REGIONAL CARBON PRICING STRATEGIES
Bulk of World Economy Subject to Price on Carbon

Source: IETA
Basic Carbon Price Frameworks

• **Cap and Trade**
  - California/Quebec (linked – WCI Market)
  - Ontario (WCI Market – Linkage pending)
  - Oregon (proposed – WCI Market & Linkage anticipated)
  - RGGI, EU-ETS, China, Japan, etc.

• **Output-based Pricing System**
  - Washington

• **Tax Systems**
  - BC – Levy on transportation & fuels (revenue neutral)

• **Combo Tax/Output-based Pricing Systems**
  - Alberta
  - Pan-Canadian Backstop
Carbon pricing requires policy choice

• **What sectors/thresholds?** Economy wide? Transportation and heating fuels? Just major emitters, or small emitters as well?

• **Revenue Neutral or Revenue Source?** Targeted use of funds for carbon reduction? Supporting other important priorities, like education? Environmental Justice issues?

• **Trade competitiveness:** What will a carbon price do to your jurisdiction? How do you protect energy intensive, trade-exposed industries?

• **Offsets:** Should they be allowed? What types? What limitations? Jurisdictional?

• **Link or stand alone:** Join with other markets? Regional? National? International?

-No one right answer!
California: Back in the done column

• Western Climate Initiative (WCI) Cap and Trade system initiated 2013
• Economy-wide application (phased in); threshold 25,000 tons CO2e
• Initial free allocation of allowances to certain energy-intensive, trade exposed industries
• Linked with Quebec 2014; Ontario linkage anticipated
• Pre-2020 regulatory certainty achieved June 2017 (Cal Chamber v. ARB)
• Post 2020 regulatory certainty achieved with 2/3 Supermajority vote passage of AB 398, July 10 2017
  • Reduces use of offsets to 4 percent through 2025, 6% through 2030; 50% offsets local
  • Particulate emission issue (somewhat) unique to California

Projected Floor Price (5% plus inflation@1.5%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Floor Price</th>
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<tbody>
<tr>
<td>2020</td>
<td>US$16.39</td>
</tr>
<tr>
<td>2022</td>
<td>US$18.60</td>
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<tr>
<td>2025</td>
<td>US$22.46</td>
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<tr>
<td>2030</td>
<td>US$30.78</td>
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</tbody>
</table>

Note: floor price estimate in 2018 through 2020 assumes 1.5% annual inflation
BC: Revenue-Neutral Tax (for now)

- Initiated 2008 at CAD$10/ton; currently CAD$30/ton; expected to increase to CAD$50 by 2022
- Limited to fossil fuels – not industry wide
- Originally Revenue Neutral with other taxes reduced; unclear whether other tax reductions will keep pace with new revenue generation
- Offsets for government application, not general market
Oregon: C&T on its way! (we think)

- **SB 1070** (pending): Oregon Clean Jobs Bill:
  Directs DEQ to create “Cap & Invest” market-based program “in a manner necessary to enable this state to pursue linkage agreements with market-based programs in other states or countries.”

- Targets: 20% below 1990 levels by 2025; 45 percent by 2035; and 80 percent by 2050.

- Threshold: **25,000 CO2E**/year, Economy-wide

- Offsets: **8% limit** (Offset types/limitations TBD)

- Broad support in legislature for February 2018 session
Washington State: Uncertainty reigns

- Failed cap and trade legislation 2015 and 2016
- Failed carbon tax ballot initiative in 2016
- **Clean Air Rule** in lieu of Cap and Trade
  - Compliance **Threshold**: 100,000 Tons in 2017, dropping down to 70,000 tons by 2035
  - Covers in-state nonmobile sources, petroleum product producers and importers, and natural gas distributors (~70 emission sources) – about 2/3 if in-state GHG emissions
  - “Emission Reduction Units” based on industry targets
  - extra-jurisdictional allowances/offsets considered for compliance use
  - **Subject to significant legal challenges**
- Four separate tax proposals before legislature in 2018
- Another carbon-tax ballot initiative on the way?
- **Cap and Trade as an alternative?**
Alberta: Why not both?

- Tax/levy on transportation/heating fuels @ $30/ton and increasing (similar to BC)
- Output-based threshold on large emitters (>100,000/tons/year) (similar to Washington State)
  - No absolute emissions cap
  - Specified Gas Emitters Regulation (“SGER”) through 2017; Large Emitters Program beginning 2018
  - CAD$30/ton in 2018, escalating 2%/year (subject to Federal backstop discussions)
- 33 different offset protocols (Alberta-only)
Pan-Canadian Framework: Do it yourself or we’ll do it for you

Pan-Canadian Framework on Clean Growth and Climate Change principles:

- Carbon pricing should be a central component
- Recognize carbon pricing policies already implemented or in development
- Carbon pricing should be economy-wide.
- Carbon pricing policies swiftly to minimize stranded investment and maximize reductions.
- Carbon price increases should be predictable & gradual.
- Carbon pricing policies should minimize competitiveness impacts and carbon leakage, particularly for emissions-intensive, trade-exposed sectors.
- Carbon pricing policies should include revenue recycling to avoid a disproportionate burden on vulnerable groups and Indigenous Peoples.

**Federal Backstop:** Minimum national carbon tax, starting at CAD$10/ton in 2018 and rising to **CAD$50 by 2022** (with status check in 2020).

- Similar to Alberta system
- Provinces with equivalent systems – whether C&T, tax or otherwise – exempt (equivalent not yet fully defined)
- Provinces with no system will be subject to Federal backstop.
Offsets: Why they matter.

- Actual carbon reduction at least cost to economy and compliance entities.
- Provide price control for markets
- Allow non-regulated sectors participation
- Provide economic development opportunities.
- Incent Innovation with long-term benefit

Offsets must be:

- **Real**: The carbon reductions must have already occurred
- **Additional**: offset must represent emission reductions that are in addition to what would have occurred otherwise
- **Permanent**: offset must represent emission reductions that are non-reversible or must be sequestered for 100-years or more
- **Verifiable**: sufficient data quantity and quality must be available to ensure emission reductions can be verified by an independent third party auditor (verifier) against an established protocol
- **Quantifiable**: emission reductions represented by offsets must be reliably measured or estimated, and capable of being quantified
- **Enforceable**: offset ownership is undisputed and enforcement mechanisms exist to ensure that all program rules are followed.
## Offsets: What works for your jurisdiction?

<table>
<thead>
<tr>
<th>Current California Protocols</th>
<th>Current RGGI protocols</th>
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<tbody>
<tr>
<td>• U.S. Forest Projects</td>
<td>• Landfill methane Projects</td>
</tr>
<tr>
<td>• Urban Forest Projects</td>
<td>• Sulfur Hexafluoride (SF$_6$) reduction in electric power sector</td>
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<tr>
<td>• Livestock Projects</td>
<td>• U.S. Forest Projects (for CT and NY only)</td>
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<tr>
<td>• Ozone Depleting Substances (ODS) Projects</td>
<td>• Building Sector Energy Efficiency Projects</td>
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<tr>
<td>• Mine Methane Capture (MMC)</td>
<td>• Agricultural manure management Projects</td>
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<td>• Rice Cultivation Projects</td>
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Supplemental Materials


- **Alberta Climate Leadership Plan**

- **BC Climate Leadership Plan**

- **Overview of BC Carbon Offsets** (IETA)

- **Overview of California Offsets** (IETA)

- **Oregon SB 1070** – Proposed Cap and Trade Legislation

- **Washington Clean Air Rule**

- **The Pan-Canadian Framework on Clean Growth and Climate Change**

- **Cal Chamber support for cap and trade**