

Cost of Carbon

In a time when the price of carbon fuels rises due to insatiable demand and dwindling supplies, the costs of carbon emissions are left largely ignored. However, the cost of carbon (in the form of CO₂) is multi-faceted, with economic, political, and environmental contributors and its accurate assessment is extremely important in generating the incentive to move towards renewable energy.

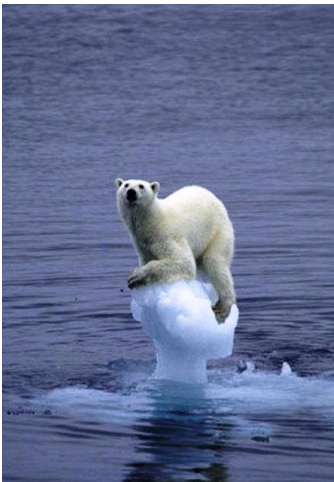


In the Midwestern United States, many companies have taken to paying farmers not to plow their land in order to offset their own carbon emissions. (Tilling soil releases CO₂ into the atmosphere.) Currently, the going rate per ton of CO₂ stands at about 50 cents per ton. A set of bills current under debate in the U.S. Congress would encourage this system, allowing the price of carbon to be determined by the market. Some speculate the upper limit could reach \$7 per ton. In Europe, which has a much longer history with carbon emission mandates, prices go as high as \$30 a ton.

However, these prices reflect a purely economic valuation of a ton of carbon. In reality, the true cost of a ton of CO₂ emissions is inflated by several other factors.



Due to a high dependence on carbon fuels by countries with few natural supplies, (United States, China, Japan), political power is shifted dramatically to countries



with high production capabilities (Iraq, Saudi Arabia, Russia). This shift in power causes political discord and the fight for control of carbon supplies can very well be the underlying driving force behind major conflicts, including the most recent Iraq War.

Perhaps the most startling and substantial contributor to the cost is the environmental cost that accompanies each ton of carbon, a cost that is caused by CO₂'s effect on the climate.

The burning of carbon fuels releases CO₂ and various other greenhouse gasses into the atmosphere. These

greenhouse gasses form a barrier around the planet, effectively trapping heat on the Earth's surface, which in turn causes global warming. While the changes in temperature may be subtle, an on average increase of only a few degrees in the past century, the effects of global warming are substantial. The warming oceans cause major changes to weather patterns. The melting glaciers and polar ice caps lead to rising sea levels and a diminished supply of freshwater. The rising temperature itself causes severe degradation to sensitive ecosystems. These environmental effects are all precursors to issues of global concern including diminished food production, human displacement, and irreparable damage to biomes from which humans depend on.

Although the political and environmental costs of carbon emissions are very real, they are also intangible and difficult to calculate. Some estimates place the total cost of a ton of carbon emissions at \$85. However, it is impossible to consider all of the effects of carbon emissions and thus, the true cost of carbon may be much higher.