Health Benefits of the Regional Greenhouse Gas Initiative (RGGI):
A summary of the Abt Associates 2017 report


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What is RGGI?

- “cap-and-invest” program to reduce CO$_2$ emissions from electrical generating plants in 9 NE states

- emissions allowances are sold and funds returned to states for energy efficiency, renewables, direct bill payments ($2.6 billion 2009-2014)

- program has reduced CO$_2$ emissions 37% already
Approach taken in Abt report

Did not consider ozone, direct impacts of NO$_2$ & SO$_2$, or impact of CO$_2$

Health benefits estimated from changes in PM$_{2.5}$

Source: Abt Associates analysis 2017
Emissions changes due to RGGI

Changes in NO\textsubscript{x} Emissions

Changes in SO\textsubscript{2} Emissions

Source: Abt Associates analysis 2017
Changes in PM$_{2.5}$ due to RGGI

RGGI Effect on Annual Average PM$_{2.5}$
2009 to 2011

RGGI Effect on Annual Average PM$_{2.5}$
2012 to 2014

Source: Abt Associates analysis 2017
Total health benefits for all RGGI states

<table>
<thead>
<tr>
<th>Avoided Health Effects</th>
<th>Avoided Mortality</th>
<th>Avoided Morbidity</th>
<th>Other</th>
<th>Value of Avoided Health Effects</th>
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<tbody>
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<td></td>
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<td>Low</td>
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<td>300–830 premature adult deaths</td>
<td>35–390 non-fatal heart attacks</td>
<td>180–220 hospital admissions</td>
<td>$3.0 billion</td>
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<td>420–510 cases of acute bronchitis</td>
<td>200–230 asthma ER visits</td>
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<td>8,200–9,900 asthma exacerbations</td>
<td>39,000–47,000 lost work days</td>
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<td>13,000–16,000 respiratory symptoms</td>
<td>240,000–280,000 days of minor restricted activity</td>
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Every RGGI State saw benefits... so did some non-RGGI states (NJ, PA, VA, WV)

Source: Abt Associates analysis 2017
Summary

- RGGI already acknowledged as environmental and economic success

- Also a public health success, preventing hundreds of premature deaths and reducing pollution-related disease

- Monetized value of health benefits > economic value of pollution allowances