

# THE COST OF CLIMATE POLLUTION

## WHAT IS THE BEST SC-GHG ESTIMATE?

### What is the best estimate of the SC-GHG to use?

The federal government’s Interagency Working Group on the Social Cost of Greenhouse Gases (IWG), which operated from 2009-2017 and was reconvened in 2021, first released its SC-GHG estimates in 2010 and updated them periodically. It last updated its estimates in 2016, although it updated those estimates for inflation in 2021.

Table 1 is from the Interagency Working Group’s 2021 Technical Support Document and shows the social cost of carbon estimates, in 2020 dollars, at five-year intervals.

**Table 1: IWG’s Social Cost of CO<sub>2</sub> (in 2020 dollars per metric ton of CO<sub>2</sub>)**

| Year of Emission | Average estimate at 5% discount rate | Average estimate at 3% discount rate | Average estimate at 2.5% discount rate | High Impact Estimate (95th percentile estimate at 3% discount rate) |
|------------------|--------------------------------------|--------------------------------------|--|---|
| 2020             | \$14                                 | \$51                                 | \$76                                   | \$152   |

## FAQ GUIDE

Executive Summary

**What is the best SC-GHG estimate?**

How and why states should use the SCC?

Are the federal IWG numbers still the best?

What methodological choices went into the IWG numbers?

Responses to common (but misguided) critiques of the SCC from opponents of climate policy

Technical guidance: how do we apply the SC-GHG in our analyses?

What other resources exist?

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| Year of Emission | Average estimate at 5% discount rate | Average estimate at 3% discount rate | Average estimate at 2.5% discount rate | High Impact Estimate (95th percentile estimate at 3% discount rate) |
|------------------|--------------------------------------|--------------------------------------|--|---|
| <b>2025</b>      | \$17                                 | \$56                                 | \$83                                   | \$169   |
| <b>2030</b>      | \$19                                 | \$62                                 | \$89                                   | \$187   |
| <b>2035</b>      | \$22                                 | \$67                                 | \$96                                   | \$206   |
| <b>2040</b>      | \$25                                 | \$73                                 | \$103                                  | \$225   |
| <b>2045</b>      | \$28                                 | \$79                                 | \$110                                  | \$242   |
| <b>2050</b>      | \$31                                 | \$85                                 | \$116                                  | \$260   |

Although the IWG’s estimates were based on the best available science when they were developed, they now fail to reflect years of science and economics and are now widely recognized to substantially undervalue the true costs of climate pollution. In November 2022, the federal Environmental Protection Agency (EPA) drafted a comprehensive update to the SC-GHG applying the most up-to-date science and economics. Those valuations are undergoing peer review and expected to be finalized in 2023 or 2024.

Table 2 is from EPA’s 2022 Draft Report and shows the social cost of carbon estimates, in 2020 dollars, at ten-year intervals.

(Whereas the IWG’s estimates stop at 2050, EPA’s go out to 2080.)

## **Table 2: EPA’s 2022 Draft Social Cost of CO<sub>2</sub> (in 2020 dollars per metric ton of CO<sub>2</sub>)**

| Year of Emission | Average estimate at 2.5% discount rate | Average estimate at 2% discount rate—EPA’s Central Estimate | Average estimate at 1.5% discount rate |
|------------------|--|---|--|
| <b>2020</b>      | \$120                                  | <b>\$190</b>  | \$340                                  |
| <b>2030</b>      | \$140                                  | <b>\$230</b>  | \$380                                  |
| <b>2040</b>      | \$170                                  | <b>\$270</b>  | \$430                                  |
| <b>2050</b>      | \$200                                  | <b>\$310</b>  | \$480                                  |
| <b>2060</b>      | \$230                                  | <b>\$350</b>  | \$530                                  |

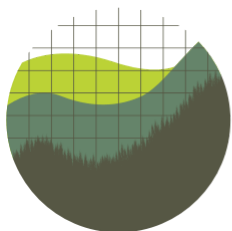
| Year of Emission | Average estimate at 2.5% discount rate | Average estimate at 2% discount rate—EPA's Central Estimate | Average estimate at 1.5% discount rate |
|------------------|--|---|--|
| 2070             | \$260                                  | <b>\$380</b>  | \$570                                  |
| 2080             | \$280                                  | <b>\$410</b>  | \$600                                  |

Note that the climate-damages value increases over time. This is because the further in the future greenhouse gases are emitted, the greater the damages they will cause, due to the effects of accumulation. Therefore, it is important to calculate the full stream of climate effects, i.e., to take into consideration the emissions from every year of a policy, so that these increasing damages are reflected.

## What's included in the SC-GHG numbers? What isn't? ▼

## Is there a state-specific SC-GHG we can use? ▼

## Why should our state use a global number? ▼



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