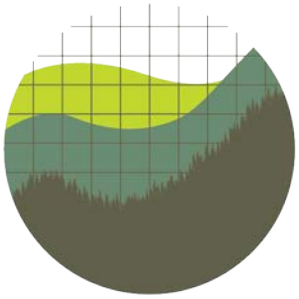

Institute *for*
Policy Integrity
NEW YORK UNIVERSITY SCHOOL OF LAW

November 13, 2017

Via Electronic Mail

Attn: Federal Highway Administration

Subject: Comments to the Federal Highway Administration on the I-15, Payson Main Street Interchange Draft Environmental Impact Statement

The Institute for Policy Integrity at New York University School of Law (Policy Integrity)[1] respectfully submits the following comments on the United States Federal Highway Administration's (FHWA or the Administration) I-15, Payson Main Street Interchange Draft Environmental Impact Statement (Payson DEIS or DEIS).[2] Policy Integrity is a nonpartisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy.

The FHWA gives two main reasons for not analyzing the climate change effects of the proposed project. Firstly, the FHWA claims that project-level emissions analysis is not useful in decisionmaking.[3] Secondly, the EIS states that projects typically have little effect on regional—and presumably global—emissions levels and therefore should only be accounted for at the regional planning level.[4] These claims are wrong according to economic principles and the requirements of the National Environmental Policy Act (NEPA). Moreover, the Administration fails to refer to climate change when discussing the impact of greenhouse gas emissions.[5] By not accounting for climate effects as such, the FHWA is further failing to meet the requirements of NEPA.

When it finalizes the Payson DEIS, the Administration should clearly articulate the connection between climate change and greenhouse gas emissions and should abandon its inaccurate misleading overgeneralizations regarding the greenhouse gas effects of individual projects. Instead, the FHWA must rationally apply its judgment to the evidence to answer whether this specific project's greenhouse gas emissions are most likely too small to warrant quantification, such that the informational benefit of quantification does not justify the expense of quantification. Only if it is

[1] No part of this document purports to present New York University School of Law's views, if any.
[2] Federal Highway Administration, I-15, Payson Main Street Interchange Draft Environmental Impact Statement (Sept. 29, 2017) [hereinafter Payson DEIS].
[3] Payson DEIS, *supra* note 2, at 3-120("The effects of greenhouse gases are global in nature and a project-level analysis of the effects of negligible increases or decreases of carbon dioxide (the primary greenhouse gas transportation-related emission) is not useful in project-level decision making.")
[4] *Id.* ("Individual projects typically have little effect on regional emission levels of greenhouse gases and reducing energy consumption and the production of greenhouse gases is better addressed at the regional planning level.")
[5] Payson DEIS, *supra* note 2.

not feasible to quantify the greenhouse gas emissions of this particular project should the inquiry end. Otherwise, if this project will likely have significant greenhouse gas effects, the Administration must quantify those effects to the extent feasible, and should further monetize those effects using the social cost of greenhouse gas metrics.

I. Contrary to the Administration's Statements, It Is Both Possible and Meaningful to Quantify the Climate Effects of Individual Projects

The FHWA does not quantify the potential greenhouse gas emissions in the Payson DEIS on the ground that project-level emissions in general do not have identifiable effects.[6] The Administration further states that the quantification of project-level emissions would not provide meaningful information for decisionmaking.[7]

Contrary to the Administration's assumptions, sophisticated metrics known as the Social Costs of Greenhouse Gases are capable of monetizing the marginal climate damages associated with an additional unit of greenhouse gas emissions from a single project.[8] Only if the Administration concludes that this specific project will have so little effect on greenhouse gas emissions that the informational benefit of quantification does not outweigh the expense of doing so should the Administration not move forward with quantification and monetization. And far from being a meaningless exercise, monetizing the climate effects of a small project may be the best way for the public and decisionmakers to put those effects into their proper context.

The Social Costs of Greenhouse Gases Can Be Applied to Individual Project and to Any Amount of Emissions

The Administration is wrong to over-generalize that all individual projects produce negligible amounts of emissions. In fact, many resource management decisions have quite significant effects on greenhouse gas emissions: for example, the Bureau of Land Management recently finalized a single environmental impact statement for a coal lease expansion project at mines that produce 20% of the country's coal supply.[9]

More importantly, a blanket argument that individual projects are too small to monetize misunderstands the tools available for monetizing climate effects. The Social Cost of Carbon and Social Cost of Methane protocols were developed to assess the cost of actions with "marginal" impacts on cumulative global emissions, and the metrics estimate the dollar figure of damages for one extra ton of greenhouse gas emissions. [10] This marginal cost is typically calculated using integrated assessment models. The models translate emissions into changes in atmospheric greenhouse concentrations, atmospheric concentrations into changes in temperature, and changes in temperature into economic damages.[11] A range of plausible socio-economic and emissions trajectories are used.[12] The marginal cost is attained by first running the models using a baseline

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[6] Payson DEIS, *supra* note 2, at 3-120
[7] *Id*.
[8] *See generally* Iliana Paul, Jason Schwartz, Peter Howard, THE SOCIAL COST OF GREENHOUSE GASES AND STATE POLICY, INSTITUTE FOR POLICY INTEGRITY REPORT (Oct. 2017) for more information on the social costs of greenhouse gases and their use, *available at* http://policyintegrity.org/publications/detail/social-cost-of-ghgs-and-state-policy
[9] *See* Bureau of Land Mgmt., Final Environmental Impact Statement for the Wright Area Coal Lease Applications, ES-60-61, 4-130-50 (July 2010).
[10] Interagency Working Group on Social Cost of Carbon, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12,866*, at 1 (2010) [hereinafter 2010 TSD].
[11] 2010 TSD, *supra* note 10, at 5.
[12] *Id.* at 15.

emissions trajectory, and then running the same models again with one additional unit of emissions. The difference in damages between the two runs is the marginal cost of one additional unit. The approach assumes that the marginal damages from increased emissions will remain constant for small emissions increases relative to gross global emissions.[13] In other words, the monetization tools are in fact perfectly suited to measuring the marginal effects of resource management decisions, as well as rulemakings.

The Monetization of Emissions Provides Useful Context for Decisionmaking

The Administration is wrong that a quantitative analysis of the climate effects of an individual project will not be meaningful. Quite the opposite, agencies often overlook or completely ignore nonquantified, i.e., purely qualitative, benefits, even if those effects are in fact significant.[14]

If an analysis only qualitatively discusses the general effects of global climate change—or worse, as this DEIS does and neglect to connect greenhouse gas emissions to climate change full stop—decisionmakers and the public will tend to overly discount that individual action's potential contribution. Greenhouse gas emissions from motor vehicle use undoubtedly have climate effects, which should be discussed in the Payson DEIS. But without context, it is difficult for many decision-makers and the public to assess the magnitude and climate consequences of a proposed action, like the infrastructure improvements discussed in the EIS. Quantification of these emissions and the monetization of their effects is the best way to avoid this tendency.

More specifically, agencies and the public might suffer from base-rate bias, which causes the undervaluation of information that is generally applicable across a range of scenarios.[15] Agencies fall into this trap when their NEPA reviews provide generic narrative descriptions of climate change yet conclude that climate change is too global and general a problem to address in a project-specific environmental impact statement, like in the Payson DEIS. This approach inappropriately forecloses the possibility of mitigating the effects of climate change.

Monetization provides much-needed context for otherwise abstract consequences of climate change. Monetization allows decision-makers and the public to weigh all costs and benefits of an action—and to compare alternatives—using the common metric of money. Monetizing climate costs, therefore, better informs the public and helps "brings those effects to bear on [the agency's] decisions."[16] The tendency to ignore non-monetized effects is the result of common but irrational mental heuristics like probability neglect. For example, the phenomenon of probability neglect causes people to reduce small probabilities entirely down to zero, resulting in these probabilities playing no role in the decision-making process.[17] This heuristic applies even to events with long-term certainty or with lower-probability but catastrophic consequences, so long as their effects are unlikely to manifest in the immediate future. Weighing the real risks that, decades or centuries from now, climate change will fundamentally and irreversibly disrupt the global economy, destabilize earth's ecosystems, or compromise the planet's ability to sustain human life is challenging; without a tool to contextualize such risks, it is far easier to ignore them. Monetization tools like the social

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[13] *Id.* at 1.

[14] Richard L. Revesz, *Quantifying Regulatory Benefits,* CALIFORNIA LAW REVIEW (2014), at 1425.

[15] *See* Fallacy Files, *The Base Rate Fallacy*, *available at* http://www.fallacyfiles.org/baserate.html; David B. Graham, Capt. Thomas D. Johns, *The Corporate Emergency Response Plan: A Smart Strategy*, 27 NAT. RESOURCES & ENV'T 3 (2012) (on normalcy bias).

[16] *See* Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, 462 U.S. 87, at 96 (U.S. 1983).

[17] Cass R. Sunstein, *Probability Neglect: Emotions, Worst Cases, and Law* (John M. Olin Law & Economics, Working Paper No. 138, 2001), *available at* http://ssrn.com/abstract=292149.

cost of greenhouse gases are designed to solve this problem: by translating long-term costs into present values, instantiating the harms of climate change, and giving due weight to the potential of lower-probability but catastrophic harms.

The FHWA Must Assess Whether It Is Feasible to Quantify the Climate Effects of This Particular Project

An individual project may have such small climate effects that the informational benefit of quantification is not worth the expense. However, the Administration cannot make a blanket assumption about all individual projects. Rather, it needs to assess the evidence of this specific project and decide whether its greenhouse gas emissions are likely to be significant and require monetization, or else so insignificant as to not make monetization feasible.

II. Legal Requirements and Precedents for Monetizing Climate Effects in EISs

NEPA May Require Quantifying and Monetizing Climate Effects

NEPA requires "hard look" consideration of beneficial and adverse effects of each alternative option for major federal government actions. The U.S. Supreme Court has called the disclosure of impacts the "key requirement of NEPA," and held that agencies must "consider and disclose the actual environmental effects" of a proposed project in a way that "brings those effects to bear on [the agency's] decisions."[18] Courts have repeatedly concluded that an EIS must disclose relevant climate effects.[19] Though NEPA does not require a formal cost-benefit analysis,[20] agencies' approaches to assessing costs and benefits must be balanced and reasonable. Courts have warned agencies, for example, that "[e]ven though NEPA does not require a cost-benefit analysis, it was nonetheless arbitrary and capricious to quantify the *benefits* of [federal action] and then explain that a similar analysis of the *costs* was impossible when such an analysis was in fact possible."[21]

While often eschewing formal cost-benefit analysis in environmental impact statements, agencies typically include in their NEPA reviews of resource management decisions both quantitative and monetized analyses of the economic benefits and distributional effects of the decision, including estimated tons of recoverable resources per acre and the market value thereof; rental rates per acre and annual royalty rates; temporary and permanent job growth, including annual wages and indirect job effects form local expenditures; construction of infrastructure supporting the project; and other related benefits.[22] The Payson DEIS, for example, takes into account direct economic

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[18] *Baltimore Gas & Elec. Co.,* 462 U.S., *supra* note 16, at 96.

[19] As the Ninth Circuit has held: "[T]he fact that climate change is largely a global phenomenon that includes actions that are outside of [the agency's] control . . . does not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming." Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1217 (9th Cir. 2008); *see also* Border Power Plant Working Grp. v. U.S. Dep't of Energy, 260 F. Supp. 2d 997, 1028-29 (S.D. Cal. 2003) (failure to disclose project's indirect carbon dioxide emissions violates NEPA).

[20] 40 C.F.R. § 1502.23 ("[T]he weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis.").

[21] High Country Conservation Advocates v. FHWA, 52 F. Supp. 3d 1174, 1191 (D. Colorado, 2014); Western Organization of Resource Councils v. U.S. Bureau of Land Management CV 16-21-GF-BMM, 2017 WL 374705 (D. Mont., Jan. 25, 2017).

[22] *See, e.g.*, FHWA, Federal Coal Lease Modifications COC-1362 & COC-67232, (Aug. 2012), at 190–91; FHWA, Pawnee National Grassland Oil and Gas Leasing Final Environmental Impact Statement 317, (Dec. 2014), at 291–98; Bureau of Land Mgmt., Final Environmental Impact Statement for the Wright Area Coal Lease Applications, ES-60-61, 4-130-50 (July 2010).

impacts, like avoided costs that would occur with the alleviation of traffic congestion, as well as indirect economic impacts, such as changes to property values, employment and wages, and retail sales.[23] As the U.S. District Court for the District of Colorado concluded, "[i]t is arbitrary to offer detailed projections of a project's upside while omitting a feasible projection of the project's costs."[24] Thus, to the extent that agencies continue to quantify and monetize many of the economic and distributional effects of resource management decisions, agencies must also treat climate effects with proportional analytical rigor.

The recent withdrawal of the Council on Environmental Quality's guidance on greenhouse gas emissions does not change the fact that using the social cost of greenhouse gases is consistent with—and may be required under—NEPA obligations. As CEQ explained in its withdrawal, the "guidance was not a regulation," and "[t]he withdrawal of the guidance does not change any law, regulation, or other legally binding requirement."[25] In other words, when the guidance recommended the appropriate use of the social cost of greenhouse gases in EISs,[26] it was simply explaining that the social cost of greenhouse gases is consistent with longstanding NEPA regulations and case law, all of which are still in effect today.

Finally, NEPA does not excuse agencies from analyzing the effects of individual actions that contribute to global phenomena. As the U.S. Court of Appeals for the Ninth Circuit has held in a case involving the National Highway Traffic and Safety Administration, "the fact that climate change is largely a global phenomenon that includes actions that are outside of [the agency's] control . . . does not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming." [27] The FHWA, in saying that greenhouse gases "have little effect on regional emission levels of greenhouse gases and reducing energy consumption and the production of greenhouse gases is better addressed at the regional planning level"[28] uses the same logic that the Ninth Circuit rejected.

Numerous federal agencies have used the social cost of greenhouse gases in EISs. In 2013, EPA called on agencies to include a monetized estimate of anticipated greenhouse gas effects in their environmental impact statements,[29] and multiple agencies have applied the social cost of carbon in

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[23] Payson DEIS, *supra* note 2, Economic Impact Technical Report, at 8.
[24] *High Country*, 52 F. Supp. 3d., at 1195; *W. Org. of Res. Councils*, CV 16-21-GF-BMM.
[25] 82 Fed. Reg. 16,576, 16,576 (Apr. 5, 2017).
[26] *See* CEQ, *Revised Draft Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews* at 16 (Dec. 2014), *available at* https://obamawhitehouse.archives.gov/sites/default/ files/docs/nepa_revised_draft_ghg_guidance_searchable.pdf ("When an agency determines it appropriate to monetize costs and benefits, then, although developed specifically for regulatory impact analyses, the Federal social cost of carbon, which multiple Federal agencies have developed and used to assess the costs and benefits of alternatives in rulemakings, offers a harmonized, interagency metric that can provide decisionmakers and the public with some context for meaningful NEPA review. When using the Federal social cost of carbon, the agency should disclose the fact that these estimates vary over time, are associated with different discount rates and risks, and are intended to be updated as scientific and economic understanding improves."); *see also* CEQ, *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews* at 33 n.86 (Aug. 2016), *available at* https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf.
[27] *Ctr. for Biological Diversity*, 538 F.3d 1172, 1217, *supra* note 19; *see also* Border Power Plant Working Grp. v. U.S. Dep't of Energy, 260 F. Supp. 2d 997, 1028-29 (S.D. Cal. 2003) (failure to disclose project's indirect carbon dioxide emissions violates NEPA).
[28] Payson DEIS, *supra* note 2, at 3-120.
[29] Letter from Cynthia Giles, Assistant Adm'r, U.S. Environmental Protection Agency, to Jose W. Fernandez & Dr. Kerri Anne Jones, U.S. Department of State, at 2 (Apr. 22, 2013).

their environmental impact statements, including the Office of Surface Mining Reclamation and Enforcement,[30] the Bureau of Land Management,[31] the National Highway Traffic Safety Administration,[32] and the Forest Service.[33] Clearly there are no legal, conceptual, methodological, or practical barriers to applying the social cost of greenhouse gases in NEPA reviews. Even if under the current administration some of those agencies try to shift away from using these metrics, past precedent confirms not only that it is possible to use the social cost of greenhouse gases in EISs, but that there is much to recommend applying the metric in EISs. In Section III, we further discuss how the most recent guidance from the current administration still requires agencies to monetize greenhouse gas emissions, and why the social cost of greenhouse gases is an appropriate tool for doing so.

III. The Administration Should Use the Social Cost of Greenhouse Gases to Monetize Climate Effects Whenever Feasible

A federal government-wide value of the social cost of carbon (SCC) was first developed in response to a Ninth Circuit decision that required the federal government to account for the economic effects of climate change in a regulatory impact analysis of fuel efficiency standards.[34] In 2009, the federal government convened the Interagency Working Group on the Social Cost of Carbon (IWG), which used a set of peer-reviewed models to develop an SCC value for use in federal regulatory analysis; between 2009 and 2016, the IWG convened several times to refine the SCC estimates and also produced estimates for the social costs of methane and nitrous oxide emissions. The IWG's August 2016 central estimate[35] of $50 in 2017 dollars per ton of year 2020 carbon dioxide emissions is based on the best available science[36] and is still likely an underestimate because some forms of damage, like catastrophic risks, are omitted from present calculations due to data limitations and scientific uncertainty.[37] Nonetheless, the IWG's SCC is the best available estimate of climate damages and has been used in approximately one hundred federal regulations and a number of state proceedings,[38] reflecting close collaboration and consistency across agencies.

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[30] *Available at* http://www.wrcc.osmre.gov/initiatives/fourCorners/documents/FinalEIS/Section%204.2%20-%20Climate%20Change.pdf; *see also* http://www.wrcc.osmre.gov/initiatives/fourCorners/documents/FinalEIS/Appendix%20A%20-%20Air%20Quality%20and%20Climate%20Change%20Information.pdf.

[31] Bureau of Land Management, Environmental Assessment DOI-BLM-MT-C020-2014-0091-EA, at 76 (May 2014).

[32] *Available at* http://www.nhtsa.gov/staticfiles/rulemaking/pdf/cafe/FINAL_EIS.pdf at 9-77; *see also* http://ntl.bts.gov/lib/55000/55200/55224/Draft_Environmental_Impact_Statement_for_Phase_2_MDHD_Fuel_Efficiency_Standards.pdf.

[33] Forest Service, *Rulemaking for Colorado Roadless Areas: Supplemental Final Environmental Impact Statement* (Nov. 2016), *available at* https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd525072.pdf (using both the social cost of carbon and the social cost of methane).

[34] *Ctr. for Biological Diversity*, 538 F.3d 1172, *supra* note 19.

[35] The IWG produced a range of social cost of carbon estimates, reflecting a 5-percent discount rate, a 3-percent discount rate, a 2.5-percent discount rate, and a 95th percentile estimate. This $50 per ton figure corresponds to the "central" 3-percent discount rate.

[36] INTERAGENCY WORKING GROUP ON SOCIAL COST OF GREENHOUSE GASES, UNITED STATES GOVERNMENT, TECHNICAL SUPPORT DOCUMENT: TECHNICAL UPDATE OF THE SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12866 (2016), at 4, tbl.ES-1 (showing a value of $42 in 2007 dollars for 2020 emissions, which yields $50 in 2016 dollars when updated using a Consumer Price Index Inflation Calculator, http://data.bls.gov/cgi-bin/cpicalc.pl).

[37] *See* Richard L. Revesz et al., *Improve Economic Models of Climate Change*, 508 NATURE 173 (2014) (co-authored with Nobel Laureate Kenneth Arrow, among others); 2010 TSD, *supra* note 11; Peter Howard, COST OF CARBON PROJECT, OMITTED DAMAGES: WHAT'S MISSING FROM THE SOCIAL COST OF CARBON (2014) [hereinafter "OMITTED DAMAGES"]; Peter Howard, COST OF CARBON PROJECT, FLAMMABLE PLANET: WILDFIRES AND THE SOCIAL COST OF CARBON (2014); The Cost of Carbon Pollution, http://costofcarbon.org/.

[38] JANE A. LEGGETT, CONGRESSIONAL RESEARCH FHWA, FEDERAL CITATIONS TO THE SOCIAL COST OF GREENHOUSE GASES (2016).

Executive Order 13,783 withdraws the guidance of both the IWG and the Council on Environmental Quality on greenhouse gas emissions. The Executive Order refers agencies to the Office of Management and Budget's (OMB) Circular A-4 on cost-benefit analysis. The Order assumes that federal agencies will continue to "monetiz[e] the value of changes in greenhouse gas emissions" and instructs agencies to ensure such estimates are "consistent with the guidance contained in OMB Circular A-4."[39] Consequently, while the FHWA and other federal agencies no longer have technical guidance directing them to exclusively rely on the IWG's estimates to monetize climate effects, by no means does the new Executive Order imply that agencies should not monetize important effects in their regulatory analyses or environmental impact statements. In fact, Circular A-4 instructs agencies to monetize costs and benefits whenever feasible.[40] Circular A-4 also directs agencies to consider uncertain consequences or outcomes of actions in a transparent manner,[41] which should not be read to exclude providing the best possible estimates of greenhouse gas emissions that would result as a consequence of a particular action. Moreover, though Executive Order 13,783 withdrew the IWG's technical documents, the estimates developed by the IWG continue to reflect the best available data and methodological choices consistent with Circular A-4, as required by the new Executive Order. For a more detailed discussion of the social costs of greenhouse gases for use in environmental impact statements in light of Executive Order 13,783, please refer to Policy Integrity's recent joint comments to the U.S. Army Corps of Engineers.[42]

In conclusion, the Administration should assess GHGs and their climate effects, and if feasible should quantify and monetize them, in the final Payson EIS for the reasons discussed above.

Respectfully submitted,

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Institute for Policy Integrity

CC: Utah Department of Transportation

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[39] *Id.* § 5(c).
[40] Office of Mgmt. & Budget, CIRCULAR A-4, Nat'l Archives (Sept. 17, 2003), *available at* https://georgewbush-whitehouse.archives.gov/omb/circulars/a004/a-4.html [Hereinafter Circular A-4] ("You should monetize quantitative estimates whenever possible.")
[41] *Id*. at E.7.b.
[42] Environmental Defense Fund, Institute for Policy Integrity at NYU School of Law, National Resources Defense Council, Union of Concerned Scientists. Joint Comments to the U.S. Army Corps of Engineers on the Use of the Social Cost of Greenhouse Gases in the Draft Environmental Impact Statement for the Proposed Missouri River Recovery Management Plan (MRRMP-EIS) (May 2017), *available at* http://policyintegrity.org/documents/Joint_Comments_to_Army_Corps_on_SCC_in_EIS.pdf.