



Federal Actions on Valuing Climate Impacts

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Early History

- **2007:** In *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 9th Circuit remands back to NHTSA its final rule on Average Fuel Economy Standards for Light Trucks, Model Years 2008-2011, after holding that the rule was arbitrary and capricious, in part due to its “failure to monetize the value of carbon emissions.”
- **2008-2009:** Agencies use diverse methodologies and estimates of SCC to monetize carbon reduction benefits in a series of rules.
- **August 2009:** Interagency Working Group recommends use of consistent interim estimates across agencies. First used in DOE Energy Conservation Standards for Refrigerated Bottled or Canned Beverage Vending Machines, and subsequently in about 7 other rules.
- **October 2009:** NAS Report, *Hidden Costs of Energy*, suggests range of \$1 to \$100, depending on extent of future damages and discount rate.

Interagency Working Group Guidance

- **February 2010:** IWG, co-chaired by OMB and CEA, issues first *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866*.
 - Recommends a range of values, specific to each emissions year, based on multiple runs of three integrated assessment models: DICE, FUND, and PAGE, using standardized input assumptions for socio-economic and emissions trajectories and climate sensitivity.
 - Results of model runs were averaged using discount rates, of 2.5, 3, and 5 percent to provide three summary values for each year. A fourth value based on the 95th percentile estimate at 3% was also included to represent “higher-than-expected” impacts. Average value at 3% for 2020 emissions was \$26 (\$2007).
 - Estimates were based on global impacts, and a range of 7 to 23 percent of these estimates was recommended to provide “approximate, provisional” values for domestic impacts.
 - First used in DOE Energy Conservation Standards for Small Electric Motors rule in March 2009, and subsequently in about 30 other rules.

2013 Update to Technical Support Document

- Update to TSD issued in May 2013
 - All input assumptions same as for 2010 TSD.
 - Used updated versions of the DICE, FUND, and PAGE models based on peer-reviewed literature. Revised estimates were significantly higher than 2010 estimates. Average value at 3% for 2020 emissions was \$43 (60% higher than 2010 estimate).
 - First used in DOE Energy Conservation Standards for Microwaves rule in June 2013, and subsequently in about 40 other rules.
 - Revised estimates generated significant public attention. Key issues included:
 - TSD not peer reviewed or published for public comment
 - Inconsistencies with OMB Circular A-4 on discount rates and use of global v. domestic
 - Concerns with model choice and input assumptions
 - Inadequate consideration/presentation of uncertainty
 - In November 2013, OMB published request for comment. 140 unique comments and 39,000 form letters received in response. IWG response to comments published in July 2015.



National Academies Report

- ❑ **July 2015:** IWG contracts with Division of Behavioral and Social Sciences and Education to conduct a two-phase study to examine the merits and challenges of potential approaches for both a near-term limited update and longer term comprehensive update to the SCC estimates.
- ❑ **January 2016:** NAS issues Phase I report. Recommends against a near-term update but offers suggestions for enhancing the transparency of the TSD, particularly with regard to the characterization of uncertainty.
- ❑ **August 2016:** IWG issues revised TSD that incorporates NAS recommendations for presentation of uncertainty, and includes social cost estimates for methane and NO_x.
- ❑ **January 2017:** NAS issues final report. Includes multiple recommendations for near-term (2-3 years) and longer-term updates and future research.

Current Administration

- **March 2017:** Incoming administration issues EO 13783 on *Promoting Energy Independence and Economic Growth*
 - Disbands the OMB/CEA led IWG and withdraws previously issued technical support documents relating to social valuation of GHG emissions.
 - Directs agencies, when monetizing the value of changes in GHGs resulting from regulations, to ensure, to the extent permitted by law, that their estimates are consistent with the guidance contained in OMB Circular A-4, including with respect to consideration of domestic v. international effects and appropriate discount rates.
 - A-4 recommends that rule analyses:
 - Focus on benefits and costs that accrue to citizens and residents of the US; for regulations likely to have effects beyond US borders, these should be reported separately.
 - Use discount rates of 3 and 7 percent; for rules with “important intergenerational benefits or costs,” consider a sensitivity analysis using a lower but positive rate, in addition to 3 and 7 percent.
 - OIRA and Federal agencies are currently considering approaches for implementing the EO.