June 21, 2021

Dominic Mancini
Deputy Administrator
Office of Information and Regulatory Affairs
Office of Management and Budget
New Executive Office Building
Washington, D.C. 20503

RE: Notice of Availability and Request for Comment on the "Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates Under Executive Order 13990."

Dear Deputy Administrator Mancini,

The GPA Midstream Association ("GPA Midstream") appreciates the opportunity to provide comments in response to the May 7, 2021, Office of Management and Budget ("OMB") Notice of Availability and Request for Comment on the "Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates Under Executive Order 13990" ("Notice").[1]

GPA Midstream Association has served the U.S. energy industry since 1921 and has nearly 70 corporate members that directly employ more than 75,000 employees that are engaged in a wide variety of services that move vital energy products such as natural gas, natural gas liquids ("NGLs"), refined products and crude oil from production areas to markets across the U.S., commonly referred to as "midstream activities." The work of our members indirectly creates or impacts an additional 450,000 jobs across the U.S. economy. GPA Midstream members recover more than 90% of the NGLs such as ethane, propane, butane, and natural gasoline purchased in the U.S. from more than 400 natural gas processing facilities. In 2017-2019 period, GPA Midstream members spent over $105 billion in capital improvements to serve the country's needs for reliable and affordable energy.

Summary

On February 26, 2021, the Interagency Working Group on the Social Cost of Greenhouse Gases ("IWG") released interim values for the Social Cost of Carbon, Methane, and Nitrous Oxide ("SC-GHGs") pursuant to President Biden's Executive Order 13990.[2] The SC-GHGs represent a series of metrics to be used by federal agencies in regulatory benefit-cost analysis to estimate the

[1] 86 Fed. Reg. 24,669 (May 7, 2021).
[2] Exec. Ord. 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, 86 Fed. Reg. 7,037 (Jan. 25, 2021).

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potential future economic damages associated with an incremental increase in a ton of GHG emissions. Notably, among the new interim values is the social cost of methane ("SCM").[3] We expect that agencies will use these new SCM values when analyzing the scope of potential regulations for natural gas processing facilities – while others will seek to expand the use of the metric to govern individual projects. As such, the IWG process and the SC-GHG estimates are critically important to GPA Midstream, as the SC-GHGs carry significant implications for our members' operations. We submit these comments to offer constructive suggestions on several economic, technical, and procedural issues with the estimates. Specifically:

- We ask the IWG to look carefully at the underlying assumptions and modeling relied on to develop the interim values. In particular, the IWG should review the modeling inputs and consider a more modest approach that does not base the values on predictions such as the global emissions, atmospheric GHG concentrations, global population, or the global economy 300 years into the future. Modeling a more modest timeframe and considering a range of future outcomes will provide more useful information to stakeholders.

- We further request that the IWG revisit the way it has applied the discount rate, a crucial input to the SC-GHG analysis. To provide a full set of data for the public, the IWG should include an analysis that assumes a 7% discount rate, the rate in official OMB guidance. We likewise ask the IWG to consider other changes to its approach to discount rates.

- Before issuing final values, the IWG should allow for peer review of the underlying model inputs and assumptions in future updates. A 2017 report by the National Academies of Sciences, Engineering, and Medicine ("NAS") called on the IWG to overhaul its process for future revisions to the estimates, including external expert peer review and public input.[4] The IWG should take steps to improve its process, consistent with the NAS recommendations, including transparency measures and more opportunities to engage with the public.

- We also request that the IWG make clear that these estimates are for regulatory analyses, but should not be used in developing an individual project, such as, for instance, in environmental reviews under the National Environmental Policy Act. The IWG should also caution states and other entities on the use of the estimates beyond their intended purpose.

I. The IWG Should Review the Model Inputs and Consider a More Modest Approach

The modeling at the heart of the SC-GHGs seeks to predict, among other factors, global emissions, atmospheric GHG concentrations, global population, and global economic output 300

[3] U.S. Gov't Interagency Working Group on Social Cost of Greenhouse Gases, Technical Support Document: Social Cost of Carbon, Methane and Nitrous Oxide Interim Estimates under Executive Order 13990, Feb. 2021 ("2021 TSD").

[4] National Academies of Sciences, Engineering, and Medicine. 2017. Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide. Washington, DC: The National Academies Press. https://doi.org/10.17226/24651.

years into the future. We suggest that the IWG adjust its approach – and thereby provide more meaningful information to the public.

A. Modeling on a 300-year Time Horizon Lacks a Sound Scientific Basis

At the outset, we urge the IWG to reconsider its reliance on modeling that attempts to predict 300 years into the future.[5] The SC-GHGs rely, in part, on projections of future gross domestic product, per capita growth rates, global population, and greenhouse gas emission trajectories. The IWG relies on the EMF-22 models to supply these projections, which extend through 2100.[6] The remaining 200 years for these inputs come from sources that are not identified in the IWG materials.[7]

The SC-GHGs may be informed by scientific models and literature, but attempting to predict future centuries of emission scenarios, technological advancement, population growth, and economic progress is fraught with difficulty because the assumptions are not testable. Three hundred years in the past, in 1721, a collection of the most sophisticated natural philosophers could not have foreseen the world as it is today. Concepts such as carbon dioxide (which was only discovered in the 1750s[8]) and electrification were completely foreign, meaning that they would not even comprehend the problem the IWG is now trying to address.

Yet, imagine these leading thinkers of their time attempting to predict technological advancement, economic growth, and population growth 300 years into the future. They would be attempting to calculate future global economic output in a world where the U.S., Brazil, and Canada (three of largest modern economies) did not exist. Nor did a unified Germany, France, or Italy. Instead, future economic predictions would be based heavily upon then-existing world powers such as the Holy Roman Empire, the Ottoman Empire, the Dutch Republic, and the Swedish Empire. All predictions would be based upon a primarily agrarian society with some supplementation from a comparatively small economy of mechanics, artisans, bankers, and traders. Likewise, London had a population of approximately 600,000 in 1720. The notion that there would be dozens of cities exceeding 10 million people would be dismissed as impossible without mass starvation.

It would have been impossible for even the most educated people in 1721 to make accurate predictions under those circumstances, not because they lacked computer models, but because the world changed so dramatically over 300 years. Indeed, anyone who would have predicted in 1721

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[5] See 2010 TSD at 25 (models are run through the year 2300).

[6] Id. at 25, 43. These variables are input into the integrated assessment models ("IAMs") where the modelers have constructed damage functions that predict future climatic effects on, among other things, agricultural productivity, extreme weather, human health effects, property damage, the disruption of energy systems, migration, ecosystem services, and political destabilization, as well as possible technological adaptations to these issues. 2010 TSD at 5-9.

[7] Id. at 43.

[8] West, J.B. (2014). Joseph Black, carbon dioxide, latent heat, and the beginnings of the discovery of the respiratory gases. Am. J. Physiol. Lung Cell Mol. Physiol. 306: L1057-L1063, available at, https://journals.physiology.org/doi/pdf/10.1152/ajplung.00020.2014.

that, in 300 years' time, China would have a GDP nearly six times greater than that of Great Britain would have been outright dismissed.

In short, the IWG should acknowledge projections of this type far into the future are not founded on a verifiable scientific method and do not provide a reliable analysis to a reasonable degree of scientific certainty.[9] This is not to say that the IWG should not pursue its work. It should do so. Rather, we suggest that there are adjustments and qualifications that can improve the SC-GHGs to be referenced in benefit-cost analyses for regulatory actions.

B. The IWG should adjust its modeling approach to better reflect the substantial uncertainties in its predictions of the future

1. The IWG should utilize more modest timelines

First, the IWG should use more modest timeframes for its predictions. On a 300 year timeline, any incorrect prediction with respect to GHG emissions, climatic effects, population growth, economic growth, etc., would be compounded for decades, if not, centuries. If inputs are intertwined, errors become "stacked" and distort the estimates even more. Using a more modest timeline, such as from 30-50 years would not only reduce the number of erroneous predictions but their degree of error and the effect of those errors on the modeling. Although errors would still compound, they may only compound for 10 years, not 210 years. A shorter timeline would also make periodic updates more meaningful as the IWG could compare its own predictions to, for instance, the prior three to five years' worth of data (i.e., approximately 10% of the modeled timeline) and adjust its modeling inputs accordingly. The result will be a more robust estimation better suited for regulators and the public.

2. The IWG should model multiple potential futures

Second, to address the uncertainties of the future, the IWG should model a range of potential futures. The principal scenario the IWG has assumed for modeling purposes is one particular future: (i) Population growth rates declining to zero in 2200, (ii) GDP/ per capita growth rates declining to zero in 2300, and (iii) Carbon intensity declining from 2090-2100 but never improving thereafter.[10] This future is premised on the hypothesis that "increasing scarcity of natural resources and the degradation of environmental sinks available for assimilating pollution from economic production activities may eventually overtake the rate of technological progress."[11] Moreover, the remaining four modeling scenarios only predict even worse outcomes.[12] A robust analysis would include a manageable number of additional modeling runs that make a range of

[9] The scientific validity of predictions about the world 300 years from now is not enhanced by "consensus-based decision making." 2021 TSD at 36. Predictions of dystopian futures have attracted followers and been wrong. See, e.g., Paul R. Ehrlich, Anne H. Ehrlich, and John P. Holdren, Human Ecology, Problems and Solutions (W.H. Freeman & Co. 1973) at 277-78 (predicting environmental collapse and nuclear war due to overpopulation and the futility of producing more food describing "industrial civilization" as "biological and social folly.").
[10] 2010 TSD at 44.
[11] Id.
[12] TSD at 15.

future assumptions, such as including mid-range futures and a more optimistic future.[13] That will present a fuller picture of what the future could bring.

The IWG should likewise recognize and account for the range of outcomes from reducing GHG emissions in the United States. U.S. domestic reductions may certainly result in significant benefits, as the 2010 TSD presumes, with international and multi-national corporate reductions enhanced by U.S. leadership. At the same time, other countries may fail to meet their pledged GHG emission reductions or may continue to increase their own emissions. U.S. regulations may incentivize leakage, shifting GHG emissions from the U.S. to other countries or, relatedly, domestic regulations may prove less effective than anticipated. Therefore, domestic regulations may lead to the full amount of the assumed benefits or something less. The IWG should acknowledge this uncertainty and appropriately account for that in additional modeling analysis.

3. The IWG should describe the SC-GHGs as qualitative estimates

Third, the IWG should recognize the limits of its ability to predict and describe the SC-GHGs as qualitative estimates. Although the 2010 TSD included a recognition of the uncertainties,[14] subsequent updates have minimized the effect of uncertainty on the SC-GHGs. Without proper qualification, the SC-GHGs may be mistakenly read by decisionmakers or the public as mathematically precise quantitative determinations.

Indeed, we suggest that the IWG include in each TSD update an explanation of the uncertainties and value judgments involved in selecting modeling inputs. It should also explain that, despite the estimates being expressed as numeric monetary figures, they are qualitative in nature as they are not the product of verifiable tests. This would allow readers to understand that current GHG emissions will have a future cost, but that the cost will vary significantly depending on a set of assumptions. The explanation that the estimates lack scientific precision will help regulators weigh these potential costs in a future decision.

II. The SC-GHGs Should Adjust its Approach to the Discount Rate

The discount rate that the IWG chooses when evaluating the current value of future costs is a crucial input. It is axiomatic that if the IWG assumes a lower discount rate, the SC-GHG will be higher today than if the IWG assumes a higher discount rate. We urge the IWG to review and reconsider how it applies and evaluates discount rates in its analysis.

A. IWG Should Include a 7% Discount Rate in Accordance with Circular A-4

As an initial matter, the IWG should include as part of its analysis the 7% discount rate specified by OMB's still-binding Circular A-4.[15] Circular A-4 provides direction to all federal agencies, including the IWG, on the proper procedures for conducting cost-benefit analyses. It is the product of independent peer review and provides a detailed rationale for using a 7% discount

[13] An optimistic outlook is in line with the past 300 years, which saw a dramatic increase in per capita GDP and living standards. Although one can be skeptical that it will continue, that, or something close to it, is plausible.

[14] 2010 TSD at 4. (The IWG acknowledged it was offering "SCC values with all due humility about the uncertainties embedded in them….")

[15] Office of Mgmt. & Budget, Circular A-4: Regulatory Analysis (Sept. 17, 2003), available at, https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf ("OMB Circular A-4").

rate, reflecting the opportunity cost of capital, and is based on the average rate of private sector return on capital investment. Government regulation diverts private capital that would be otherwise invested. The IWG has never asserted that GHG emission reduction regulations are somehow immune to this general rule. Therefore, the SC-GHGs should include a 7% discount rate.

Rather than use the Circular A-4 rate, the IWG applies a discount rate based on foregone consumption, arguing that the models themselves use "terms of reduced consumption (or consumption equivalents)."[16] We suggest that the IWG should reconsider this approach. As OMB has explained, the consumption discount rate is reserved for regulation that "primarily and directly affects private consumption (e.g., through higher consumer prices for goods and services)…."[17]. Hence, it is the nature of the regulation that determines the discount rate, not a model output. Some regulations that have used a form of the SC-GHGs directly affect private consumption, such as Department of Energy efficiency standards for consumer goods. But many regulations that have used, and will use, the SC-GHGs affect capital investment, e.g., gas processing plants, power plants, and factories. Yet, the IWG entirely avoids the distinction between regulations that will affect capital and regulations that will affect consumption. The IWG should advise regulators to only use a 3% consumption discount rate where the regulation at issue "primarily and directly affects private consumption."

GPA Midstream agrees with the IWG that "the choice of a discount rate also raises highly contested and exceedingly difficult questions of science, economics, ethics, and law."[18] Therefore, we believe it is best to resolve that controversy by including the Circular A-4 7% discount rate along with other rates selected by the IWG. Providing the 7% discount rate in addition to lower rates as may be advocated by the 2021 TSD, provides additional transparency. It illustrates for the reader how much of a difference the choice of discount rate makes in constructing the SC-GHG estimates.

B. The IWG Should Reassess its Consideration of Discount Rates Below 3%

Further, we urge the IWG to rethink its contention that the 3% discount rate for displaced future consumption is, at best, an upper boundary. The 2021 TSD argues the facts have changed - that the 3% discount rate used in Circular A-4 "was based on the real rate of return on 10-year Treasury Securities from the prior 30 years (1973 through 2002), which averaged 3.1 percent."[19] Accordingly, the argument is made, declines in inflation-adjusted Treasury securities over the last 30 years should re-establish the consumption rate to at least 2% and even as low as 1.2%.[20]

However, assuming a lower rate would be inconsistent with how OMB arrived at the 3% discount rate used in Circular A-4. Specifically, the consumption rate only considers the return on savings to individuals, after inflation and taxes.[21] As an illustration of this principle, OMB explained: "For example, the yield on 10-year Treasury notes has averaged 8.1 percent since 1973 while the average annual rate of change in the [consumer price index] over this period has been

[16] 2021 TSD at 17; see also 2010 TSD at 17 (same).
[17] OMB Circular A-4 at 33.
[18] 2021 TSD at 17.
[19] 2021 TSD at 19.
[20] Id.
[21] See, e.g., EPA, Guidelines for Preparing Economic Analyses (Dec. 2010) at 6-6.

5.0 percent, implying a real 10-year rate of 3.1 percent."[22] OMB did not formulaically peg consumption rates to 30-year averages of the real rate of Treasury note returns. Instead, the consumption rate is calculated based on how individuals save, the taxes on those savings, and inflation.

Regardless, Circular A-4 is binding on federal agencies and the IWG has not been authorized to create exceptions for cost-benefit analyses using the SC-GHGs. Nevertheless, if OMB wishes to update Circular A-4's presumed consumption discount rate, then it should follow the appropriate process – to determine rates of return on individual investments, the rate of inflation, and the applicable tax rates. Until that work is done, the IWG should not use a consumption discount rate that differs from Circular A-4.[23]

C. The IWG Does Not Adequately Justify the Applicability of Intergenerational Discount Rates

GPA Midstream would further urge the IWG to reconsider its approach to "intergenerational" discount rates. The IWG suggests that due to intergenerational effects, it should consider a discount rate as low as 1%, or even lower. However, there is insufficient scientific basis to depart from OMB guidance and settled economic principles to create and apply that rate in this analysis.

It is certainly an important policy judgment for this generation to provide for future generations in establishing government policy. However, those judgments should not be embedded into choosing a discount rate. Discount rates provide a net present value of future cash flow by accounting for the time value of money. The key assumption in discounting future cash flows is that money invested today is worth more in the future. Or, conversely, that a dollar saved in the future, is worth less when discounted back to today. It is these fundamental economic principles that the IWG should use to set discount rates for the SC-GHGs.

The 2021 TSD does not clearly document how it would arrive at a 1% intergenerational discount rate, but refers back to the 2010 TSD for the implication that there is an ethical obligation to shift wealth from the current generation to a future generation.[24] The 2010 TSD, in turn, citing an early 20th Century philosopher and mathematician, references such an ethical contention without directly explaining it or providing a technical basis for an adjusted rate.[25] This is a

[22] OMB Circular A-4 at 34.

[23] The Circular A-4 consumption discount rate may actually be too low. Today, individual savings options are no longer largely limited to passbook savings accounts, certificates of deposit, and Treasury bills. Individuals are more heavily invested in individual stocks, mutual funds, and index funds than in the 1973-2002 timeframe. Thus, individual savings options and capital investment overlap far more than they used to. Further, tax rates have changed since the 1973-2002 period and inflation has been significantly lower. See Federal Reserve Bank of Minneapolis, Consumer Price Index, 1913-Present.

[24] The 2021 TSD refers back to the 2010 TSD for an explanation of "certain judgments on the prescriptive or normative approach" and "related ethical obligations that have been raised about rates of 3 percent or higher." 2021 TSD at 17.

[25] For instance, it asserts that "Ramsey (1928), for example, has argued that it is 'ethically indefensible' to apply a positive pure rate of time preference to discount values across generations, and many agree with this view." 2010 TSD at 18.

theoretical debate between and among academics of differing views,[26] not an empirically proven technical concept supported with data on which important policy judgments should be based.[27]

We suggest that the IWG not depart from the realm of established scientific and technical bases for setting discount rates.[28] Through Circular A-4, OMB, implementing procedures for cost-benefit analyses required under acts of Congress and executive orders, has determined that the future value of money shall be discounted and established the discount rates that shall be used. The IWG should follow these determinations.

III. The IWG Should Develop, Consider and Direct Regulators to Also Evaluate Domestic Benefits

The IWG compares the domestic costs of regulation to the assumed global benefits of reducing GHGs. We would urge the IWG to also include a more symmetrical domestic cost to domestic benefit comparison to provide decision makers with more complete information.

First, there are tools available to evaluate the domestic benefits. The 2021 TSD states that that there are technical barriers to calculating only domestic benefits,[29] and that the models' characterization of "the share of damages arising from climate impacts occurring within U.S. borders" is "both incomplete and an underestimate of the share of total damages that accrue … because these models do not capture" various "regional interactions and spillovers."[30]

However, the models available to the IWG do provide functions to separately considering domestic benefits. The IWG uses three different models.[31] According to the 2021 TSD, "[b]oth the PAGE and FUND model[s] contain a U.S. region and so the damages for this region are reported directly for those models…"[32] There is also a separate regional version of the DICE model.[33] Given these tools, the IWG should publish or explain why it should not publish a version of the SC-GHG that includes only domestic benefits.

Second, publishing values for both global and domestic benefits provides valuable information for both the public and other federal agencies. As presidential executive orders on cost-benefit analysis have long recognized, the analysis is designed to aid regulatory agencies in "deciding whether and how to regulate" and evaluate "available regulatory alternatives, including

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[26] See Dasgupta, P. (2019), Ramsey and Intergenerational Welfare Economics, The Stanford Encyclopedia of Philosophy (Summer 2019 ed.) (discussing Ramsey's preference for not discounting, prompting a "debate [that] has on occasion been shriller than even we economists are used to (see in particular Nordhaus, 2007)").

[27] See, e.g. 2021 TSD at 20 (citing surveys of "experts' views on the appropriate discount rates to use in an intergenerational context" and characterizing confirmatory opinion as "confirming evidence that the economics profession generally agrees" with the IWG authors).

[28] Cf. In re Rezulin Prods. Liab. Litig., 309 F. Supp. 2d 531, 543 (S.D.N.Y. 2004) (excluding expert opinions as "their opinions concerning purported ethical standards are based on their personal, subjective views" and not the product of any expertise).

[29] 2021 TSD at 21 ("the development of a domestic SC-GHG is greatly complicated by the relatively few region- or country-specific estimates of the SC-CO_2 in the literature.")

[30] Id. at 16; see also id. at 26 ("Additionally, models differ in their treatment of regional damages….").

[31] See 2010 TSD at 5-10 (explaining different attributes, limitations, information considered, and damage functions of the DICE, FUND, and PAGE models).

[32] 2021 TSD at 25, n. 32.

[33] Id.

the alternative of not regulating."[34] Only comparing the domestic costs of a regulation against a (presumably larger) global benefit misses the full domestic cost/benefit comparison the executive orders expect.[35]

IV. IWG Should Increase Public Participation and Improve Its Processes

Separate from the technical issues described above, GPA Midstream requests the IWG improve its process for developing the SC-GHG estimates and increase its public engagement. In the first instance, the IWG should conduct a proper peer review before issuing the final updated estimates. We also request the IWG increase its transparency and opportunities for public input throughout the process.

A. Rigorous Peer Review of the Estimates is Critical and Consistent with NAS Recommendations

The SC-GHG estimates warrant more fulsome peer review in accordance with OMB guidance and consistent with the NAS recommendations. Peer review is especially important given the significance of the estimates. GPA Midstream requests the IWG complete this critical work before issuing any revised estimates.

While the 2021 TSD and those preceding it state the estimates are based on the "peer reviewed literature" and note the three, integrated assessment models were peer reviewed, the IWG's modeling inputs and assumptions have never been peer reviewed as required under OMB guidance until, arguably, the NAS review that concluded in 2017. These inputs and assumptions clearly meet the definition of "influential scientific information" under OMB's government-wide *Final Information Quality Bulletin for Peer Review* ("OMB Peer Review Bulletin").[36] Per OMB's Peer Review Bulletin, "the need for rigorous peer review is greater when the information contains precedent-setting methods or models, presents conclusions that are likely to change prevailing practices, or is *likely to affect policy* (emphasis added)."[37] Indeed, the methods and models underpinning the SC-GHG estimates carry such effect and should be subject to more rigorous peer review.

GPA Midstream commends the IWG for seeking NAS review of the estimates in 2015 and strongly encourages the IWG to implement the subsequent NAS recommendations. Notably, the NAS recommended a three-step process for updating the estimates: (1) the IWG should "draw on internal and external technical expertise and incorporate scientific peer review;" (2) "draft revisions" of the "methods and estimates should be subject to notice and comment, allowing input and review from a broader set of stakeholders, the scientific community, and the public;" and (3) the IWG's approach "should be regularly reviewed by an

[34] Exec. Ord. 12866, Regulatory Planning and Review, 58 Fed. Reg. 51735 (Oct. 4, 1993).
[35] Similarly, a domestic value provides a metric, if the SC-GHG values are applied to single project analyses, as discussed below
[36] OFFICE OF MGMT & BUDGET, INFORMATION QUALITY GUIDELINES (Oct. 1, 2002), available at https://www.whitehouse.gov/sites/default/files/omb/inforeg/iqg_oct2002.pdf.
[37] Id.

independent scientific assessment panel to identify improvements for potential future updates and research needs."[38] GPA Midstream supports these recommendations.

The U.S. Government Accountability Office ("GAO") reported in June 2020 that the Trump administration failed to take any actions to implement the NAS recommendations.[39] Notwithstanding the prior administration's refusal, the reinstated IWG should make it a priority to address these recommendations prior to issuing any revised estimates. It was disappointing to see the interim values released in February 2021 failed to account for the NAS recommendations. Accordingly, we request the IWG withdraw the interim values or advise federal agencies not to use the estimates until they have been updated to account for the NAS input.

Addressing the NAS recommendations and conducting proper peer review of the estimates also provides assurances to the public that the estimates comply with the President's policy on scientific integrity.[40] As stated above, there are many aspects of the inputs and assumptions shaping the estimates that are based on subjective judgments and decisions that may not have been fully evaluated. Rigorous peer review and implementation of the NAS recommendations would apply an objective test to these decisions, which could lead to additional modifications and improvements or could uphold the work giving the public confidence in the values.

GPA Midstream would further add that in the years since the initial request for peer review and quality improvements to the models, the IWG has not provided a good reason for rejecting additional peer review. Of course, this work takes additional time and resources, but that is not a valid excuse to deny this important quality check. The IWG should follow the government's long-standing principles on peer review and information quality—without doing so would undermine the existence of such guidance and set a bad precedent for other government action to disavow them. Similarly, the IWG should implement the NAS recommendations because if left ignored, the NAS review may be perceived as a waste of taxpayer dollars and it could set a bad precedent for other agencies to ignore the feedback of the NAS in the future.

B. Enhanced Transparency and Public Engagement is Necessary

As the IWG works towards meeting the additional directives in E.O. 13990, it should increase transparency and public engagement throughout the process. Following the release of interim values, E.O. 13990 calls on the IWG to complete the following over the next year: (1) recommendations to the President regarding the application of the estimates to other "areas of decision-making, budgeting, and procurement" by September 2021; (2) updated "final" estimates

[38] National Academies of Sciences, Engineering, and Medicine. 2017. Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide. Washington, DC: The National Academies Press, at 9-10, https://doi.org/10.17226/24651.

[39] U.S. Gov't Accountability Office, Social Cost of Carbon: Identifying a Federal Entity to Address the National Academies' Recommendations Could Strengthen Regulatory Analysis (June 2020), *available at* https://www.gao.gov/assets/gao-20-254.pdf.

[40] Memorandum for the Heads of Exec. Depts. And Agencies, Memorandum on Restoring Trust in Gov't Through Scientific Integrity and Evidence-Based Policymaking, Jan. 27, 2021, available at https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/memorandum-on-restoring-trust-in-government-through-scientific-integrity-and-evidence-based-policymaking/.

that incorporate NAS recommendations by January 2022; (3) recommendations regarding the process for revisions and approach to new considerations, such as environmental justice, by June 2022.[41] The E.O. does not provide further details regarding intermediary steps in meeting these deliverables nor does it prescribe a specific number or format for public input. Rather, in conducting this work, the E.O. simply directed the IWG to "solicit public comment" and "engage with the public and stakeholders."[42] As written, it is clear the E.O. envisioned the IWG would provide additional opportunities for public engagement beyond this comment period.

GPA Midstream reinforces the importance of transparency and public input and strongly encourages the IWG to be more open and forthright with its plans, processes, and opportunities for public engagement. Consistent with and the NAS recommendations, the IWG should provide notice and an opportunity for public comment on any draft revised estimates—prior to the release of the final estimates expected in January 2022 per E.O. 13990. First and foremost, the IWG should provide an opportunity for public input, including written comments as well as public hearings and meetings, on any draft recommendations or draft revised estimates before they are submitted to the President or finalized. Second, the IWG should commit to meaningfully consider public input received; make changes and improvements, where appropriate; and provide timely, adequate responses to the public's feedback. In addition to posting the revised final estimates, the IWG should also ensure any final recommendations to the President are publicly available at the time of submission. These are necessary and important steps to improve the transparency and public engagement of the IWG. Given the upcoming September 2021 E.O. 13990 deadline for certain recommendations to the President, the IWG should promptly commit to making draft recommendations public and offering an opportunity for public input that will be considered—ahead of its submission to the President. GPA Midstream urges the IWG to follow a similar process for the remaining E.O. 13990 deliverables.

The IWG should also clarify how it may or may not consider public comments on related regulatory dockets. As one example, EPA recently issued a proposed rulemaking related to hydrofluorocarbons (HFCs) that not only used a novel estimate of the social cost of HFCs, it posed questions "to complement the IWG process" regarding the methodology underpinning the SC-GHG estimates, among others.[43] While it is odd for the EPA, a member of the IWG, to pose such questions that appear to be more appropriate for the IWG, GPA Midstream believes it is equally important for the IWG to clarify to what degree it plans to review comments on EPA's docket to inform its work. Indeed, there may be stakeholders unaffected by EPA's proposal or who have no interest in and would otherwise have no reason to comment on it, which may be inadvertently excluded from providing the IWG input. However, if the IWG makes clear that this, for instance, is viewed as a docket it will rely upon then it becomes more important for stakeholders unaffected by the particular rule to participate and ensure their voice is heard by the IWG.

This ad hoc approach to collecting public input on the estimates has long been a defect of the IWG and the federal government's overall approach to its application of the SC-GHGs estimates. These comment periods are not a substitute for the IWG's responsibility to separately solicit public input on its work product. Absent a centralized list of open dockets the IWG may

[41] Exec. Ord. 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, 86 Fed. Reg. 7,037 (Jan. 25, 2021).
[42] Id.
[43] 86 Fed. Reg. 27,150 (May 19, 2021).

consider in its work, the public is left in the dark as to what input the IWG actually considers. For this reason, GPA Midstream recommends the IWG clarify the relationship of other agency dockets to the IWG's work and make a public posting and statement on any open docket to which the IWG may consider comments submitted for purposes of its work under E.O. 13990.

This request for the IWG to clarify the relationship of other agency dockets to its work extends to other administration efforts, such as OMB's review and forthcoming update to Circular A-4. As previously stated, Circular A-4 has served as the framework for government-wide regulatory benefit-cost analyses for nearly two decades and should guide the methodology for the revised SC-GHG estimates.[44] President Biden ordered OMB to consider revisions to Circular A-4 on the same day he signed E.O. 13990.[45] While E.O. 13990 prescribes certain deadlines for the IWG, the memorandum directing the review of A-4 called on OMB to begin a process for developing recommendations to improve and modernize regulatory review, including revisions to Circular A-4, "as soon as practicable."[46] There has been no information shared with the public on OMB's review and potential revisions to Circular A-4. While questions regarding OMB's process, timeline, scope of review, and potential revisions remains unclear, it is indisputable that this work has a direct effect on the IWG's implementation of E.O. 13990. This work should be very closely coordinated, properly sequenced, and openly communicated with the public to ensure one effort does not inappropriately influence or undermine the other. Accordingly, GPA Midstream requests the IWG, particularly OMB—as one of the co-leads of the IWG—and author of Circular A-4, should address this confusion and provide the public some much-needed clarification and information on these two related workstreams.

GPA Midstream appreciates the opportunity to provide these comments on the interim values and certain topics before the IWG, but believes additional transparency and public input is necessary. These measures will undoubtedly benefit the public and will add value to the IWG as it implements E.O. 13990.

V. The SC-GHGs Should Be Used For Regulatory Cost-Benefit Analyses, Not to Evaluate Individual Projects

The IWG should warn against the use of SC-GHGs for evaluating the costs and benefits of single projects. The IWG created the SCC in response to a court decision finding that regulatory cost-benefit analyses may not assume that the future costs of GHG emissions will be zero.[47] As the IWG explained, the SCC's genesis was to "promote consistency in the values used across agencies" in regulatory impact analyses for rulemakings.[48] The SC-GHGs were not created, or been evaluated, for any other purpose. In the context of evaluating the costs and benefits of a single project, federal agencies have almost always refused to use the SC-GHGs due to the uncertainties and limitations involved, the outsized impact of discount rates chosen, and an inability to

[44] OMB Circular A-4.
[45] Modernizing Regulatory Review, 86 Fed. Reg. 7223 (Jan. 26, 2021).
[46] Id.
[47] 2021 TSD at 2.
[48] Id.

understand whether a range of potential future damages are "significant" effects under the National Environmental Policy Act ("NEPA") framework.[49]

Courts, however, have gone both ways.[50] Often, litigators and judges misunderstand what the SC-GHGs were created to do, how the estimated values were created, and the purpose for their creation, let alone the uncertainties with the specific values as outlined above. The IWG should disclaim use of the SC-GHGs for NEPA reviews and related litigation and prominently explain to the public, in non-technical jargon, that the SC-GHGs rely on a number of subjective choices by individual modelers regarding an array of future possibilities; that they are estimates, not proven values; and that they are intended for use in regulations that broadly impact the national economy, not for a single project.

* * *

GPA Midstream appreciates and welcomes the opportunity to provide these comments. If you have any questions regarding our comments, please contact Matthew Hite, Vice President of Government Affairs, at mhite@gpamidstream.org.

Respectfully submitted,

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[49] See, e.g., 350 Montana v. Bernhardt, 443 F. Supp. 3d 1185, 1196 (D. Mont. 2020); EarthReports v. FERC, 828 F.3d 949 (D.C. Cir. 2016).

[50] Compare High Country Conservation Advocates v. U.S. Forest Service, 52 F. Supp. 3d 1174 (D. Colo. 2014) (requiring SCC for NEPA whenever an agency considers project benefits); with WildEarth Guardians v. Zinke, 368 F. Supp. 3d 31 (D.D.C. 2019) (SCC is too speculative for NEPA evaluations).