MEMORANDUM

TO: Docket for rulemaking, "Extension of Deadlines in Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review Final Rule" (EPA-HQ-OAR-2025-0162)

DATE: 23 July 2025

SUBJECT: Economic Impact Analysis for the Extension of Deadlines in the NSPS OOOOb and EG OOOOc

1. Introduction

On March 8, 2024, the Environmental Protection Agency (EPA) published "Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review" (hereafter "2024 Final Rule").[1] The 2024 Final Rule promulgated New Source Performance Standards (subpart OOOOb; hereafter NSPS OOOOb) regulating methane and volatile organic compound (VOC) emissions pursuant to Clean Air Act (CAA) section 111(b)(1)(B) and Emissions Guidelines (subpart OOOOc; hereafter EG OOOOc) regulating methane emissions pursuant to CAA section 111(d). Both regulations are extensive, covering several individual emissions sources at thousands of oil and natural gas facilities across the country.

In response to multiple petitions for reconsideration and communications with stakeholders, the EPA is extending certain compliance deadlines from the 2024 Final Rule by issuing an interim final rule (IFR). For the NSPS OOOOb, the new deadlines are to be 18 months from publication of the IRF in the Federal Register and apply to a subset of regulated emissions sources; see section II.B of the preamble for a detailed discussion of the emissions sources to which deadline extensions apply. For the EG OOOOc, the deadline extension applies to the state plan submittal date; see section II.C of the preamble for details.

In this document, we present an analysis of the potential economic impacts of the deadline extensions. The baseline for our assessment includes the provisions of the 2024 Final Rule, including the compliance deadlines specified therein, and the analysis is intended to capture the incremental impact of extending those deadlines. We do not present quantified impacts for the NSPS OOOOb deadline extensions, as they are not expected to result in any material impact on compliance costs and emissions; see Section 2 for more information. For the EG OOOOc deadline extension, we estimate the changes in compliance costs resulting from deferred control of methane emissions for all emissions sources for which we quantified impacts in the 2024

[1] 89 FR 16820; https://www.federalregister.gov/documents/2024/03/08/2024-00366/standards-of-performance-for-new-reconstructed-and-modified-sources-and-emissions-guidelines-for.

Final Rule Regulatory Impact Analysis (RIA),[2] since the state plan submittal deadline applies to all sources.

Over a 2028–2039 analysis horizon of 11 years with estimated costs and emissions reductions,[3] we estimate that the EG OOOOc deadline extensions will result in net present values (NPVs) of $750 million in compliance cost savings and $170 million in lost value of emitted natural gas that would have been captured and monetized under the 2024 Final Rule, assuming a 3% discount rate. If we instead assume a 7% discount rate, we estimate cost savings of $1.4 billion and $280 million in lost value of emitted natural gas.

2. Regulatory Requirements, Methodology, and Key Assumptions

The IFR includes compliance deadline extensions for the NSPS OOOOb and the EG OOOOc. Consistent with Section 5.4.4 of the EPA's *Guidelines for Preparing Economic Analysis* (U.S. EPA, 2024), we assume full compliance with the deadlines in both the baseline and policy scenarios.[4] This assumption, however, should not be interpreted as an EPA position on the feasibility of compliance with the 2024 Final Rule deadlines.

The compliance deadline extensions for the NSPS OOOOb apply, for the most part, to narrow provisions of the rule regarding applicability and compliance assurance for which we lack the specific data that would be needed to estimate cost and emissions impacts. Extensions for net heating value (NHV) monitoring of flares and emissions control devices, no identifiable emissions requirements for covers and closed vent systems, equipment leak repair requirements at natural gas processing plants, and specific provisions regarding storage vessel applicability can be characterized this way. For the extension of the process controller requirements, we estimate that the impacts are very small (less than 1% of the size of the estimated impacts of the EG OOOOc deadline extension), so we omit them from our analysis to simplify the exposition. Finally, the impacts of the postponement of the effective date of the "Super Emitter Program" cannot be quantified due to a lack of data, which the EPA noted in the 2024 Final Rule RIA as a limitation in assessing the impacts of the program.

The compliance deadline extension for the EG OOOOc applies to the state plan submittal date and therefore applies to all emissions sources covered by the subpart. As described in section II.C of the preamble to this IFR, the EPA is extending the state plan submittal date from the date of IFR publication by 18 months. The state plan submittal deadline established in the 2024 Final Rule was March 2026, so the extension would provide states with approximately 10 additional months from the deadline established in the 2024 Final Rule, assuming IFR publication in July

[2] 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. December 2023. See docket ID: EPA-HQ-OAR-2021-0317-4021.

[3] The calendar year ranges with estimated non-zero impacts are 2028–2038 for the 2024 Final Rule and 2029–2039 for the IFR.

[4] The guidelines also suggest analyzing under-compliance when supporting evidence exists. We discuss this possibility in Section 7, though we don't have the detailed information on the possibility of future under-compliance needed to provide a quantitative assessment of a specific alternative baseline.

2025. Since the temporal resolution of our analysis is annual, we assume the IFR results in a one-year delay in compliance activities.

The analysis summarized in this document builds upon the Regulatory Impact Analysis (RIA) of the 2024 Final Rule (U.S. EPA, 2023b). The quantified net benefits from the 2024 Final Rule RIA included estimated compliance costs for the domestic oil and natural gas sector, increased value from the additional capture of natural gas, health benefits from reduced ozone concentrations because of reduced VOC emissions, and climate benefits from reduced emissions of methane. Those estimates resulted from an assessment of a variety of regulatory requirements applying to emissions sources in the production, gathering and boosting, processing, transmission, and storage segments for natural gas and the production segment for crude oil. A detailed list of those sources and requirements can be found in Section 2.1 of the 2024 Final Rule RIA.

To estimate the benefits and costs of the 2024 Final Rule, we performed a detailed nationwide engineering cost analysis for its major provisions.[5] The analysis merged projected activity data representing estimates of the counts of affected facilities over time with control measure data that included information on applicability and estimates of costs and control efficiencies for representative facilities. The activity data projections were generated specifically for the 2024 Final Rule RIA and informed by analysis of several different data sources, while the control measure information was adapted from the best system of emission reduction (BSER) analysis used to inform the setting of standards as described in the preamble to the 2024 Final Rule.

For this analysis, we leveraged the outputs produced for the 2024 Final Rule RIA and recalculated the impacts assuming deferred compliance for the EG OOOOc. Our analysis horizon is 2028–2039, with 11 years of positive estimated costs and emissions reductions for both the 2024 Final Rule and the IFR, which is consistent with the analysis of the EG OOOOc for the 2024 Final Rule RIA.[6] Given our annual temporal resolution, we approximate the impact of the 10-month EG OOOOc extension by assuming impacts for the EG OOOOc are delayed by a year, with the initial year of compliance moving from 2028 in the 2024 Final Rule RIA to 2029 after the deadline extension. This results in compliance cost savings as the stream of compliance expenditures is pushed out a year into the future and thus discounted more heavily. This also results in fewer emissions reductions since reductions in the earliest year of impacts in the 2024 Final Rule (2028) are no longer assumed to occur and are instead replaced by reductions in a later year (2039), with the latter estimated to have fewer emissions reductions due to production decline and retirement of emissions sources.

For this document, we update the presentation of the analysis to be consistent with the Office of Management and Budget's (OMB) Circular A-4 by emphasizing social discount rates of 3% and

[5] The Excel workbook accompanying this RIA includes a tab with output data copied from the main results workbook published alongside the 2024 Final Rule RIA (tab name: *output_detail*); that workbook can be accessed by following the instructions in the memorandum located at https://www.regulations.gov/document/EPA-HQ-OAR-2021-0317-4020 to access the collection of analysis files in *ONG-Analysis.zip*. The workbook is in the main directory within the ZIP file with the file name *tables_for_RIA.xlsx*.

[6] The full analysis period for the 2024 Final Rule RIA was 2024–2038, but the first four analysis years only estimated impacts of the NSPS OOOOb.

7% (OMB, 2003). Other updates to the analysis include changing the dollar years to 2024 (rather than 2019) and discounting back to a base year of 2025 (rather than 2021).[7]

3. Compliance Cost and Value of Captured Natural Gas Impacts

Below we present estimates of the impact of the IFR on compliance costs and the value of captured natural gas for the EG OOOOc deadline extensions. All values reflect estimates of industry expenditures assuming initial year compliance occurs in 2028; potential cost savings accruing to other parties such as states are discussed in Section 7. Costs include both (unannualized) capital and annual costs in the year they are assumed to be incurred.

Table 1 shows a year-by-year comparison of the undiscounted compliance cost and value of captured natural gas estimates over the analysis horizon across the 2024 Final Rule and the IFR. For the 2024 Final Rule, we show annual compliance cost and value of captured natural gas estimates side-by-side. For the IFR, we show estimates of compliance costs both excluding additional revenues from the capture of natural gas and including them as an offset to the costs of compliance. In both cases, in the first year of assumed compliance, we estimate a substantial initial outlay of capital expenditure, with a steady stream of (mostly) annual costs in subsequent years.[8] The value of the captured natural gas decreases over time, ranging from $730 million down to $550 million.

Table 1: Undiscounted Annual Stream of Compliance Cost and Value of Captured Natural Gas Estimates for the Final Rule and the IFR, 2028–2039 (million 2024$)

	Final Rule		IFR	
Year	*Costs*	*Value of captured gas*	*Costs*	*Costs less value of captured gas*
2028	$15,000	$730	$0	$0
2029	$1,600	$720	$15,000	$14,000
2030	$1,600	$710	$1,600	$900
2031	$1,500	$700	$1,600	$860
2032	$1,800	$670	$1,500	$840
2033	$1,400	$660	$1,800	$1,100
2034	$1,500	$630	$1,400	$750
2035	$1,300	$600	$1,500	$850
2036	$1,800	$580	$1,300	$720
2037	$1,300	$560	$1,800	$1,200
2038	$1,300	$550	$1,300	$700
2039	-	-	$1,300	$750

[7] Values in this analysis were converted from 2019 dollars to 2024 dollars by multiplying by 1.204, which was derived from the quarterly GDP Implicit Price Deflator values accessed via the St. Louis Federal Reserve on April 4, 2025 (https://fred.stlouisfed.org/series/GDPDEF#). The remainder of the difference in values presented in this RIA is related to discounting over four fewer years (to 2025 instead of 2021). Adjusting to 2024 dollars accounts for 57% of the increase in estimated net present value of compliance costs for the 2024 Final Rule.

[8] The table reveals a small but noticeable increase in the cost stream every four years after the initial year of cost impacts. This is because we assume that batteries needed to store and dispense energy generated by solar photovoltaic panels to power electronic controllers need to be replaced every four years. More details on pneumatic device control technology assumptions are available in Section 2.2.2 of the 2024 Final Rule RIA.

Note: Estimates only pertain to the EG OOOOc compliance deadline extensions.

In Table 2, we present the present value (PV) and equivalent annualized value (EAV) over the analysis horizon of the estimated costs from Table 1, as well as the estimated cost savings of the IFR relative to the 2024 Final Rule. Estimates are provided for two social discount rates, 3% and 7%, with a discounting base year of 2025.[9] Under both the 2024 Final Rule compliance deadlines and the IFR deadlines, we estimate compliance costs over the analysis horizon of $19–26 billion dollars in present value with equivalent annualized values of $2.6–2.8 billion dollars per year. Depending on the assumed social discount rate and whether or not revenue from captured natural gas is included or not, the estimated present value of cost savings are approximately $0.6–1.4 billion, with the EAV ranging from around $60–180 million per year.

Table 2: Estimated Total Cost Savings from the EG OOOOc Compliance Deadline Extension, 2028–2039 (million 2024$)

	2024 Final Rule		IFR		Policy Impact	
Social Discount Rate	*Costs*	*Value of captured gas*	*Costs*	*Costs less value of captured gas*	*Cost savings*	*Cost savings less value of additional lost gas*
			Present Value (PV)			
3%	$26,000	$5,700	$25,000	$19,000	$750	$580
7%	$21,000	$4,300	$20,000	$16,000	$1,400	$1,100
			Equivalent Annualized Value (EAV)			
3%	$2,800	$610	$2,700	$2,100	$81	$63
7%	$2,800	$580	$2,600	$2,100	$180	$150

4. Emissions and Health Impacts

In this section, we present estimates of the impact of the IFR on emissions. Our analysis applies to three pollutants (or classes of pollutants): methane, which is directly regulated by EG OOOOc; VOC; and hazardous air pollutants (HAP). In the 2024 Final Rule RIA, we monetized the health benefits associated with lower ozone concentrations resulting from VOC emissions reductions for the entire rule but not separately for the NSPS OOOOb and EG OOOOc. Since the estimated VOC emissions changes in this analysis apply only to the EG OOOOc, we do not monetize the ozone health benefits for the IFR.

a. Emissions

In Table 3, we present estimates of the annual stream of emissions reductions under the 2024 Final Rule and the IFR over the analysis horizon. In both cases, and for all pollutants, the estimated emissions reductions gradually decline over the analysis horizon because of assumed

[9] The formula for discounted cost in year t is $DiscCost_t = (1+r)^{-(t-2025)} Cost_t$, where r is the social discount rate. The formula for present value for a given social discount rate r is $PV(r) = \sum_{t=2028}^{2039} DiscCost_t$. The formula for the equivalent annualized value for a given social discount rate r is $EAV(r) = \frac{r}{1-(1+r)^{-11}} \cdot PV(r)$.

equipment removal from sites and decommissioning (retirement) of sites.[10] The last row in the table shows the incremental increase in emissions estimated for the IFR relative to the 2024 Final Rule. The increase is equal to the difference between the quantity of emissions reductions estimated to result from the 2024 Final Rule in 2028, which is the year that we assume EG OOOOc compliance costs are first incurred, and the quantity of emissions reductions estimated to result from the IFR in 2039. The EPA did not monetize benefits associated with the emissions changes in Table 3.

Table 3: Estimated Annual Stream of Emissions Reductions under the 2024 Final Rule and the IFR, 2028–2039 (short tons)

	Methane		VOC		HAP	
Year	*2024 Final Rule*	*IFR*	*2024 Final Rule*	*IFR*	*2024 Final Rule*	*IFR*
2028	3,800,000	-	960,000	-	36,000	-
2029	3,700,000	3,700,000	920,000	920,000	34,000	34,000
2030	3,500,000	3,500,000	880,000	880,000	33,000	33,000
2031	3,400,000	3,400,000	840,000	840,000	32,000	32,000
2032	3,300,000	3,300,000	810,000	810,000	30,000	30,000
2033	3,200,000	3,200,000	780,000	780,000	29,000	29,000
2034	3,000,000	3,000,000	740,000	740,000	28,000	28,000
2035	2,900,000	2,900,000	710,000	710,000	27,000	27,000
2036	2,800,000	2,800,000	680,000	680,000	25,000	25,000
2037	2,700,000	2,700,000	670,000	670,000	25,000	25,000
2038	2,600,000	2,600,000	640,000	640,000	24,000	24,000
2039	-	2,500,000	-	610,000	-	23,000
Total	35,000,000	34,000,000	8,600,000	8,300,000	320,000	310,000
Additional Emissions		1,300,000		350,000		13,000

b. Volatile Organic Compounds and Hazardous Air Pollutants Health Effects

Below, we describe some of the potential health impacts related to VOC and HAP emissions. VOC is a precursor to ozone and fine particulate matter ($PM_{2.5}$), exposure to which is associated with adverse health effects in humans. Human exposure to HAP is associated with both cancer and noncancer adverse health effects.

i. Ozone-Related Health Impacts Due to VOC Emission Changes

This IFR is projected to increase emissions of volatile organic compounds (VOC), which are a precursor to ozone, by 350,000 short tons relative to the 2024 Final Rule over the 2028–2039 analysis horizon. Ozone is not generally emitted directly into the atmosphere but is created when its two primary precursors, VOC and oxides of nitrogen (NO_X), react in the atmosphere in the presence of sunlight. In urban areas, compounds representing all classes of VOC can be important for ozone formation, but biogenic VOC emitted from vegetation tend to be more

[10] Since we did not estimate emissions reductions beyond 2038 for the 2024 Final Rule RIA (and because we are relying on the estimates from that analysis to perform this one), the IFR estimates for 2039 are calculated by subtracting the change in emissions reductions from 2037 to 2038 from the reductions for 2038.

important compounds in some non-urban vegetated areas (U.S. EPA, 2013). Observational and modeling studies have found that VOC emissions from oil and natural gas operations can impact ozone levels (Helmig, 2020; Kemball-Cook et al., 2010; Lindaas et al., 2019; Lyu et al., 2021; McDuffie et al., 2016; Pozzer et al., 2020; Reddy, 2023; Tzompa-Sosa & Fischer, 2021). Emissions increases may increase ozone formation, human exposure to ozone, and the incidence of ozone-related health effects.

Human exposure to ambient ozone concentrations is associated with adverse health effects, including premature respiratory mortality and cases of respiratory morbidity (U.S. EPA, 2020). Researchers have associated ozone exposure with adverse health effects in numerous toxicological, clinical, and epidemiological studies (U.S. EPA, 2020). When adequate data and resources are available, the EPA has generally quantified several health effects associated with exposure to ozone (U.S. EPA, 2011, 2015, 2023a). These health effects include respiratory morbidity, such as asthma attacks, hospital and emergency department visits, lost school days, and premature respiratory mortality (U.S. EPA, 2020). The scientific literature is also suggestive that exposure to ozone is associated with chronic respiratory damage (U.S. EPA, 2020) . The EPA is unable to quantify the health effects of this IFR. Numeric modeling of the benefits and costs of this IFR are based on analyses for the 2024 Final Rule. The 2024 Final Rule modeled NSPS and EG VOC emissions reductions jointly, however sections of the NSPS are not changed by this IFR. Therefore, the health effect changes under this IFR would differ in magnitude from those in the 2024 Final Rule.

ii. $PM_{2.5}$-Related Impacts Due to VOC Emissions

This IFR is expected to result in increases of emissions of VOC, which are a precursor to $PM_{2.5}$, relative to the 2024 Final Rule, thus increasing human exposure to $PM_{2.5}$ and the incidence of $PM_{2.5}$-related health effects, although the magnitude of this effect has not been quantified at this time. Most VOC emitted are oxidized to CO_2 rather than to PM, but a portion of VOC emissions contributes to ambient $PM_{2.5}$ levels as organic carbon aerosols (U.S. EPA, 2019). Analysis of organic carbon measurements suggest only a fraction of secondarily formed organic carbon aerosols are of anthropogenic origin. Given that only a fraction of secondarily formed organic carbon aerosols is from anthropogenic VOC emissions, and the relatively volatile nature of VOCs emitted from this sector, it is unlikely that the estimated VOC emissions increase projected to occur under this IFR would have a large contribution to ambient secondary organic carbon aerosols. See the $PM_{2.5}$ ISA for a discussion of $PM_{2.5}$-related health impacts (U.S. EPA, 2019).

iii. Hazardous Air Pollutants (HAP) Impacts

This IFR is projected to increase HAP emissions by 13,000 tons over the analysis horizon.[11] With the data available, it was not possible to estimate the change in emissions of each

[11] The projected emissions increase from the IFR, including projections of HAP increases relative to the 2024 Final Rule, are based upon the unit-level model plant analysis supporting this rulemaking multiplied by counts of units that are potentially affected by this IFR. The model plants and counts are built from a different basis than the oil and natural gas sector emissions estimated in the NEI. Comparisons between the projected emissions increases under this IFR and the NEI should be made with caution.

individual HAP. Available emissions data show that several different HAP are emitted from oil and natural gas operations. The HAP emissions from the oil and natural gas sector are from the 2017 National Emissions Inventory (NEI) emissions data. Emissions of eight HAP make up a large percentage of the total HAP emissions by mass from the oil and natural gas sector: toluene, hexane, benzene, xylenes (mixed), ethylene glycol, methanol, ethyl benzene, and 2,2,4 trimethylpentane (U.S. EPA, 2012).

Monetization of the benefits of reductions in cancer incidences requires several important inputs, including central estimates of cancer risks, estimates of exposure to carcinogenic HAP, and estimates of the value of an avoided case of cancer (fatal and non-fatal). Due to methodology and data limitations, we did not attempt to monetize the health benefits of reductions in HAP in this analysis, nor was it attempted in the 2024 Final Rule. Instead, we are providing a qualitative discussion of the health effects associated with HAP emitted from sources subject to control under the final NSPS OOOOb and EG OOOOc.

The EPA's Integrated Risk Information System (IRIS) database contains detailed data about each HAP.[12] Human exposure to HAP is associated with both cancer (fatal and non-fatal) and noncancer adverse health effects. HAP exposure can contribute to various cancers including, leukemia, nasopharyngeal cancer, sinonasal cancer, and myeloid leukemia. Noncancer health effects of HAP include respiratory effects, developmental and reproductive effects, neurological effects, reproductive effects, central nervous system (CNS) dysfunction, and gastric irritation.

5. Comparison of Benefits and Costs

In Table 4, we present a summary of the estimated benefits and costs of the IFR relative to the 2024 Final Rule. The top panel of the table provides the monetized estimates, while the bottom panel summarizes unquantified and non-monetized items. The monetized benefits that we estimate for the IFR consist of compliance cost savings to industry due to deferred deadlines for EG OOOOc. The monetized costs include the lost market value of emitted natural gas that would have been captured if not for delayed application of emissions controls. Unquantified benefits include potential cost savings to states from having an additional year to develop state plans, while non-monetized costs include climate damages from increased emissions of methane and the value of additional premature mortality and healthcare expenditures resulting from increased emissions of VOC and HAP.

[12] The U.S. EPA Integrated Risk Information System (IRIS) database is available at https://www.epa.gov/iris.

Table 4: Summary of Quantified Benefits and Costs, 2028–2039 (million 2024 dollars)

	3% Discount Rate		7% Discount Rate	
	PV	*EAV*	*PV*	*EAV*
Disbenefits				
Lost market value of emitted natural gas	$170	$18	$280	$38
Cost Savings				
Compliance cost savings	$750	$81	$1,400	$180
Net Benefits	$580	$63	$1,100	$150

Non-monetized disbenefits

- Climate damages from increasing methane emissions by 1,300,000 short tons.
- Lost value of $PM_{2.5}$ and ozone-related health benefits from increasing VOC emissions by 350,000 short tons.
- Lost value of health benefits from increasing HAP emissions by 13,000 short tons.

Unquantified cost savings

- Cost savings to states resulting from having an additional year to develop state plans to implement the EG OOOOc.

6. Economic Impact Analysis

Section 4.1 of the 2024 Final Rule RIA provided estimates of the impact of the regulation on domestic prices and production for crude oil and natural gas. The largest impacts were estimated to occur in and beyond the initial year of assumed compliance with the EG OOOOc (2028). For that initial year, the EPA estimated up to a 0.69% decrease in crude oil production and a 0.75% decrease in natural gas production, along with a 0.24% increase in crude oil prices and a 1.76% increase in natural gas prices. While we did not estimate the impact of the IFR on crude oil and natural gas prices and production, our methodology for estimating market impacts would yield similar results, except with the largest impacts starting in 2029, which is the assumed initial year of compliance expenditures for the EG OOOOc.

Consistent with the EPA's interpretation of the Regulatory Flexibility Act (RFA), the Final Regulatory Flexibility Analysis (FRFA) for the 2024 Final Rule RIA was restricted to assessing the impacts of the NSPS OOOOb on small businesses, and not the EG OOOOc. As such, we do not estimate any impacts of the IFR on small businesses.

7. Limitations and Uncertainties

Our assessment of the impacts of the IFR on compliance costs and health and economic damages due to climate pollutant emissions relies on many assumptions about firm behavior, the evolution of the number of emissions sources over time, the frequency and magnitude of emissions in the absence of control, the costs and environmental performance of control measures, and the value of methane emissions reductions. Section 5.2 of the 2024 Final Rule RIA summarizes several of the most important limitations and sources of uncertainty, and all those items apply to the analysis presented in this document. Moreover, there are additional limitations and uncertainties specific to this analysis that we highlight next.

- **2024 Final Rule baseline compliance**: We assume that, in the baseline, sources would be able to comply with the estimated compliance deadlines for the EG OOOOc from the 2024 Final Rule. To the extent some facilities wouldn't have been able to meet the 2024 Final Rule compliance deadlines due to difficulties in formulating adequate state plans, this analysis will overestimate cost savings and climate impacts.
- **Costs to states**: In support of the 2024 Final Rule, the EPA estimated average annual total costs to states of developing state plans for the EG OOOOc of $7–9 million (2021 dollars) over the first three years.[13] As noted in Section 5, we do not quantify the impact of the IFR on these costs. However, by extending the state plan submittal deadline, the IFR may result in cost savings to some states by allowing them to either delay expenditures related to state plan development or to more carefully and strategically deploy budgetary resources in developing their plans.
- **Monetizing methane-related domestic climate benefits:** There are significant uncertainties related to the monetization of greenhouse gases that include, but are not limited to: the magnitude of the change in climate due to a change in GHG emissions; the relationship between changes in the climate and the economy and therefore, the resulting economic impacts; future economic and population growth which are important for estimating vulnerability, willingness to pay to avoid impacts, and the ability to adapt to future changes; future technological advancements that would reduce vulnerability and impacts; the share of impacts from GHG emissions that affect citizens and residents of the United States; and the appropriate discount rates to use when discounting in an intergenerational context. Due to the uncertainties related to monetization of impacts from changes in GHG emissions the EPA has elected to not monetize these impacts. Monetizing these impacts could potentially result in flawed decision-making due to overreliance on highly uncertain values.

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[13] See the workbook attachment titled "Final EG OOOOc ICR 9-26-2023" located at https://www.regulations.gov/document/EPA-HQ-OAR-2021-0317-3983.

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