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Via electronic submission and e-mail to hill-hammond.shaunta@epa.gov

Subject: Initial Comments to the Science Advisory Board Economic Guidelines Review Panel regarding EPA's revised document titled "Guidelines for Preparing Economic Analyses."

Dear Dr. Hill-Hammond:

Thank you for the opportunity to make oral comments on April 23 to the Panel on the topic of the revised draft "Guidelines for Preparing Economic Analyses." The World Resources Institute submits these written comments, expanding on those oral comments.

WRI is a fact-based, non-partisan policy research organization that works at the nexus of environment and development. We go beyond research to put ideas into action, working globally with governments, businesses, and civil society to build transformative solutions that protect the earth and improve people's lives. WRI provides policy advice as well as technical analysis, trainings, and capacity building services. We focus on urgent sustainable development challenges related to food, forests, water, climate, energy, and cities and transport. Attention to business, finance, economics, and governance underpin our efforts in these areas.

I am a Senior Fellow in WRI's Climate program, bringing over 30 years of experience in the fields of climate change, energy, and environment in a career that has spanned legislative and executive branches, research institutions, NGOs, and consulting. I served as Deputy Assistant Administrator in EPA's Policy Office from 1993-1995.

My comments focus on issues related to how the Guidelines will be applied to the most challenging environmental problem of our time: climate change. I want to emphasize a big picture issue: I strongly believe that a Benefit-Cost Analysis (BCA) framework is not the appropriate framework for choosing policies to address climate change. Given the nature of the problem, a risk management framework is the more appropriate framework, and is reflected in the UN Framework Convention on Climate Change. Nevertheless, EPA and other agencies recognize the need to determine a Social Cost of Carbon (SCC) and apply the Guidelines in that task and other aspects of regulatory decision-making.

My comments address:

1. Discount rates (Sec. 6)
2. Geographic scope of analysis (Sec. 5.1.1)
3. Uncertainty and risk aversion (Sec. 5.6)

1. Discount rates

I want to commend the team writing the draft of this section. The extensive treatment and discussion of discount rates is a major step forward from the treatment in OMB Circular A-4, and reflects the evolution in thinking among leading climate economists. Notably, the recommendations are specific in stating that, for a policy with a long time horizon (such as climate change):

- Analysis should not use the 7% discount rate based on the opportunity cost of private capital.
- Analysis should include either a declining discount rate (DDR) or a discount rate lower than the standard 3% based on the consumption rate of interest.

Nevertheless, the Guidelines should be strengthened by more explicit directives on appropriate DDR schedules and lower interest rates, particularly with respect to estimating the SCC.

The Guidelines also recognize properly that economic analysis should be only one factor in policymaking that affects multiple generations (though this is also true for all policymaking):

The problem of comparing benefits borne by future generations to costs experienced by the current generation involves both economic and ethical questions. Therefore, the normative choice of how a decision maker should weigh the welfare of present and future generations, along with the preferences of the current generations regarding future generations, cannot be made on economic grounds alone. [p. 6-17]

2. Geographic scope of analysis (Sec. 5.1.1)

This section is very disappointing and is inconsistent with fundamental principles of BCA. It addresses who has economic “standing,” and properly notes that “for domestic policy making standing is typically limited to the national level in order to maximize the welfare of residents.” However, aside from a quick reference in footnote 111 to when “non-residents” outside the U.S. might be relevant, the Guidelines are silent on the critical issue of when the geographic scope of a BCA should extend beyond U.S. borders. Climate change is just one of a growing number of environmental issues that are transboundary or global in nature and require collective action by governments to solve them. Climate change is a “global commons” problem, and the U.S. has worked for decades with other countries through the UNFCCC and other fora to address it. If each country considers benefits and costs only within its borders as a basis for action, countries collectively will fail to reduce carbon and other greenhouse gas emissions to the degree justified by the extent of global damages. All countries will needlessly suffer excessive climate damages. Both textbook economics and common sense point to this conclusion. The Guidelines should provide explicit direction to broaden the geographic scope of analysis beyond US borders when US policy is aimed at solving a transboundary or global commons problem. The Guidelines should explicitly direct analysts take a global perspective on estimating the SCC.

3. Uncertainty and risk aversion (Sec. 5.6)

This section of the Guidelines appears to endorse a “risk neutral” approach to dealing with uncertainty (though the phrase “risk neutral” does not appear in the Guidelines). Section 5.6 states that analysis should “present outcomes or conclusions based on expected or most plausible values.” This appears consistent with the more extensive language in OMB Circular A-4 on dealing with the economic value of uncertain outcomes (p. 42):

These best estimates are usually the average or the “expected value” of benefits and costs. Emphasis on these expected values is appropriate as long as society is “risk neutral” with respect to the regulatory alternatives. While this may not always be the case, you should in general assume “risk neutrality” in your analysis. If you adopt a different assumption on risk preference, you should explain your reasons for doing so.

The Guidelines should address explicitly the issue posed in OMB Circular A-4 and by many academics and experts: how should BCA deal with problems where society is not “risk neutral” with respect to a range of uncertain outcomes. Climate change is clearly one of those problems. It poses uncertain but potentially catastrophic damages, especially at high temperatures (e.g., warming that exceeds 3 degrees C (5.4 degrees F).

Standard BCA practices do not take into account situations in which individuals have a higher willingness to pay to reduce the likelihood of low-probability, high-impact damages than they have to reduce the likelihood of higher-probability but lower-impact damages with the same expected cost. Widespread risk-aversion among individuals is observable everywhere. People routinely purchase insurance to protect against a variety of high impact outcomes (e.g. death, disability, long-term medical care, loss of property, etc.), as do firms and organizations of all types. This reality should be explicitly recognized in the Guidance. When applied to climate change, SCC values should incorporate a degree of risk aversion analogous to that shown widely by all elements of society.

The Guidelines should draw from and build on the literature that has explored how risk aversion affects the SCC (e.g., Kopp R. et al, The Influence of the Specification of Climate Change Damages on the Social Cost of Carbon, *Economics: The Open-Access, Open-Assessment E-Journal* 6(2012-13): 1-40.). The Guidelines should require that SCC estimates incorporate a range of reasonable risk aversion assumptions. With regard to the treatment of this issue in the Guidelines, EPA has the opportunity to do truly pioneering work, building on studies by leading experts such as Kopp, Anthoff, Tol, and others.

Once again, WRI appreciates the opportunity to comment.

Sincerely,

Karl Hausker, Ph.D.
Senior Fellow