Linkage without Trade: California’s Contribution to “Linkage by Degrees”

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Goals for Introductory Remarks

- Clearly define formal linkage and linkage by degrees.
- Describe California’s approach to formal linkage and linkage by degrees.
- Describe the benefits of linkage by degrees.
Defining Formal Linkage and Linkage by Degrees

• **Formal linkage**: the authorization of allowance flows between two cap-and-trade (C&T) systems.

• **Linkage by Degrees**: a broad process of incrementally aligning program elements between two C&T systems.

• **Program elements**: design choices regulators face when constructing a C&T system. Includes:
  – Technical issues: monitoring, reporting and verification of carbon emissions; tracking systems
  – Stringency of reduction targets
  – Methods for allowance allocation
  – The provision of cost control measures

• Formal linkage is a particularly important program element that regulators may or may not align between C&T system.
## Linkage by Degrees Example

<table>
<thead>
<tr>
<th>Program Element</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Floor</td>
<td>No alignment</td>
<td>Both systems have price floor</td>
<td>Systems align initial price floor levels</td>
<td>Systems align initial levels and growth rates</td>
<td>Systems align initial levels, growth rates and source for calculating inflation rates</td>
</tr>
</tbody>
</table>

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### No Linkage by Degrees Between C&T Systems

### Fully Aligned C&T Systems
California’s Approach to Formally Linking with Quebec

- California has aligned virtually all program elements with Quebec as a prerequisite to establishing a formal link. The programs, in fact, look nearly identical.
  - Although impressive, California and Quebec are on track to become the first bilaterally linked C&T systems, this level of alignment comes with costs: time and administrative effort.
  - Those costs might spur alternative approaches to formal linking (such as authorizing allowance flows with only a few aligned program elements).
  - But a more likely outcome is that some future formal links will simply fail to materialize because aligning program elements is too difficult.

- Would failure to establish all proposed formal links be the end of the world? My answer is no.
Benefits of Linkage by Degrees

• Linkage by degrees cannot achieve only a few benefits that formal linkage achieves:
  – Achieving lowest overall abatement costs between two C&T systems.
  – Lowering overall allowance price volatility because of increased liquidity.

• Linkage by degrees can fully or partially achieve many of the benefits that formal linkage achieves:
  – Reductions in leakage and competitiveness issues.
  – Political benefits.
  – Administrative benefits to businesses and regulators.

• Linkage by degrees achieves one benefit that formal linkage cannot:
  – Aligning program elements that allow for stringencies of two C&T programs to be readily compared.
Thank You