

Social Cost of Greenhouse Gasses

The social cost of carbon is a measure of the economic harm from those impacts, expressed as the dollar value of the total damages from emitting one ton of carbon dioxide into the atmosphere. The current central estimate of the social cost of carbon is **over \$50 per ton** in today's dollars.

This vital tool helps federal agencies make sound decisions to protect current and future generations of Americans. By properly accounting for the damages caused by carbon pollution, agencies can properly evaluate policies that affect greenhouse gas emissions.

The social cost of methane emissions was set most recently at **\$1,756 per short ton** by the U.S. Interagency Working Group on Social Cost of Greenhouse Gases, compared to \$68 for carbon dioxide. Both metrics estimate the economic damages of releasing emissions into the atmosphere.

As the climate continues to change, millions of poor people face greater challenges in terms of **extreme events, health effects, food security, livelihood security, migration, water security, cultural identity**, and other related risks.

The social cost of carbon (SCC) is used **to estimate in dollars all economic damage that would result from emitting one ton of carbon dioxide into the atmosphere**. It indicates how much it is worth to us today to avoid the damage that is projected for the future.

The **discount rate** used in estimating the SCC incorporates both empirical evidence and value judgments. In Step 4 of the SCC modeling process described above, future damages are converted into present-day value by using a discount rate to determine how much weight is placed on impacts that occur in the future. Future costs and benefits are generally considered less significant than present costs and benefits, and the discount rate reflects this level of relative significance. A high discount rate means that future effects are considered much less significant than present effects, whereas a low discount rate means that they are closer to equally significant. The effects of different discount rates on estimates of the SCC can be seen in the table below. (Estimates of the SCC in 2020 were published in the Affordable Clean Energy Rule Regulatory Impact Analysis. Units are 2019\$ per ton of CO₂.)