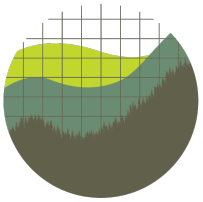

Institute *for*
Policy Integrity
NEW YORK UNIVERSITY SCHOOL OF LAW

December 5, 2022

To: Environmental Protection Agency

Re: Request for Information – Greenhouse Gas Reduction Fund (EPA-HQ-OA-2022-0859)

The Institute for Policy Integrity (Policy Integrity) at New York University School of Law respectfully submits the following comments to the Environmental Protection Agency (EPA) regarding its request for information on implementation of the Greenhouse Gas Reduction Fund (GHG Fund).[1] Established by the Inflation Reduction Act of 2022 (IRA), the GHG Fund "provides competitive funding to enable zero-emission technologies, as well as funds for financial and technical assistance for projects that reduce or avoid greenhouse gas emissions and other forms of air pollution, including projects in low-income and disadvantaged communities."[2] Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy.[3]

In allocating the GHG Fund, we recommend that EPA:

- use cost-benefit analysis to prioritize projects;
- require project analyses to include unquantified effects;
- require project analyses to be geographically granular and include an assessment of distributional impacts;
- require project analyses to address the extent to which a project will further (or decrease) resilience.

In tracking the success of the GHG Fund program, we further recommend that EPA identify resilience as a relevant program outcome.

We expand below on these suggestions, which are organized by RFI section and question.

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[1] EPA, Request for Information: Greenhouse Gas Reduction Fund (EPA-HQ-OA-2022-0859), https://www.regulations.gov/docket/EPA-HQ-OA-2022-0859.

[2] *Id.* at 1.

[3] These comments do not purport to represent the views, if any, of New York University School of Law.

Section 3.1: What types of projects should EPA prioritize under sections 134(a)(1)-(3), consistent with the statutory definition of "qualified projects" and "zero emissions technology" as well as the statute's direct and indirect investment provisions?

Response: EPA should use cost-benefit analysis to prioritize projects.

To ensure that projects of different sizes and in different regions are compared on a transparent and consistent basis, EPA should require that each project applicant submit a cost-benefit analysis. Where otherwise in keeping with statutory requirements, the agency should prioritize funding for projects with the highest net benefits for society (taking into account unquantified effects and distributional impacts, as discussed further below).

Several other federal agencies already use cost-benefit analysis to allocate discretionary funding. The Department of Transportation, for example, administers several grant programs for which it requires applicants to submit cost-benefit analyses.[4] The Department of Housing and Urban Development likewise requires such analysis for applicants to its Community Development Block Grant Mitigation program.[5] Like those other agencies, EPA should provide project applicants with guidance on how to conduct the required analysis and offer technical support where possible.[6] Such guidance should, among other things, specify a uniform (but non-exhaustive) set of core costs and benefits that each applicant must consider—such as the health and environmental consequences of any associated changes in both greenhouse-gas and conventional-pollutant emissions.

Response: Project cost-benefit analyses should include unquantified effects.

Although applicants should be required to quantify costs and benefits to the extent feasible with reasonably available data, EPA should also emphasize the importance of robust qualitative discussion of effects that cannot be quantified. It is widely acknowledged by economists that cost-benefit analysis should give "due consideration to factors that defy quantification but are thought to be important."[7] That an effect cannot currently be monetized says little about its magnitude; some of the most substantial categories of monetized pollution-reduction benefits in recent regulatory impact analyses were once considered unquantifiable.[8] Accordingly, executive orders governing rulemaking and infrastructure investment explicitly

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[4] These programs include the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program and the Infrastructure for Rebuilding America program. Richard L. Revesz & Max Sarinsky, *The Social Cost of Greenhouse Gases: Legal, Economic, and Institutional Perspectives*, 39 YALE J. ON REG. 855, 881 (2022).

[5] *Id.* at 882.

[6] See, e.g., DEP'T OF TRANSP., BENEFIT-COST ANALYSIS GUIDANCE FOR DISCRETIONARY GRANT PROGRAMS (2022), https://perma.cc/T48V-H7TB; *Benefit-Cost Analysis*, FED. EMERGENCY MGMT. AGENCY, https://perma.cc/CP9W-ABA8.

[7] KENNETH J. ARROW ET AL., AM. ENTER. INST., ANNAPOLIS CTR & RES. FOR THE FUTURE, BENEFIT-COST ANALYSIS IN ENVIRONMENTAL, HEALTH, AND SAFETY REGULATION: A STATEMENT OF PRINCIPLES 8 (1996); *see also* Richard L. Revesz & Samantha P. Yi, *Distributional Consequences and Regulatory Analysis*, 52 ENV'T L. 53, 96–97 (2022) ("While cost-benefit analysis prefers the quantification of costs and benefits, it contemplates the possibility that it sometimes might not be possible to do so because of the lack of accepted techniques. Unquantified benefits, however, have a place in cost-benefit analyses, and decision-makers are required to take them into account.").

[8] *See* Richard L. Revesz, *Quantifying Environmental Benefits*, 102 CAL. L. REV. 1423, 1436 (2014).

instruct agencies to consider unquantified effects when evaluating potential actions.[9] Agency guidance on cost-benefit analysis for grant applications similarly recognizes the importance of qualitative considerations.[10]

Response: Project cost-benefit analyses should be geographically granular and include an assessment of distributional impacts.

Project cost-benefit analyses should assess costs and benefits with sufficient geographic granularity to ensure that aggregate statistics do not mask disparate environmental, health, and economic impacts on small geographic areas or disadvantaged communities.[11] Where feasible with reasonably available data, EPA should also require applicants to disaggregate project costs and benefits among demographic subgroups, to reveal whether some subpopulations will bear or enjoy a disproportionately large share of a project's costs or benefits.[12] Any significant distributional disparities unveiled by such analysis should be considered in funding-allocation decisions.

Response: Project cost-benefit analyses should address the extent to which a project will further (or decrease) resilience.

Increasing resilience to climate change is an EPA and IRA priority that should be taken into account when allocating the GHG Fund. EPA's most recent Strategic Plan sets an objective to accelerate resilience to climate change impacts and reiterates a directive to "[i]ntegrate climate adaptation planning into EPA programs, policies and rulemaking processes."[13] This focus is consistent with the IRA's goal of "increas[ing] the resilience of our communities in the face of a changing climate," which President Biden emphasized in his recent Executive Order on the Implementation of the Energy and Infrastructure Provisions of the Inflation Reduction Act of 2022.[14] Accordingly, cost-benefit analyses for potential GHG Fund projects should address the projects' potential to increase (or reduce) climate resilience.[15]

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[9] *See* Exec. Order No. 12,866 § 1(a), 58 Fed. Reg. 51,735, 51,735 (Sept. 30, 1993) ("Costs and benefits shall be understood to include both quantifiable measures . . . and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider."); Exec. Order No. 12,893 § 2(a), 58 Fed. Reg. 4233, 4233 (Jan. 31, 1994) ("Analyses should consider not only quantifiable measures of benefits and costs, but also qualitative measures reflecting values that are not readily quantified."); Off. Mgmt. & Budget, *Circular A-4* (2003) (cautioning agencies against ignoring the potential magnitude of direct unquantified benefits, because the most efficient alternative may not have the "largest quantified and monetized . . . estimate").

[10] *See, e.g.*, DEP'T OF TRANSP., *supra* note 6, at 6 (explaining that the agency "will consider benefits and costs using standard data and qualitative information provided by applicants").

[11] See generally JACK LIENKE ET AL., INST. FOR POL'Y INTEGRITY, MAKING REGULATIONS FAIR: HOW COST-BENEFIT ANALYSIS CAN PROMOTE EQUITY AND ADVANCE ENVIRONMENTAL JUSTICE 6–9 (2021), https://perma.cc/Z2BW-X46A.

[12] *Id.* at 10.

[13] ENV'T PROT. AGENCY, FY 2022–2026 EPA STRATEGIC PLAN 18–21 (2022), https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf; *see also* ENV'T PROT. AGENCY, CLIMATE ADAPTATION ACTION PLAN 4 (2021), https://www.sustainability.gov/pdfs/epa-2021-cap.pdf.

[14] Exec. Order No. 14,082 § 1(h), 87 Fed. Reg. 56,861, 56,861 (Sept. 12, 2022).

[15] The recently passed Infrastructure Investment and Jobs Act defines a resilient project as one "with the ability to anticipate, prepare for, or adapt to conditions or withstand, respond to, or recover rapidly from disruptions, including the ability—(A)(i) to resist hazards or withstand impacts from weather events and natural disasters; or (ii) to reduce the magnitude or duration of impacts of a disruptive weather event or natural disaster on a project; and (B) to have

Many projects eligible for funding under the GHG Fund program will have significant resilience implications because of the electricity sector's vulnerability to climate change.[16] For example, rooftop solar panels—which are specifically mentioned in the IRA as GHG Fund-eligible zero-emission technologies[17]—could provide higher resilience benefits if paired with a properly configured inverter and adequate storage, in order to continue to provide power once an electrical grid shuts off.[18] Panels that connect to microgrids or are equipped with grid-forming inverters are also more likely to continue providing power when the larger electrical grid shuts off.[19]

Moreover, the type of structure served by a distributed energy project affects its resilience benefits. Distributed energy projects that focus on critical infrastructure such as hospitals, fire departments, shelters, water treatment facilities, and community-based resilience hubs can vastly increase the capacity of a community to respond to shocks.[20]

Projects may also have resilience-related *costs* if they further maladaptive hardening. Maladaptation includes "actions taken that (unintentionally) constrain the options or ability of other decisionmakers now or in the future to manage the impacts of climate change, thereby resulting in an increase in exposure and/or vulnerability to climate change."[21] Maladaptation also "describes the extent to which adaptation fails or has been conducted in an unsustainable manner."[22]

Further recommendations on how to assess the resilience value of distributed energy and other projects can be found in two Policy Integrity reports: *Toward Resilience: Defining,*

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the absorptive capacity, adaptive capacity, and recoverability to decrease project vulnerability to weather events or other natural disasters." Pub. L. No. 117-58, § 11103(4), 135 Stat. 454, (2021), https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf.

[16] *See, e.g.*, Craig Zamuda et al., ENERGY SUPPLY, DELIVERY, AND DEMAND, IN IMPACTS, RISKS, AND ADAPTATION *in* THE UNITED STATES: FOURTH NATIONAL CLIMATE ASSESSMENT, vol. II, 174, 193 (D.R. Reidmiller et al. eds., 2018); U.S. DEP'T OF ENERGY, CLIMATE CHANGE, AND THE U.S. ENERGY SECTOR: REGIONAL VULNERABILITIES AND RESILIENCE SOLUTIONS (2015).

[17] Inflation Reduction Act, Pub. L. No. 117-169, § 60103, 136 Stat. 1818, 2067 (2022), https://www.congress.gov/117/plaws/publ169/PLAW-117publ169.pdf (noting that Fund-eligible "zero-emission technologies" include "distributed technologies on residential rooftops").

[18] Dep't of Energy, Solar and Resilience Basics, https://www.energy.gov/eere/solar/solar-and-resilience-basics.

[19] *Id.*

[20] *Id.*; *see also* Kristin Baja, *Resilience Hubs: Shifting Power to Communities Through Action*, *in* CLIMATE ADAPTATION AND RESILIENCE ACROSS SCALES: FROM BUILDINGS TO CITIES 89 (Nicholas B. Rajkovich & Seth H. Holmes eds., 2022).

[21] JANE EBINGER & WALTER VERGARA, CLIMATE IMPACTS ON ENERGY SYSTEMS 90 (2011).

[22] Orr Karassin, *Mind the Gap: Knowledge and Need in Regulating Adaptation to Climate Change*, 22 GEO. INT'L ENV'T L. REV. 383, 389 n.31 (2010)

Measuring, and Monetizing Resilience in the Electricity System[23] and *Getting the Value of Distributed Energy Resources Right: Using a Societal Value Stack*.[24]

Section 5.3: What metrics and indicators should EPA use to track relevant program outcomes including, but not limited to, (a) reductions in greenhouse gas emissions or air pollution, (b) allocation of benefits to low-income and disadvantaged communities, (c) private sector leverage and project additionality, (d) number of greenhouse gas and air pollution reduction projects funded, and (e) distribution of projects at the national, regional, state and local levels?

Response: EPA should identify resilience as a relevant program outcome and develop metrics for tracking GHG Fund-driven increases in resilience.

In addition to the outcomes listed in Question 5.3, EPA should consider designating resilience as a relevant program outcome. In keeping with its commitment "to building and using data, measurement, and other evidence to evaluate the effectiveness of climate adaptation tools, activities, program management, and policy approaches," EPA is already in the process of developing metrics to track and evaluate its progress in implementing climate adaptation into its many programs.[25] EPA should continue this process, and it should issue guidance on how it intends to measure progress on resilience in the GHG Fund program specifically.

Respectfully,

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[23] BURCIN UNEL & AVI ZEVIN, INST. FOR POL'Y INTEGRITY, TOWARD RESILIENCE: DEFINING, MEASURING, AND MONETIZING RESILIENCE IN THE ELECTRICITY SYSTEM (2018), https://policyintegrity.org/files/publications/Toward_Resilience.pdf.
[24] JUSTIN GUNDLACH & BURCIN UNEL, INST. FOR POL'Y INTEGRITY, GETTING THE VALUE OF DISTRIBUTED ENERGY RESOURCES RIGHT: USING A SOCIETAL VALUE STACK (2019), https://policyintegrity.org/files/publications/Getting_the_Value_of_Distributed_Energy_Resources_Right.pdf.
[25] CLIMATE ADAPTATION ACTION PLAN, *supra* note 13, at 19.