# Article information:

Impacts of Potential CO2-Reduction Policies on Air Quality in the United States | Environmental Science & Technology
<https://pubs.acs.org/doi/10.1021/acs.est.5b00473>

# Article summary:

1. The impacts of four potential U.S. CO2 emission reduction policies on 2050 air quality are analyzed using the community multiscale air quality model (CMAQ).

2. A relatively aggressive carbon tax leads to improved PM2.5 air quality compared to the reference case, but less capital is available to install NOX reduction technologies, resulting in an O3 increase.

3. A policy aimed at reducing CO2 from the transportation sector and electricity production sectors leads to reduced emissions of mobile source NOX, thus reducing O3 and PM2.5 concentrations in most of the U.S., but increased primary PM2.5 emissions associated with fuel switching in the residential and industrial sectors leads to increased organic matter (OM) and PM2.5 in some cities.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “Impacts of Potential CO2-Reduction Policies on Air Quality in the United States” provides a comprehensive analysis of four potential U.S. CO2 emission reduction policies and their impacts on 2050 air quality using the community multiscale air quality model (CMAQ). The authors provide detailed information about each scenario, including emissions growth factors from the EPAUS9r MARKAL model, future meteorology downscaled from GISS ModelE General Circulation Model (GCM), and implementation of a relatively aggressive carbon tax leading to improved PM2.5 air quality compared to the reference case as incentives increase for facilities to install flue-gas desulfurization (FGD) and carbon capture and sequestration (CCS) technologies, among other points discussed throughout the article.

The article appears to be well researched and reliable overall; however, there are some potential biases that should be noted when considering its trustworthiness and reliability as a source of information on this topic:

1) The authors do not explore any counterarguments or alternative perspectives that could challenge their findings or conclusions;

2) The authors do not discuss any possible risks associated with implementing these policies;

3) The authors do not present both sides equally – they focus primarily on presenting evidence for their own conclusions rather than exploring opposing views;

4) There is no discussion of any promotional content or partiality within the article;

5) There is no mention of any missing points of consideration or missing evidence for claims made within the article;

6) There is no discussion of whether unsupported claims are made within the article;

7) There is no discussion of whether one-sided reporting occurs within the article;

8) Finally, there is no discussion of whether all relevant facts have been considered when making conclusions within the article.

In conclusion, while this article appears to be well researched and reliable overall, it should be read with caution due to potential biases that may exist within it which could affect its trustworthiness and reliability as a source of information on this topic.

# Topics for further research:

* Carbon tax incentives
* Flue-gas desulfurization (FGD)
* Carbon capture and sequestration (CCS)
* EPAUS9r MARKAL model
* GISS ModelE General Circulation Model (GCM)
* Potential risks of CO2-reduction policies

# Report location:

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