# Article information:

Methane emissions as energy reservoir: Context, scope, causes and mitigation strategies - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0360128515300629>

# Article summary:

1. Methane (CH4) is a bridge fuel between present fossil (carbon) economy and desired renewables, and is projected to play an important role in the global energy mix.

2. Five key anthropogenic sources of CH4 emissions are agriculture, coal, landfills, oil and gas operations and wastewater. Landfills are the third highest source of CH4 emissions.

3. The US and China are the two largest producers of municipal solid waste (MSW), with the US averaging 250 MMT of MSW annually and China treating 105 MMT of MSW in 2013.

# 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 provides a comprehensive overview of methane emissions as an energy reservoir, including context, scope, causes, mitigation strategies, and potential for harvesting this wasted resource for useful energy. The article is well-researched and provides detailed information on global methane emissions from key sources such as agriculture, coal mines, landfills, oil and gas operations and wastewater. It also provides quantitative data on methane emissions from landfills in the United States and China. Furthermore, it discusses various estimation models used to measure methane emissions as well as potential pathways for conversion of methane into renewable gaseous fuel for use as compressed natural gas (CNG) or clean liquids such as methanol or dimethylether (DME).

The article appears to be unbiased in its reporting; however there may be some potential biases due to its focus on the US and China as two largest producers of municipal solid waste (MSW). Additionally, while it does provide information on government policies to deal with methane emissions from specific sectors in different countries, it does not explore counterarguments or present both sides equally when discussing these policies. Furthermore, while it does discuss potential risks associated with methane emissions from landfills such as adverse health effects on population due to unmanaged landfills in China, it does not provide any evidence for these claims or explore possible solutions to mitigate these risks.

In conclusion, overall the article is reliable in terms of providing comprehensive information on methane emissions as an energy reservoir; however there may be some potential biases due to its focus on the US and China as two largest producers of MSW which could lead to one-sided reporting or missing points of consideration when discussing government policies related to methane emission control. Additionally there is lack of evidence provided for certain claims made regarding risks associated with unmanaged landfills in China which could lead to unsupported claims or unexplored counterarguments when discussing possible solutions for mitigating these risks.

# Topics for further research:

* Methane emissions mitigation strategies
* Renewable gaseous fuel conversion pathways
* Government policies for methane emission control
* Health effects of unmanaged landfills
* Global methane emissions from agriculture
* Coal mine methane emissions estimation models

# Report location:

<https://www.fullpicture.app/item/8fa4cc8792442d9f74e16dfbad978c02>