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Written Testimony of Jon Goldstein, Senior Director Regulatory and Legislative Affairs, Environmental Defense Fund

Chair Johnson, Ranking Member Tonko, and members of the Committee, I'm Jon Goldstein, Senior Director of Regulatory and Legislative Affairs of the Environmental Defense Fund (EDF). One of the world's leading nonprofit organizations, EDF creates transformational solutions to the most serious environmental problems. To do so, EDF links science, economics, law, and innovative private-sector partnerships. With more than 3 million members and supporters, EDF's experts are working to turn solutions into action. Thank you for the opportunity to testify today.

Reducing methane emissions from oil and gas operations is a triple win for the climate, public health, and our energy security. Because of methane's elevated short-term impact, cutting this pollution is the quickest, most cost-effective way to slow the rate of climate change in the near term and avert its worst impacts. These efforts will protect millions of Americans from health harming pollution. And – since methane is the primary component of natural gas – these efforts will reduce energy waste and keep American energy competitive in the global market.

Fortunately, the technical solutions to reduce emissions are available today, have a proven, successful track record in leading states where they have been in force for a decade, and leading operators are already deploying them in the field creating made in America jobs in the process.

I will focus my testimony on the vital benefits of the Environmental Protection Agency's (EPA) recently finalized methane standards, as well as the Methane Emissions Reduction Program (MERP) and Greenhouse Gas Reporting Program (GHGRP) update provisions in the recently passed Inflation Reduction Act (IRA) which illustrate well the tremendous opportunities to our country and to the planet from smart, cost-effective policies that cut oil and gas methane pollution and waste.

Reducing Methane Protects Public Health and Helps Address Climate Change

Reducing oil and gas methane emissions protects communities' health and is one of the fastest, most cost-effective ways to immediately slow our current rate of global warming.[1]

Human-made emissions of methane – a greenhouse gas over 80 times more powerful than CO_2 in the near-term – drive about one third of current global warming. Peer-reviewed science shows swift cuts in methane across sectors, including oil and gas, could slow our current rate of warming by 30%.[2]

Oil and gas is the largest industrial source of methane in the U.S., and companies currently emit at least 13 million metric tons of methane annually.[3] That much methane has a greater near-term climate impact than over 200 million cars driven for a year.[4]

Other pollutants, such as cancer-causing benzene and smog-forming volatile organic compounds, are also emitted alongside methane. Reducing methane leaks is important for safeguarding the health of the roughly 10 million Americans living within a half mile of an active oil or gas site.[5]

Cutting Methane Emissions Cuts Energy Waste and Reinforces U.S. Energy Security

Methane is the main component of natural gas, making it a valuable energy resource. U.S. companies currently waste enough methane to meet the annual needs of more than 12 million households.[6] Operators prioritizing rapid development of oil will often flare, or burn, excess gas despite widely available, and often profitable, options to capture and use or sell the gas—some as simple as improving coordination between producers and pipeline operators. In other instances, producers vent gas or leak it freely into the atmosphere unburned. Even when solutions to flaring, venting, and leakage are profitable, operators often forgo them because they can earn higher rates of return on other investments, like developing new oil projects.

Allowing companies to waste this valuable domestic energy resource is unconscionable. Analysis from S&P Global Commodity Insights shows that North America is wasting more than 50 billion cubic meters of gas annually through venting, leaks and flaring.[7] This amounts to roughly a third of the gas Europe was importing from Russia prior to the invasion of Ukraine and

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[1] IEA, *Curtailing Methane Emissions from Fossil Fuel Operations* (Oct. 2021), https://www.iea.org/reports/curtailing-methane-emissions-from-fossil-fuel-operations.

[2] Ocko et al., *Acting rapidly to deploy readily available methane mitigation measures by sector can immediately slow global warming*, 16 Env. Research Letters 054042 (2021), https://iopscience.iop.org/article/10.1088/1748-9326/abf9c8.

[3] Alvarez et al., *Assessment of Methane Emissions from the U.S. Oil and Gas Supply Chain*, 361 Science 186 (2018), https://science.sciencemag.org/content/361/6398/186.

[4] EDF, *Understanding the Near- and Long-Term Impacts of Emissions*, https://blogs.edf.org/climate411/2022/09/09/edfs-new-calculator-shows-the-dire-impact-of-methane-pollution/.

[5] Proville et al., *The demographic characteristics of populations living near oil and gas wells in the USA*, 44 Population & Environment 1-14 (2022), https://link.springer.com/article/10.1007/s11111-022-00403-2.

[6] EDF calculation based on statistics from the Energy Information Agency on natural gas consumption and number of residential consumers. https://thehill.com/opinion/energy-environment/3491442-biden-can-make-good-on-eu-gas-supply-and-climate-pledges-by-ending-methane-leaks/.

[7] S&P Global Commodity Insights, *Levers for capturing methane emissions to improve gas availability* (Dec. 2022), https://cdn.ihsmarkit.com/www/pdf/1222/EDF---Executive-Summary---Levers-for-capturing-flared-gas-and-methane-emissions.pdf?utm_source=PR&utm_medium=Social&utm_campaign=ET_Consulting_Study.

could be brought to our allies without the need for additional LNG export capacity beyond what's already in operation or under construction.

Cutting Methane Stimulates Economic Growth

In addition to stopping the unnecessary waste of energy resources, keeping more product in pipelines and out of the atmosphere, efforts to cut methane pollution support job creation in the growing methane mitigation industry.

The methane mitigation industry provides the goods and services needed to help companies measure and reduce their emissions. The industry has nearly doubled in size since 2017 and is made up of over 200 companies in over 750 locations nationwide.[8] More than 75% of these firms expect to create additional jobs with strong methane policies in place.[9]

Jobs in the methane mitigation industry are high-paying – 10% more than the national average salary – and they can't be offshored.[10]

Recently Finalized EPA Methane Standards and Key IRA Provisions Help Realize These Benefits

In December, EPA Administrator Michael Regan announced a final set of standards that are designed to cut methane pollution from the oil and gas industry. These standards build from more than a decade of experience at the state and federal level in efforts to rein in oil and gas pollution. In 2014, Colorado became the first state in the U.S. to enact oil and gas methane standards and these efforts continued as other states, under both Republican and Democratic leadership, have established similar requirements to reduce oil and gas pollution and the waste of domestic energy resources. EPA first implemented standards to reduce methane pollution at new oil and gas facilities in 2016, and since then many leading operators have gone beyond regulatory requirements to phase out polluting equipment and quickly find and fix leaks.

EPA's standards are the culmination of a three-year public development process that included extensive input from industry and many other stakeholders. This effort has received historic levels of support from oil and gas producers and was driven by the bipartisan passage by both the U.S. House and Senate of a Congressional Review Act Resolution reaffirming the regulation of methane from the oil and gas sector under the Clean Air Act in 2021.

EPA estimates that these requirements when fully implemented will cut pollution from covered sources by 80%, reducing tens of millions of tons of climate-damaging methane and other toxic, smog-forming pollution from oil and gas leaks, venting and flaring – delivering vital climate and

[8] Datu Research, *Find, Measure, Fix: Jobs in the U.S. Methane Emissions Mitigation Industry* (2021), https://www.edf.org/sites/default/files/content/FindMeasureFixReport2021.pdf.
[9] *Id.*
[10] *Id.*

health benefits for the millions of Americans living in communities near this industrial activity and resulting in $7.3 to $7.6 billion in net economic benefits per year.[11]

And these requirements are extremely cost effective for producers. According to EPA, the range of price impact per barrel of crude caused by the standards will be between zero and a maximum of 25 cents.[12] At current prices of around $70 a barrel, this is about a 0.4% impact at the most. Compliance costs from these standards are estimated to make up less than 1% of annual revenue for producers.[13] EPA also estimates that compliance costs will make up a similarly low percentage of revenue for small operators.[14]

This is because methane mitigation is overwhelmingly cost-effective and represents just a small fraction of the record profits oil and gas companies have experienced in recent years. Exxon and Chevron alone brought in a combined $90 billion in profit in 2022, buoyed by high oil prices. In fact, methane pollution reductions can add to the bottom line of operators who sell the otherwise-wasted gas they capture. The cost-effectiveness of methane mitigation has grown steadily over time, as innovations in monitoring and mitigation technologies have helped further improve the cost-effectiveness of detecting and preventing methane emissions.

The IRA Includes Important Complements to the EPA Rules

The Inflation Reduction Act (IRA) is the most comprehensive Congressional action taken to date to address the climate crisis. This landmark legislation puts the U.S. on a path to achieve the Biden Administration's goal of cutting greenhouse gas emissions in half by 2030 and reaching net zero emissions by 2050. With the inclusion of the Methane Emissions Reduction Program (MERP) in the IRA, Congress acknowledged the major role that oil and gas methane emissions have played in causing the climate crisis, as well as the need to significantly reduce methane emissions from this sector to reach the Administration's climate goals. Congress thus established a new provision in the Clean Air Act – section 136 – which provides EPA with $1.55 billion to reduce methane emissions and establishes a methane-waste emissions charge applicable to oil and gas facilities.[15]

MERP complements and reinforces EPA's methane standards. Each tool plays an important and reinforcing role in tackling methane pollution.

Strong and comprehensive pollution standards from EPA are needed to ensure protective, broad and equitable pollution reductions for all communities. Meanwhile, a charge on especially wasteful levels of methane emissions further discourages pollution and holds companies

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[11] EPA, *EPA Issues Final Rule to Reduce Methane and Other Pollution from Oil and Natural Gas Operations Fact Sheet*, https://www.epa.gov/system/files/documents/2023-12/epas-final-rule-for-oil-and-gas-operations.-overview-fact-sheet.pdf.

[12] *See* EPA, Regulatory Impact Analysis of the Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review at 4-7.

[13] Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review at 171 (pre-publication Final Rule), https://www.epa.gov/system/files/documents/2023-12/eo12866_oil-and-gas-nsps-eg-climate-review-2060-av16-final-rule-20231130.pdf.

[14] *See* EPA, Regulatory Impact Analysis of the Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review at 4-77.

[15] 42 U.S.C. § 7436.

accountable for their impact. MERP recognizes the importance of EPA methane regulations and contains an exemption from the charge for companies in compliance with protective methane standards.

Charge On Excess Methane Waste is Vital Incentive to the Industry to Cut Pollution

A primary pillar of MERP is its charge on excessive methane emissions from U.S. oil and gas facilities. The charge provides a strong incentive to cut pollution – many operators will choose to reduce their emissions by minimizing leaks and replacing equipment rather than pay for excessive emissions. And leading companies have already pledged to limit emissions below MERP's thresholds, meaning they would not need to pay the charge at all.

The charge starts in 2024 at $900/ton of methane and increases over time to $1500/ton by 2026. It only applies to large polluting facilities with over 25,000 metric tons of carbon dioxide equivalent emissions annually. Further, the charge is only assessed on excessive emissions above commonly used emissions intensity thresholds that are consistent with industry's own pollution targets.[16] And finally, there is an exemption for facilities in compliance with final EPA regulatory standards. So, by avoiding excessive emissions and adopting commonsense pollution reduction measures, like those contained in EPA's rules, operators can fall below the thresholds and avoid the charge.

MERP also includes $1.55 billion in funding to reduce methane emissions – funding to state and tribal agencies, communities, and producers themselves. These funds will support air pollution monitoring, plugging end-of-life wells, researching and applying new methane mitigation technologies, and improving reporting and estimates of oil and gas emissions. EPA and the Department of Energy have already announced the commitment of $350 million in funding to 14 states – Texas, Pennsylvania, West Virginia, California, Ohio, Illinois, Louisiana, New Mexico, Kentucky, Colorado, New York, Michigan, Utah, and Virginia – to help companies voluntarily permanently mitigate methane emissions at end-of-life wells.[17]

Because the charge only applies to operators of large facilities with major emissions, smaller companies may not in fact be subject to the charge. For instance, an independent operator with many low-producing wells within a particular basin may be exempt from the charge.

MERP also sets aside $700 million specifically to assist marginal conventional wells with emissions reduction.

Real-World Data Collection on Methane is Vital to Fix the Problem

MERP also includes important provisions to improve reporting and estimation of methane emissions. EPA's current methods undercount emissions from today's oil and gas industry

[16] *See* OGCI, *OGCI's 2025 Methane Intensity Target*, https://www.ogci.com/action-and-engagement/reducing-methane-emissions/#methane-target.
[17] EPA, Biden-Harris Administration Announces $350 Million to 14 States to Reduce Methane Emissions from Oil and Gas Sector as Part of Investing in America Agenda, https://www.epa.gov/newsreleases/biden-harris-administration-announces-350-million-14-states-reduce-methane-emissions (Dec. 15, 2023).

production, practices, and equipment. Numerous studies have found that observed methane emissions are significantly higher than current EPA estimates. A comprehensive study released in 2018 found emissions to be 60% higher than EPA figures.[18]

To ensure that we have durable and effective solutions, it is vitally important to accurately understand the magnitude and source of the problem. Ensuring emission estimates are accurate is also essential for the effectiveness of the waste emissions charge.

MERP takes important steps to address this issue by directing and providing funds for EPA to update the Greenhouse Gas Reporting Program to incorporate empirical measurement data to ensure emissions estimates and MERP's waste charge accurately reflect total methane emissions from oil and gas facilities. With the release of a proposal to update oil and gas emissions reporting last summer, EPA is taking steps to fulfil those Congressional directives.

[18] Alvarez et al., *Assessment of Methane Emissions from the U.S. Oil and Gas Supply Chain*, 361 Science 186 (2018), https://science.sciencemag.org/content/361/6398/186.