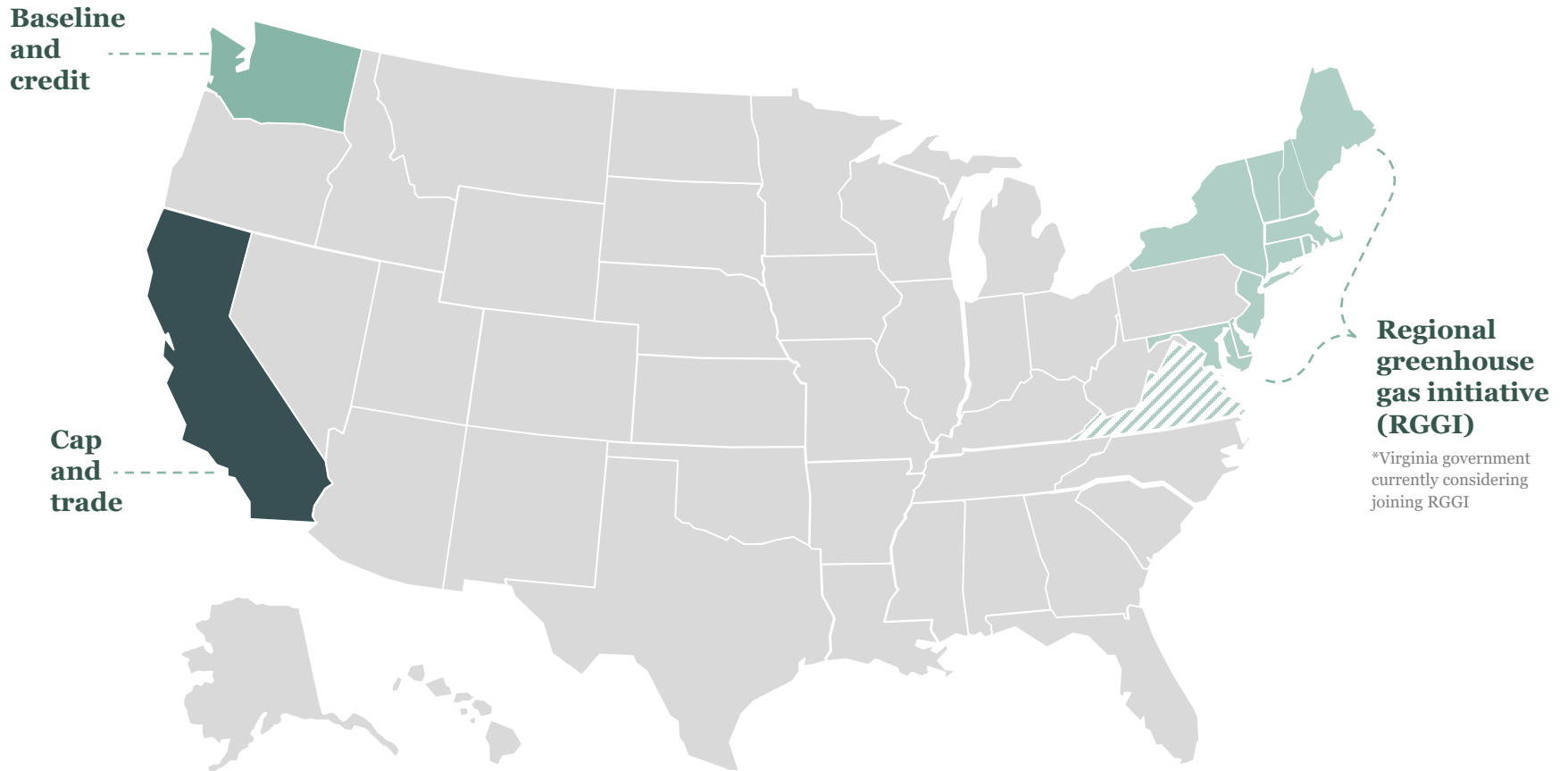
Sources: Center for Climate and Energy Solutions, "Cap and Trade vs. Taxes," 2017.

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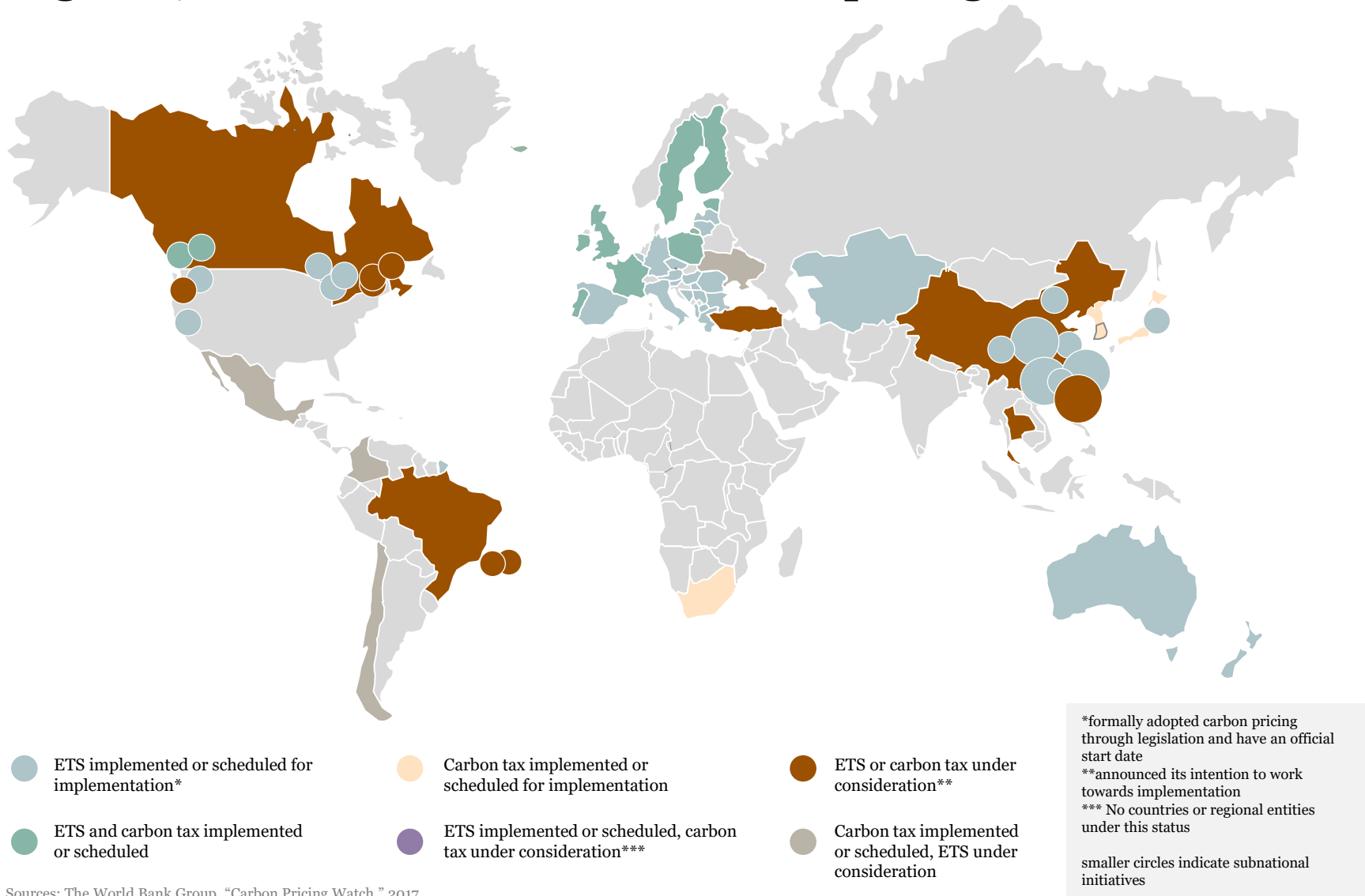
# Twelve states have implemented cap and trade programs

These include the 10 states in RGGI, California and Washington



Sources: Center for Climate and Energy Solutions, State Carbon Pricing Policies.

# Regional, national and subnational carbon pricing initiatives



Sources: The World Bank Group, "Carbon Pricing Watch," 2017.



# California has linked its cap and trade program with similar ones in Canada

## Overview of California's cap and trade program

- First multi-sector cap and trade program in North America
- Launched in 2013
- One of many policies that the state is using to lower GHGs
- Expected to reduce GHGs from regulated entities by over 16 percent between 2016 and 2020, and an additional 40 percent by 2030
- Linked with similar programs in Canadian provinces of Ontario and Quebec, meaning that businesses in one jurisdiction can use emission allowances issued by one of the others for compliance

- From 2012 to 2018, the program generated almost \$10 billion in proceeds
- This revenue must be spent for environmental purposes, with emphasis on benefitting disadvantaged communities, which tend to suffer disproportionately from air pollution



# California's cap and trade program

The program uses two types of compliance instruments: allowances and offsets



## Allowances

- Generated by the government
- Distributed to regulated entities by a mix of free allocation and quarterly auctions



## Offsets

- Voluntarily generated by a non-regulated entity and sold to regulated entities
- Represent the reduction, removal, or avoidance of one ton of GHG emissions
- Regulated entities can use offsets to fulfill up to 8 percent of their compliance obligation

The program applies to:

electric power plants,



industrial plants



and fuel distributors



that emit at least 25,000 metric tons of emissions per year. This adds up to around 450 businesses responsible for about 85 percent of California's total GHG emissions

# The Regional Greenhouse Gas Initiative (RGGI)

**RGGI is the first mandatory market-based greenhouse gas emissions reduction program in the U.S.**

- RGGI began in 2009 as the first mandatory CO<sub>2</sub> based cap-and-trade program in the U.S.
- Electric power generators with capacity of 25 MW or above are required to obtain CO<sub>2</sub> allowances equivalent to the amount of CO<sub>2</sub> they emit (in tons)
- RGGI distributes CO<sub>2</sub> emissions allowances to the market primarily through auctions
- The nine states included in the program are Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, Maryland and Delaware

Through June 2018, RGGI has conducted 40 auctions and has sold 918 million CO<sub>2</sub> allowances for a total of \$2.8 billion

The emissions cap for 2018 is set at 82.2 million short tons of CO<sub>2</sub>

The cap will be reduced gradually each year until it reaches 54.7 million tons in 2030

An adjusted cap, 21.9 million tons more than the original cap, has been placed for each year through 2020 due to the surplus of CO<sub>2</sub> allowances that accumulated from 2009 to 2013

# CO<sub>2</sub> allowances are sold at quarterly auctions

## Key elements of RGGI's cap-and-trade system

### RGGI cap

- Regional budget for CO<sub>2</sub> emissions from the power sector
- 2018 cap is 82,235,598 short tons of CO<sub>2</sub>
- 2019 cap is 80,179,708 short tons of CO<sub>2</sub>

### Cost containment reserve

- A quantity of allowances available for sale when allowance prices exceed predefined price levels
- The CCR is replenished each year
- CCR trigger price will increase by 2.5% each year

### Emissions containment reserve

- The ECR will be introduced in 2021
- ECR will only withhold allowances if prices fall below trigger prices
- ECR trigger price in 2021 will be \$6.00
- The trigger price will rise by 6% each year

### Auctioning and reinvestment

- Allowances are offered quarterly, at regional CO<sub>2</sub> allowance auctions
- States reinvest the proceeds from allowances in consumer benefit programs to improve energy efficiency and boost renewable energy

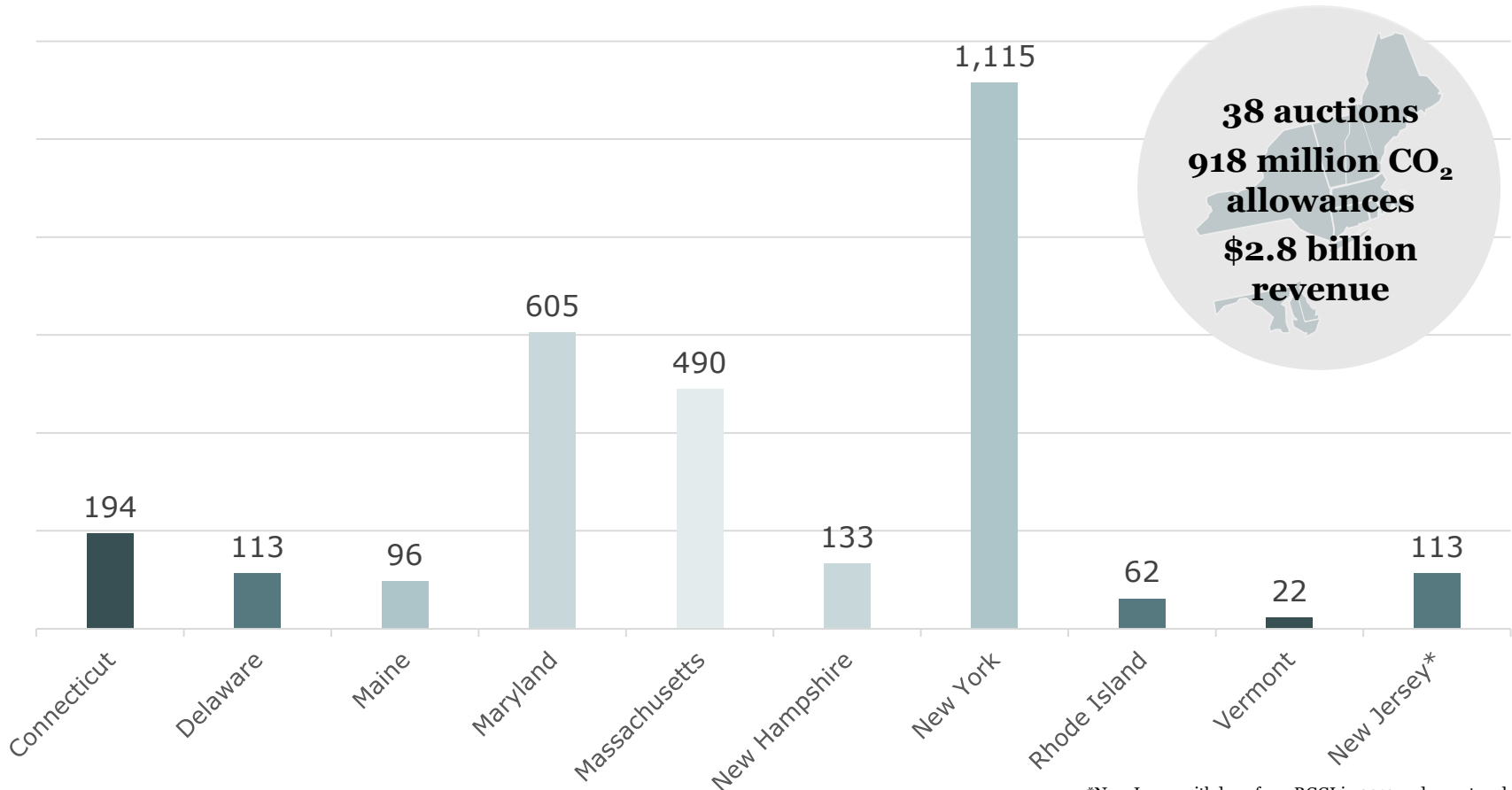
### Tracking and compliance

- Requirement to possess allowances equal to emissions over a three-year control period
- Offset allowances from GHG emissions reduction or carbon sequestration projects can meet up to 3.3% of compliance obligations

# RGGI has generated \$2.8 billion from CO<sub>2</sub> allowance sales

## Total revenue from RGGI allowance auctions


IN MILLIONS OF U.S. DOLLARS



Sources: The Regional Greenhouse Gas Initiative, Elements of RGGI.

\*New Jersey withdrew from RGGI in 2013 and re-entered in 2019

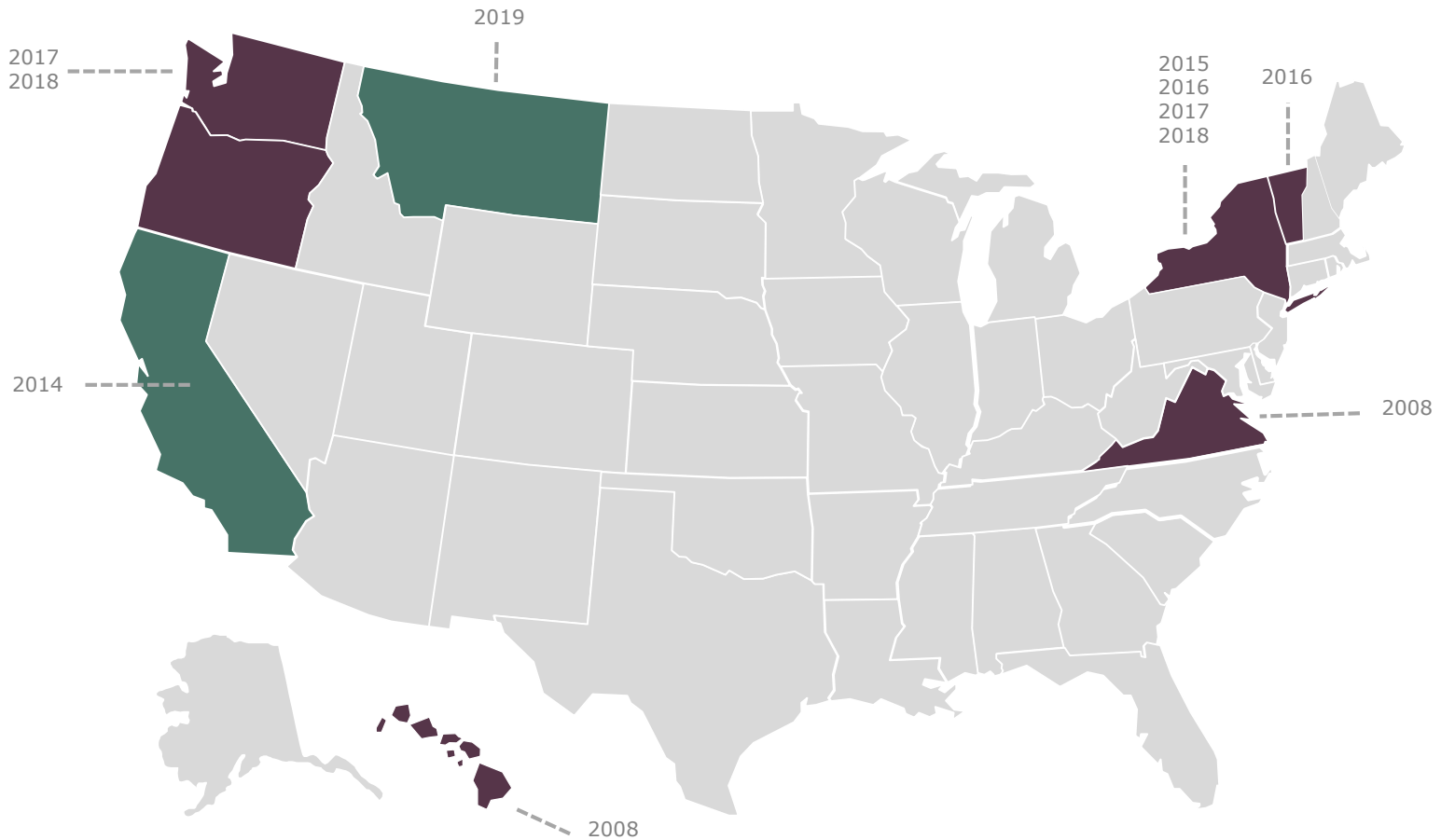
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# No state carbon tax bills have yet been passed, although several have been proposed

## Status of bill and year proposed

Failed Pending



Sources: National Conference of State Legislature, Carbon tax bills

# Proposed state carbon tax legislation

## **NY A 3967: Tax on Carbon Emissions**

Status: Failed - Adjourned - Assembly Ways and Means Committee

Establishes an initial rate of \$5/ton excise tax on all carbon-based fuels sold in NY to retail customers, revenue from which will go into a carbon tax revenue fund

- Rate will increase with inflation plus 1% each year for 10 years
- Same bill proposed in 2015, 2016 and 2017

## **VT HJR 20: Regional Carbon Tax**

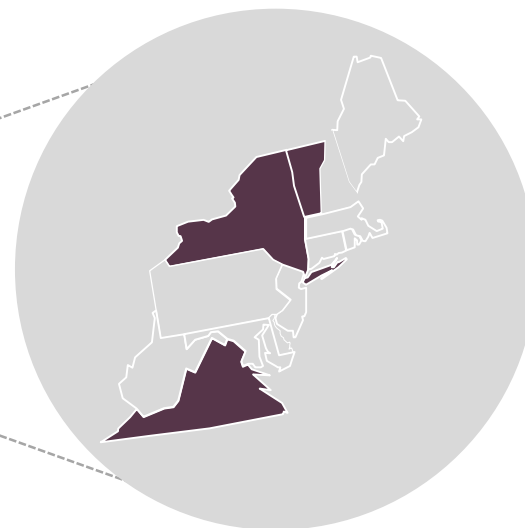
Status: Failed - Adjourned - House Natural Resources and Energy

Requests the governor convene the Regional Greenhouse Gas Initiative and to advocate for a regional carbon tax

## **VA HJR 109: Investment in High Carbon Emitting**

Status: Failed

Orders an economic impact study on investments in high-carbon-emitting generation facilities, if the federal government were to adopt a carbon tax, a cap-and-trade program, or other system to regulate the emission of greenhouse gases





# Proposed state carbon tax legislation, continued

## **WA H 1646 & S 5509: Equitable Clean Energy Economy**

Status: Failed

Proposes a carbon tax to be born by the emitting entity. Introduces a revenue fund to invest generated revenue into environmental health projects in low income communities.

## **CA S 1156: Carbon Tax Law of 2014**

Status: Pending - Senate Governance and Finance Committee

Imposes a carbon tax of an unspecified amount per ton of carbon-dioxide-equivalent emissions on suppliers of fossil fuels

## **HI H 3237: Renewable Energy**

Status: Failed - Adjourned - House Water, Land, Ocean Resources and Hawaiian Affairs Committee

Amends the renewable portfolio standards to mandate greater energy penetration levels, establishes a photovoltaic feed-in tariff financed by a carbon fee, establishes a carbon tax for grid-based electricity and for vehicles

## **OR D 1556: Carbon Tax**

Status: Failed

Imposes tax on fuel suppliers and utilities based on amount of carbon in carbon-based fuel that is sold by fuel supplier to consumers in state or that is used to produce carbon-generated electricity supplied by utility to consumers

## **MT H 193: Equitable Clean Energy Economy**

Status: Introduced

Establishes a carbon tax of \$10 per metric ton on large emission sources from 2020, sets emissions reduction goals



# Washington state strikes down carbon fee measures

## Timeline of carbon fee proposals in Washington state




### Initiative 1631 results



Sources: Ballotpedia, "Washington 2018 ballot measures;" "SB 6203 – 2017-18," Washington State Legislature.

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## Washington Initiative 1631 supporters

**Supporters argued that a carbon fee would've created jobs and minimized pollution, resulting in cleaner air, water and natural resources**



“We feel very excited that this is another opportunity for Washington to do what we do well, which is to innovate and build a high-tech future in clean energy, and we're doing it big time.”

**WA Governor Jay Inslee**



“With the recent report from the IPCC noting the drastic action required to prevent the worst impacts of climate change, Initiative 1631 is an important step forward for the people of Washington State.”

**Sen. Bernie Sanders (I-VT)**



“[Initiative 1631] will clean up the mess of pollution by putting a fee on the largest corporate polluters and invest in clean energy, transportation and protecting our state's natural resources. This is a major step to improving public health and reducing the climate change impacts.”

**Rep. Pramila Jayapal (D-WA)**



“If 1631 passes, it will create the first fee of its kind in the United States. Going first is never easy, but Washington has a history of pioneering new ideas. And because of all the benefits—shoring up nuclear and hydropower, enhancing the state's role as a leader in innovation, and most of all accelerating progress on climate-change solutions—I believe it will be worth it.”

**Bill Gates, Bill and Melinda Gates Foundation**

Sources: Ballotpedia, “Washington 2018 ballot measures;” “Washington Gov. Jay Inslee Pushes Nation's First Carbon Tax,” WBUR, Jan. 29, 2018; Bernie Sanders, Twitter, Oct. 28, 2018; Bill Gates, “Why I'm for Washington state's carbon fee,” LinkedIn, Oct. 9, 2018.

## Washington Initiative 1631 opponents

**Opponents argued that the initiative wouldn't have reduced global carbon emissions and could've raised gas prices**



“Our members concluded I-1631 is not the right way to reduce emissions. We share the goal of protecting the environment, but this initiative will raise the cost of energy for families and employers while offering little assurance it will result in a meaningful reduction of carbon emissions.”

**Kristofer Johnson, Association of Washington Business President**



“The assumption is that while industry will leave the state due to high costs, commercial business and families are less likely to do so and will simply endure the costs. Ultimately, the increased costs are borne by families who can't avoid them and must find a way to fit them into an ever-increasing burden of taxes in Washington.”

**Todd Myers, Washington Policy Center's Center for the Environment Director**



“ [Initiative 1631] would exempt six of the ten largest stationary source emitters in the state, including a coal-fired power plant, an aluminum smelter, and a number of pulp and paper plants. This would undermine the goal of reducing emissions, while effectively subsidizing certain companies at the expense of others.”

**Robert Allendorfer, BP refinery manager**

# Carbon pricing debates divide both parties

## Opposition and support spans the political spectrum

### Regulation

#### *Democrats against carbon pricing*



- Democratic opponents argue that carbon pricing won't do enough to achieve necessary carbon emission reductions.
- Instead, they support regulation-based approaches like the Clean Power Plan
- The plan includes federally mandated emission caps and penalties for industries that do not comply with such mandates

### Market solutions

#### *Republicans for carbon pricing*



- Several current and former Republican-elected and appointed officials promote a model in which the revenue generated from a tax on carbon emissions is returned to citizens as dividends to IRAs
- This model is backed by younger members of the party and several Bush-era Republicans, but it has seen little support in Congress

### Business as usual

#### *Republicans against carbon pricing*



- Many Republican elected and appointed officials do not support emissions regulations or carbon pricing
- No carbon pricing bills have succeeded at the state or federal level where strong Republican opposition is present
- President Trump has stated explicitly that he does not support any form of carbon pricing.

### Clean energy market

#### *Democrats for carbon pricing*



- Several Democratic leaders, at the federal and state level, promote a similar carbon tax model to their Republican counterparts
- A 2018 Senate Bill, American Opportunity Carbon Fee Act, supports a carbon tax with revenue streams for clean energy job training grants and refundable tax credits, including job training and infrastructure projects

Sources: Robinson Meyer, "Democrats are Shockingly Unprepared to Fight Climate Change," the Atlantic, November 15, 2017. Lisa Friedman, "College Republicans Propose an Unusual Idea from the Right: A Carbon Tax," The New York Times, March 6, 2018. H.R.4926, "American Opportunity Carbon Fee Act of 2018," U.S. Congress. John Schwartz, "A Conservative Climate Solution: Republican Group Calls for Carbon Tax," The New York Times, February 7, 2018.