UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Proposed Withdrawal of the Control Techniques Guidelines for the Oil and Natural Gas Industry	)	**Docket No. EPA-HQ-OAR-2015-0216** *Via regulations.gov* *April 23, 2018*

Environmental Defense Fund, Center for Biological Diversity, Clean Air Task Force, Earthjustice, Environmental Integrity Project, Environmental Law and Policy Center, National Parks Conservation Association, Natural Resources Defense Council, and Sierra Club submit these comments on behalf of our millions of members across the nation, who are deeply concerned about the health and environmental impacts of harmful air pollution from oil and natural gas facilities, including ozone-forming volatile organic compounds ("VOCs") and toxic air pollutants. We strongly oppose the Environmental Protection Agency's ("EPA," or "the Agency") proposal to withdraw its Control Techniques Guidelines ("CTG") for the oil and natural gas industry.

The CTG provide recommendations for common-sense, cost-effective measures states can implement within their ozone nonattainment areas to reduce harmful VOC emissions from the oil and natural gas sector. These measures are based on technologies and best practices that have long been effectively used by states and leading companies and so provide a ready-made template to assist state air quality planners, while affording states the flexibility to adopt different, state-based approaches to restore healthy air quality. The CTG help states implement measures necessary to attain the National Ambient Air Quality Standard ("NAAQS") for ground-level ozone. The purpose of the Clean Air Act's ("CAA") NAAQS requirement is to "protect the public health" with "an adequate margin of safety." 42 U.S.C. § 7409(b)(1). To that end, EPA must set the ozone NAAQS at a level requisite to protect the public health based exclusively on public health considerations, and must be set at a level which is precautionary in safeguarding against adverse health effects in sensitive populations.

EPA issued the CTG in October 2016 after a detailed study of the problem of VOC emissions from the oil and natural gas sector, thorough consideration of the availability and costs of technologies to reduce those emissions, and an extensive notice-and-comment process. Now, EPA proposes to withdraw the CTG not based on any new analysis of the evidence, but based solely on the fact that the Agency is reconsidering its separate 2016 new source performance standards ("2016 NSPS") for methane and VOC emissions from new and modified oil and gas facilities. 83 Fed. Reg. 10,478 (Mar. 9, 2018). EPA plans to withdraw the CTG because the Agency now claims they are "fundamentally linked" to the conclusions in the 2016 NSPS, and likewise asserts that withdrawal will prevent affected states from having to revise their state implementation plans ("SIPs") for ozone control now and then again after EPA's reconsideration is complete. *Id.* at 10,478–79.

For the reasons discussed below, withdrawal of the CTG would be manifestly arbitrary, capricious, and contrary to law. Withdrawal would also needlessly eliminate a reasonable, nationally consistent framework for improving air quality, thereby hampering the ability of state air quality planners to develop and implement plans to restore healthy air quality.

Part I, below, describes health harms associated with ozone pollution and the significant contribution that emissions from the oil and gas sector make to this pollution. This Part builds on our December 2015 comments in support of EPA's proposal to issue the CTG ("2015 Comments").[1] The 2015 Comments are attached to this submission and incorporated by reference here.

In Part II, we describe the events and analysis leading up to the development, and now proposed withdrawal, of the CTG. This Part includes discussion of a 2012 petition submitted by many of the undersigned organizations and others requesting that EPA issue CTG for VOC emissions from the oil and natural gas industry ("2012 Petition").[2] The 2012 Petition is attached to this submission, and EPA's proposal to withdraw the CTG, if finalized, would constitute a constructive denial of that petition. Part II also contains an explanation of how the CTG operate in the CAA cooperative federalism framework and the harmful effects of withdrawing the CTG.

In Part III, we evaluate the practical consequences of withdrawing the CTG, specifically, the increase in emissions that will result from such an action. Although EPA's withdrawal proposal provides an estimate of the resulting emissions impacts, the Agency understated these impacts and arbitrarily failed to consider the associated health consequences.

Lastly, in Part IV, we identify a number of reasons why withdrawal of the CTG would be arbitrary and capricious and contrary to law, including: EPA's failure to ground its reasons for withdrawal in the statute; EPA's attempt to justify withdrawing the CTG in their entirety based on its reconsideration of the 2016 NSPS, a wholly separate regulation; and EPA's change in position without adequate explanation.

Accordingly, we respectfully urge EPA to abandon its proposed withdrawal, which is legally flawed, entirely unnecessary, and threatens to harm the health of Americans across the country.

I. The Oil and Natural Gas Sector is a Significant Source of Smog-Forming VOCs

The oil and gas sector is a significant source of smog-forming pollutants that contribute to unhealthy air pollution in multiple areas across the country. Rigorous standards that reduce the emission of VOCs and nitrogen oxides ("NOx"), both ozone precursors, are critical to protect public health in states that are home to, or are impacted by, oil and gas development.

[1] Clean Air Task Force, et al., Comments on Oil and Natural Gas Sector: Control Techniques for the Oil and Natural Gas Industry (Dec. 4, 2015) ("2015 Comments"), Docket ID: EPA-HQ-OAR-2015-0216-0195.
[2] In re Petition for the U.S. EPA to 1) Promptly Require Oil & Gas Owners and Operators to Monitor for Ozone & 2) to Issue Control Techniques Guidelines for Oil and Natural Gas Operations in Non-Attainment Areas (Dec. 19, 2012) ("2012 Petition").

In December 2015, we submitted the 2015 Comments in support of EPA's proposal for the 2016 CTG.[3] Those comments included a detailed discussion of the connection between the oil and gas sector and harmful air pollution. The 2015 Comments are attached to this submission, and we reaffirm and incorporate them by reference here. Below, we provide additional comments regarding the link between the oil and gas sector, VOC emissions, and human health impacts.

A. *Ozone is a Dangerous Air Pollutant that Harms Public Health*

Scientific evidence spanning several decades shows that human exposure to ozone can cause a broad range of respiratory effects, including inflammation of the airways, asthma attacks, chronic obstructive pulmonary disease ("COPD"), and other pathologies that can lead to increased use of medication, school absences, hospital admissions, and emergency room visits.[4]

According to the Centers for Disease Control and Prevention ("CDC"), more than 24 million Americans had asthma in 2015, including 6.1 million children.[5] This places a significant economic burden on the United States, with one recent paper estimating asthma's cost to the nation to be $81.9 billion in 2013.[6] Of that total, approximately $50 billion can be attributed to medical costs, $29 billion to asthma-related mortality, and $3 billion to missed work and school days.[7] Asthma disproportionately affects the most vulnerable in our population, including children, the elderly, lower-income families, and communities of color. For example, the CDC estimates that African-American children are two times more likely to have asthma than white children.[8] More than one in four African-American adults cannot afford their asthma medication, nor can one in five Hispanic or Latino adults.[9] And African-Americans are two to three times more likely to die from asthma than any other racial or ethnic group.[10]

Ozone aggravates existing asthma and is likely to be one of many causes of asthma development. Children are particularly at risk of asthma attacks because they breathe more air per unit of body weight, are more active outdoors, are more likely to have existing asthma than adults, and are still developing their lungs and other organs. In fact, EPA's Children's Health Protection Advisory Committee— a body of external experts that provides the Administrator with recommendations concerning children's health—finds that "[c]hildren suffer a disproportionate

[3] *See generally* 2015 Comments.
[4] EPA, *Integrated Science Assessment for Ozone and Related Photochemical Oxidants*, Executive Summary (2013), *available at* https://www.epa.gov/isa/integrated-science-assessment-isa-ozone-and-related-photochemical-oxidants (last visited Apr. 22, 2018).
[5] CDC, 2015 National Health Interview Survey (NHIS) Data, Table 3-1, https://www.cdc.gov/asthma/nhis/2015/table3-1.htm (last visited Apr. 15, 2018).
[6] Nurmagambetov, T. et al., (2018) "The Economic Burden of Asthma in the United States, 2008–2013," Annals of the Am. Thoracic Soc'y Vol. 15 N. 3, doi: 10.1513/AnnalsATS.201703-259OC, *available at* https://www.atsjournals.org/doi/full/10.1513/AnnalsATS.201703-259OC.
[7] *Id.*
[8] CDC, Fact Sheet, Asthma's Impact on the Nation: Data from the CDC National Asthma Control Program, *available at* https://www.cdc.gov/asthma/impacts_nation/asthmafactsheet.pdf (last visited Apr. 15, 2018).
[9] *Id.*
[10] *Id.*

burden of ozone-related health impacts due to critical developmental periods of lung growth in childhood and adolescence that can result in permanent disability."[11]

On October 1, 2015, EPA strengthened the NAAQS for ground-level ozone, which had previously been 75 parts per billion ("ppb"), to 70 ppb based on extensive scientific evidence about ozone's effects on public health.[12] EPA estimates that attaining the 2015 Ozone NAAQS can be expected to prevent up to 230,000 childhood asthma attacks, 160,000 missed school days, and 630 asthma-related emergency room visits across the nation in 2025, excluding California.[13] The agency monetized these benefits at up to $5.9 billion, greatly outweighing the costs of implementation.[14] Ozone exposure is also associated with premature death, and attainment of the NAAQS is expected to prevent up to 660 deaths nationwide (excluding California) in 2025.[15] Many health and medical associations have also recommended EPA adopt more protective standards based on the significant body of scientific evidence showing adverse health effects below the current standard.[16]

A significant portion of these human health impacts from ozone, including burdens on low-income communities and communities of color, are associated specifically with air pollution from the oil and gas sector. A 2016 study by Clean Air Task Force ("CATF"), *Gasping for Breath*, focused on the health effects of ozone pollution from the oil and gas industry.[17] The results of the study show the contribution of oil and gas air pollution to increased ozone levels and associated health impacts throughout the country, including in areas further afield from oil and gas development. Indeed, some of the areas hit hardest by oil and gas air pollution—that is, areas with the greatest number of health incidents per county, a measure informed by population density—include urban metro regions in the Midwest, Northeast, South, and Southeast. Subsequent reports by CATF highlight the health impacts of oil and gas facilities on African-American and Latino populations in particular, finding a significant toll from oil and gas wells and associated equipment due to ozone pollution as well as air toxics (which are addressed in more detail below).[18]

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[11] Letter from Sheela Sathyanarayana, MD, MPH, Chair, Children's Health Prot. Advisory Ctte., to H. Christopher Frey, PhD, Chair, EPA Clean Air Sci. Advisory Ctte. 1 (May 19, 2014), *available at* https://www.epa.gov/sites/production/files/2014-12/documents/2014.05.19_chpac_ozone_naaqs.pdf.
[12] EPA, Fact Sheet: EPA's Final Air Quality Standards for Ground-Level Ozone by the Numbers, *available at* https://www.epa.gov/sites/production/files/2015-10/documents/20151001_bynumbers.pdf (last visited Apr. 15, 2018).
[13] *Id.*
[14] *Id.*
[15] *Id.*
[16] Letter from Am. Acad. of Pediatrics, et al., to Hon. Gina McCarthy, Adm'r, EPA (Mar. 17, 2015), *available at* http://www.lung.org/assets/documents/advocacy-archive/national-health-and-medical.pdf.
[17] Clean Air Task Force, *Gasping for Breath: An Analysis of the Health Effects from Ozone Pollution from the Oil and Gas Industry* (2016), *available at* http://www.catf.us/resources/publications/files/Gasping_for_Breath.pdf.
[18] Clean Air Task Force & NAACP, *Fumes Across the Fence Line: The Health Impacts of Air Pollution from Oil and Gas Facilities on African American Communities* (2017), *available at* http://www.catf.us/resources/publications/files/FumesAcrossTheFenceLine.pdf; Clean Air Task Force, League of United Latin Am. Citizens, & Nat'l Hispanic Med. Ass'n, *Latino Communities at Risk: The Impact of Air Pollution from the Oil and Gas Industry* (2016), *available at* http://www.catf.us/resources/publications/files/Latino_Communities_at_Risk.pdf.

Additionally, ozone harms park plant and animal species. It stifles tree and plant growth, burns the leaves of plants and common tree species, and affects the lungs of wildlife. Ecosystems across the country show damage from ground-level ozone pollution, including iconic species like the black cherry tree in the East, and aspen and ponderosa pine in the West. As an example, scientists have found foliar damage from ozone on cutleaf coneflower plants, one of eleven native plants sensitive to ozone at Rocky Mountain National Park, the eastern part of which lies within Colorado's Northern Front Range non-attainment area.[19]

The National Park Service recognizes ozone as a pollutant of concern in national parks[20] and has identified 109 parks as having ozone conditions that are of "significant concern" with regard to human health, with 72 parks of "significant concern" with regard to ozone's damage to ecosystems.[21] During the 2017 ozone season, monitors at parks from Acadia to Joshua Tree recorded a total of 276 days with ozone levels above the 2015 standard.[22]

B. *VOCs and Hazardous Air Pollutants Have Dangerous Direct Effects on Human Health*

In addition to their contribution to harmful ground-level ozone, VOCs have negative direct impacts on human health. A number of VOCs emitted from oil and gas operations are also hazardous air pollutants ("HAPs")—namely, benzene, toluene, xylene, and others. There is no safe level of human exposure to many of these toxic pollutants. Exposure to some can cause cancer and seriously impair the human neurological system. For example, EPA "lists benzene as a known human carcinogen (causing leukemia) by all routes of exposure, and concludes that exposure is associated with additional health effects, including genetic changes in both humans and animals."[23] Further, a "number of adverse noncancer health effects including blood disorders, such as preleukemia and aplastic anemia, have also been associated with long-term exposure to benzene."[24] Along with benzene, EPA has catalogued the harmful effects of other HAPs emitted from oil and gas operations, including toluene, carbonyl sulfide, ethylbenzene, mixed xylenes, n-hexane, and other air toxics. Each of these hazardous pollutants is, by definition, seriously harmful to human health. For example, the major health effects associated with exposure to toluene range from the dysfunction of the central nervous system to narcosis,

[19] Kohut, R., et al., (2012) "Foliar Ozone Injury on Cutleaf Coneflower in Rocky Mountain National Park, Colorado," Western North American Naturalist 72(1): 32-42, *available at* http://www.bioone.org/doi/abs/10.3398/064.072.0104.

[20] *Ozone Effects on Health*, NPS.gov, *available at* https://www.nature.nps.gov/air/aqbasics/understand_ozone.cfm (last visited Apr. 22, 2018); *Ozone Effects on Plants*, NPS.gov, *available at* https://www.nature.nps.gov/air/aqbasics/ozoneEffects.cfm (last visited Apr. 22, 2018).

[21] *Park Conditions & Trends*, NPS.gov, *available at* https://nature.nps.gov/air/data/products/parks/index.cfm (last visited Apr. 22, 2018) (data compiled for year-end 2015). We recognize Great Sand Dunes National Park and Great Sand Dunes National Preserve as two separate park units.

[22] *Ozone Standard Exceedances in National Parks*, NPS.gov, *available at* https://nature.nps.gov/air/data/products/parks/index.cfm (last visited Apr. 22, 2018).

[23] EPA, Regulatory Impact Analysis of the Final Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources 4-33 (May 2016), *available at* https://www3.epa.gov/ttnecas1/docs/ria/oilgas_ria_nsps_final_2016-05.pdf.

[24] *Id.* at 4-34.

with effects "frequently observed in humans acutely exposed to low or moderate levels of toluene by inhalation."[25]

Nationally, nearly 18 million people live within one mile of oil and gas activity and are thus at risk of being exposed to elevated levels of HAPs.[26] A recent study in Colorado found that communities living in close proximity to oil and gas activity had higher measured exposures to HAPs and faced increased risks to their health, including a heightened risk of cancer. The results indicate the lifetime cancer risk was 8.3 per 10,000 people for populations living within approximately 500 feet (or 152 meters) of oil and gas activity, which is above EPA's allowable risk.[27] The study also found elevated levels of acute and chronic blood system and developmental risks and acute nervous system risks for the same population, and determined that benzene exposures contributed to 80 to 95% of risks across the different health effects.[28] Furthermore, the problem of HAP exposure for communities living in close proximity to oil and gas activity is growing: the authors of the study noted that 19% of the population of the Denver Julesberg Basin on the Colorado Northern Front Range live within a mile of oil and gas activity, and that between 2000 and 2012, the number of people living in that area grew almost three times faster than the population living further away.[29]

An increase in cancer risks was also seen in a CATF analysis of EPA's assessment of the impacts of industry emissions of toxic air pollutants. Using EPA's National Air Toxics Assessment for 2011 and EPA's oil and gas emissions estimates for 2017, CATF reported that due to air toxics that can be traced back to the oil and gas industry, 238 counties in 21 states face cancer risk that exceeds EPA's one-in-a-million threshold level of concern.[30] In 2017, CATF released a separate report finding that communities of color and low income communities are disproportionality burdened, with over 6.7 million African Americans living in the 91 counties with oil refineries.[31]

C. *The Oil and Gas Sector is a Substantial Source of Smog-Forming VOCs and These Emissions Have Been Linked to Unhealthy Levels of Ozone*

Our 2015 Comments highlighted a number of analyses finding that the oil and gas sector emits significant amounts of VOC emissions and that those emissions have been linked to harmful levels of ozone pollution.[32] In addition to that extensive body of evidence, which we incorporate here, subsequent studies have confirmed that the oil and gas sector is a significant (and often

[25] *Id.*
[26] Czolowski, E.D., et al., (2017) "Toward Consistent Methodology to Quantify Populations in Proximity to Oil and Gas Development: A National Spatial Analysis and Review," Environ .Health Perspect., 125(8):086004, doi: 10.1289/EHP1535, *available at* https://www.ncbi.nlm.nih.gov/pubmed/28858829.
[27] McKenzie, L., et al., (2018) "Ambient Non-Methane Hydrocarbon Levels Along Colorado's Northern Front Range: Acute and Chronic Health Risks," Envtl. Sci. & Tech., doi: 10.1021/acs.est.7b05983, *available at* https://pubs.acs.org/doi/10.1021/acs.est.7b05983.
[28] *Id.*
[29] *Id.*
[30] Clean Air Task Force, *Fossil Fumes: A Public Health Analysis of Toxic Air Pollution from the Oil and Gas Industry* (2016), *available at* http://www.catf.us/resources/publications/files/FossilFumes.pdf.
[31] CATF & NAACP, *Fumes Across the Fence-Line.*
[32] 2015 Comments at 2–7.

underestimated) contributor to VOC emissions and have strengthened the link. In particular, a 2018 analysis by EDF estimated over 50,000 tons of annual VOC emissions from the upstream oil and natural gas sector in Pennsylvania—more than nine times greater than reflected in the state inventory of unconventional wells.[33] And a recent peer-reviewed publication from the Cooperative Institute for Research in Environmental Sciences examined the oil and gas sector's contribution to ozone formation on Colorado's Front Range, focusing specifically on days that exceeded the ozone NAAQS. The study found that, on individual days, oil and gas ozone precursors could contribute in excess of 30 ppb of ozone growth and could be the primary driver of exceedances of the ozone NAAQS in that region.[34] Another study of the Colorado Front Range found that oil and gas VOC emissions contributed approximately 20% to regional ozone production.[35]

II. The CTG Are Proven, Cost-Effective Measures that Help States Reduce These Harmful Smog-Forming Emissions

A. *The CTG Were Issued After Thoughtful Study and a Thorough Comment Process*

In December 2012, a number of public health and environmental organizations, including many of the undersigned organizations, submitted a petition to EPA requesting the Agency issue CTG for oil and gas operations in ozone non-attainment areas.[36] The petition cited numerous studies demonstrating the connection between pollution from oil and gas facilities and ozone air quality problems, as well as the well-established link between ozone and adverse human health impacts. The petition described EPA's legal authority to issue CTG for the oil and gas sector and highlighted a number of cost-effective emission-reduction measures already in use Colorado and Wyoming that would be appropriate for inclusion as CTG recommendations.

In September 2015, EPA released a draft CTG document containing recommendations to help oil and gas emission sources determine reasonably available control technology ("RACT") for VOC emissions. 80 Fed. Reg. 56,577 (Sept. 18, 2015). EPA made the proposed CTG available for comment, soliciting specific input on four topics in particular: costs associated with retrofitting existing storage vessels; implementing a monitoring plan that uses optical gas imaging for fugitive emissions; interaction of the CTG with new builds in areas affected by the CTG; and the appropriateness of EPA's suggested emission threshold for defining low-production wells and information on fugitive emissions associated with low-production wells. *Id.* at 56,578. EPA

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[33] *Pennsylvania Oil and Gas Emissions Data: Air Toxics and Smog-Forming Pollution*, EDF.org, https://www.edf.org/pa-oil-gas/#/inventory (last visited Apr. 19, 2018). The EDF analysis estimated emissions from Pennsylvania conventional and unconventional oil and gas wells based on active well counts and production data from Drillinginfo and average site emission rates and loss rates reported in Omara et al. 2016, which was based on site-level measurements at 35 well pads in southwestern Pennsylvania and northern West Virginia. *Methodology of Estimating Untracked Emissions*, EDF.org, https://www.edf.org/energy/methodology-estimating-untracked-emissions (last visited Apr. 19, 2018).

[34] Cheadle, L.C., et al., (2017) "Surface Ozone in the Colorado Northern Front Range and the Influence of Oil and Gas Development During FRAPPE/DISCOVER-AQ in Summer 2014," Elem. Dci. Anth. 5:61. doi:10.1525/elementa.254, *available at* https://www.elementascience.org/articles/10.1525/elementa.254/.

[35] McDuffie, E., et al., (2016) "Influence of Oil and Gas Emissions on Summertime Ozone in the Colorado Northern Front Range," J. Geophys. Res. Atmos., 121, doi:10.1002/2016JD025265, *available at* http://eprints.whiterose.ac.uk/103000/.

[36] *See generally* 2012 Petition.

subsequently extended the comment period on the proposed CTG in response to requests from interested parties seeking more time to comment. 80 Fed. Reg. 70,781 (Nov. 16, 2015).

A number of the undersigned organizations submitted a detailed comment letter in response to EPA's proposal.[37] Among other things, the 2015 Comments set forth EPA's clear legal authority to adopt CTG for sources of VOCs in the oil and natural gas sector.[38] They also included a discussion supporting EPA's reasonable determination—made after consideration of a number of different studies, technical support documents, and evidence from state and local regulatory experiences—that RACT for existing sources "constitutes the same suites of measures EPA proposed to control emissions from new and modified oil and gas sources."[39] Finally, the 2015 Comments discussed several specific aspects of EPA's RACT determination in the CTG. For instance, the Comments urged EPA to strengthen its proposed leak detection and repair ("LDAR") recommendations by increasing the frequency of inspections and omitting from the final CTG its proposal to exempt wells producing less than 15 BOE/d from the LDAR program.[40] The Comments also asked EPA to add CTG recommendations addressing liquids unloading activities.[41]

On October 27, 2016, EPA published a Federal Register notice announcing the availability of the final CTG document. 81 Fed. Reg. 74,798 (Oct. 27, 2016). The final CTG describes the six sources EPA evaluated for RACT recommendations: storage vessels, compressors, pneumatic controllers, pneumatic pumps, equipment component leaks from natural gas processing plants, and fugitive emissions from well sites and gathering and boosting stations. For each source, the CTG document reviews the available control and regulatory approaches and considers the projected emissions reductions and costs for the available approaches.[42] EPA relied on a number of different sources to develop the CTG recommendations, including its 1983 CTG recommendations for VOC emissions from equipment leaks at natural gas processing plants; its 2012 and 2016 New Source Performance Standards ("NSPS") for control of VOC emissions from new and modified oil and gas sources and related technical support documents; existing state and local emission control approaches; and other available information about costs, emissions, and control technologies, including a number of EPA white papers.[43]

Many of EPA's CTG recommendations were similar to the control measures adopted by EPA in the 2012 and 2016 NSPS. As discussed in detail in Part IV.D.1, *infra*, EPA was nevertheless clear that its CTG RACT recommendations were based on a supporting analysis *separate* from the one used to develop the NSPS requirements. This analysis took into account that the sources covered by the CTG are existing, rather than new, sources, and it estimated the costs of available control approaches accordingly.

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[37] *See generally* 2015 Comments.
[38] *Id.* at 7–9.
[39] *Id.* at 9–10.
[40] *Id.* at 11–12.
[41] *Id.* at 12–13.
[42] EPA, Control Techniques Guidelines for the Oil and Natural Gas Industry 2-6 (2016) ("2016 CTG"), Docket ID: EPA-HQ-OAR-2015-0216-0236.
[43] *Id.* at 2-4 to -5.

Additionally, EPA carefully considered the cost-effectiveness of the recommendations it made in the CTG, noting in the final document that it "compared control options and estimated costs and emission impacts of multiple emission reduction options under consideration."[44] EPA ultimately made recommendations "for the subset of existing sources in the oil and natural gas industry where the application of controls is judged reasonable, given the availability of demonstrated control technologies, emission reductions that can be achieved, and the cost of control."[45]

The CTG were issued after thorough study of the problem of VOC emissions from oil and gas sources and the practicality and cost-effectiveness of available solutions, not to mention a robust public comment process. Given this history and the strong administrative record supporting the CTG, we urge EPA to retain them. Indeed, as we describe in more detail below, withdrawing the CTG would be arbitrary and capricious, contrary to the Agency's responsibility under the CAA, and would constitute a constructive denial of the petition submitted by many of the organizations signed on to these comments.

B. *The Clean Air Act Mandates that States Revise Their SIPs Whenever EPA Issues a New CTG*

CAA section 183(a) requires EPA to issue CTG for certain categories of stationary sources of VOC emissions. 42 U.S.C. § 7511b(a). Section 183(a) further authorizes EPA to "issue such additional control techniques guidelines as the Administrator deems necessary." *Id.* Furthermore, section 108(b)(1) of the CAA requires EPA to provide information about air pollution control techniques to the states and applicable air agencies. *Id.* § 7408(b)(1).

The publication of CTG triggers mandatory state action: CAA section 182 requires states to revise their SIPs to "include provisions to require the implementation of reasonably available control technology [("RACT")]" with respect to "[e]ach category of VOC sources in the area covered by a CTG document." *Id.* § 7511a(b)(2)(A) (covering moderate nonattainment areas); *id.* § 7511a(c), (d), (e) (incorporating moderate nonattainment area requirements into requirements for serious, severe, and extreme nonattainment areas). CAA section 184 extends this requirement to the Ozone Transport Region ("OTR"), obligating states in the OTR to submit a SIP or SIP revision requiring implementation of RACT with respect to all sources of VOCs in the state covered by CTG. *Id.* § 7511c(b)(1)(B). Thus, publication of the 2016 CTG triggered the CAA's requirement that states revise their SIPs to include VOC RACT provisions for oil and gas sources in moderate, serious, severe and extreme nonattainment areas and in the entirety of the OTR. Such revisions must be "submitted within the period set by the Administrator in issuing the relevant CTG document." *Id.* § 7511a(b)(2). The 2016 CTG took effect on October 27, 2016 and, in accordance with the timelines prescribed in CAA section 182(b)(2), granted affected states two years (until October 27, 2018) to submit their required SIP revisions for EPA approval. 81 Fed. Reg. at 74,799 ("The EPA is providing a 2-year period, from the [October 27, 2016]

[44] *Id.* at 3-5.

[45] *Id.; see also, e.g., id.* at 4-9 to -11 (examining cost data for use of vapor recovery unit ("VRU") to reduce emissions from storage vessels); *id.* at 4-13 to -16 (same for use of combustion devices); *id.* at 4-16 to -17 (same for use of VRU with combustion device as backup); *id.* at 4-20 to -22 (setting RACT recommendation based on cost considerations).

effective date included in this Notice, for the required SIP submittal."). Notably, states are free to propose their own approach for regulating oil and gas sources in nonattainment areas that differs from the CTG as long as the alternate approach is approved by EPA and consistent with RACT requirements.

C. *If the CTG Are Withdrawn, States Will No Longer Be Required to Revise SIPs by October 27, 2018, and Oil and Gas Sources in Non-Attainment Areas and the OTR Will No Longer Be Required to Implement RACT by January 1, 2021*

In addition to their October 27, 2018 deadline for SIP revision submissions, the CTG require that the approved RACT determinations for the oil and gas sources covered in each SIP revision be implemented as soon as practicable, but no later than January 1, 2021.[46]

Importantly, these requirements, their scope, and their timing are different from the regular SIP revision process. Independent of the CTG process, the CAA requires states with ozone nonattainment areas and those in the OTR to revise their SIPs to include plans for VOC (and NOx) reductions in order to attain the ozone NAAQS, 42 U.S.C. § 7511a(b)(1)(A), and to require the implementation of RACT for major sources, *id.* § 7502(c)(1).[47] However, the requirement that these states revise their SIPs and implement RACT *for the oil and gas sector in particular*, and the scope and timing of this requirement, come from EPA's publication of the 2016 CTG, which triggered sections 182 and 184 of the CAA, and *not* from the CAA's regular SIP revision process. One reason for this is because the oil and gas sources covered by the CTG are largely non-major.[48]

Indeed, there are critical differences between the process required by the 2016 CTG and the regular SIP revision process. As just discussed, the 2016 CTG require RACT specifically for oil and gas sources, many of which are non-major sources and thus, in the absence of the CTG, would not be subject to RACT through the regular RACT SIP revision process. 42 U.S.C. § 7511a(b)(2) (requiring RACT for all "major stationary sources of VOCs that are located in the area" in addition to those covered by a CTG). Accordingly, if the 2016 CTG were withdrawn, the standard SIP revision requirements for states with moderate and above nonattainment areas would no longer include a specific obligation that those states' mandatory SIP revisions include a RACT component for the oil and gas sector. 83 Fed. Reg. at 10,479 ("[T]he withdrawal of the CTG will relieve state, local, and tribal air agencies of the requirement to address RACT for non-

[46] Memorandum from Anna Marie Wood, Dir., Air Quality Policy Div., OAQPS, to Reg'l Air Div. Dirs. 1 (Oct. 20, 2016) ("2016 CTG RACT Memo"), Docket ID: EPA-HQ-OAR-2015-0216-0238 ("The emissions controls determined by the state to be RACT for sources covered by the Oil and Gas CTG must be implemented as soon as practicable, but in no case later than January 1, 2021.").

[47] CAA section 172(c)(1) requires nonattainment plans to "provide for the implementation of all reasonably available control measures . . . including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of *reasonably available control technology*." 42 U.S.C. § 7502(c)(1) (emphasis added).

[48] EPA's analysis of the avoided costs and foregone emission reductions that will result from a withdrawal of the CTG focuses on non-major sources only, with the emissions estimates the agency derives based only on consideration of non-major sources. EPA, Estimated Avoided Costs and Forgone Emission Reductions Associated with the Potential Withdrawal of the Control Techniques Guidelines for the Oil and Natural Gas Industry 4–5, 4 n.5 (Feb. 15, 2018) ("Withdrawal Memo"), Docket ID: EPA-HQ-OAR-2015-0216-0342.

major sources in this sector . . . ."). Similarly, as noted above, CAA section 184 requires areas in the OTR to implement "reasonably available control technology with respect to all sources of volatile organic compounds in the State *covered by a control techniques guideline*." 42 U.S.C. § 7511c(b)(1)(B) (emphasis added). Absent the CTG, non-major sources in the OTR would not be required to incorporate RACT for these sources into their SIPs.

Even if affected states *were* required to include RACT for oil and gas sources through the normal SIP revision process, those revisions would occur on a timeline that is considerably slower than the one specified under the CAA's CTG program. The 2016 CTG require states to revise their SIPs by October 27, 2018 and to implement RACT at covered oil and gas sources by January 1, 2021. The usual SIP revision process, however, would not require states to revise their SIPs until two years after designations for a revised NAAQS, which under EPA's current proposal for the 2015 ozone NAAQS would be April 30, 2020 for most areas. *See* 40 C.F.R. § 51.110(a)(6) (approach for 2008 ozone NAAQS implementation); 81 Fed Reg. 81,276, 81,280 (Nov. 17, 2016) (identical proposed approach for 2015 ozone NAAQS). And these reductions would not be implemented until January 1, 2023. *See id.* at 81,294.

EPA's current proposal to withdraw the CTG would thus have significant practical and legal consequences for states, oil and gas sources, and the public. If EPA withdraws the CTG, states will no longer have to revise their SIPs to designate RACT for oil and gas sources in non-attainment areas and the OTR by October 27, 2018, and covered oil and gas sources in those areas will no longer have to implement those RACT designations by January 1, 2021. The result will be additional pollution for the breathing public living in these affected areas beginning (at the latest) in January 2021. This is especially problematic for states facing deadlines to demonstrate attainment with the 2008 ozone NAAQS. States must demonstrate attainment in moderate areas by December 31, 2018, and attainment in serious areas by December 31, 2021. 77 Fed. Reg. 30,160, 30,167 (May 21, 2012). States may be counting on reductions attributable to implementation of the CTG RACT recommendations as part of their planning for demonstrating attainment by these deadlines.

III. Withdrawal of the CTG Will Have Significant On-the-Ground Emissions and Health Consequences

EPA's withdrawal of the CTG will allow for substantial increases in emissions of ozone-forming VOCs, toxic air pollution, and methane, which will result in harmful health effects in communities across the country and (in the case of methane) drive harmful climate change. Indeed, EPA's own assessment underscores the significant emissions that will result from the withdrawal, though EPA understates these emissions impacts in a number of important respects. Moreover, the Agency arbitrarily failed to consider, let alone assess, the health and other consequences associated with these additional emissions, instead focusing almost entirely on the cost savings to industry. We discuss each of these deficiencies in more detail below.

A. *EPA's Own Analysis Recognizes, but Understates, the Significant Emissions Impacts Associated with the Withdrawal of the CTG*

Along with the Agency's notice of proposed withdrawal, EPA provides two assessments of the likely emissions impacts of its action. In the first, the Agency assumes that states would fully adopt controls under the CTG, but would not adopt any such controls in response to the withdrawal.[49] The Agency also includes a second estimate, which purports to assess the impacts of the CTG withdrawal "across all industries" and assumes that, in non-attainment areas designated as moderate or higher, reductions otherwise attributable to the CTG could be delivered by other industrial sectors.[50] Table 1, below, sets forth EPA's estimates of the additional VOC, methane, and HAP emissions that will result from withdrawal of the CTG.

Table 1: EPA's Assessment of Annual Impacts from CTG Withdrawal[51]

	Foregone Emissions Reductions (TPY)	
	All Areas	**Excluding Nonattainment Areas Designated Moderate or Higher**
VOCs	64,200	15,900
Methane	199,700	58,200
HAPs	2,400	610

As a threshold matter, both of EPA's estimates demonstrate the significant, additional emissions that will result from the proposed withdrawal. Even so, both of the Agency's assessments likely understate the true impacts of the proposed withdrawal in important ways.

First, the emissions baseline EPA uses for its assessment significantly understates the true scope of smog-forming emissions from the oil and gas sector. Indeed, recent studies have found that traditional inventory approaches tend to underestimate hydrocarbon emissions.[52] While many of these studies focus on methane emissions, the same issues would apply to co-emitted VOCs. The National Academy of Sciences, Engineering, and Medicine recently published a report on methane issues that highlights the importance of using empirical, top-down data to verify the accuracy of emission inventories.[53]

[49] Withdrawal Memo at 2.
[50] *Id.*
[51] *Id.* at 4. EPA's estimate of foregone emission reductions under its first assessment is shown in the "All Areas" column, and EPA's estimate of foregone emission reductions under its second assessment is shown in the "Excluding Nonattainment Areas Designated Moderate or Higher Column." *See id.* at 3.
[52] Pétron, et al., (2014) "A New Look at Methane and Nonmethane Hydrocarbon Emissions from Oil and Natural Gas Operations in the Colorado Denver-Julesburg Basin, J. Geophys. Res. Atmos.,119, 6836–6852, doi:10.1002/2013JD021272, *available at* https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2013JD021272; Zavala-Araiza, et al., (2015), "Reconciling Divergent Estimates of Oil and Gas Methane Emissions," PNAS 112 (51) 15597-15602, doi: 10.1073/pnas.1522126112, *available at* http://www.pnas.org/content/112/51/15597.
[53] Nat'l Acads. of Scis., Eng'g, & Med., *Improving Characterization of Anthropogenic Methane Emissions in the United States* (2018).

The disparity is evident in areas that are covered by the CTG—either because they are located in the OTR or because of their nonattainment designation. For instance, EDF recently estimated oil and gas well pad emissions in Pennsylvania, a state located in the OTR, using empirical, site-level measurements data. VOC emissions from the oil and gas sector were *nine times higher* than inventory estimates for unconventional wells.[54] Studies assessing emissions in the Barnett Shale in Texas (part of the Dallas-Fort Worth nonattainment area) and other studies assessing VOC emissions on Colorado's Front Range have come to similar conclusions.[55] A study examining wintertime ozone formation in Utah's Uinta Basin, home to significant oil and gas development, found that modeling using EPA's National Emissions Inventory did not accurately simulate the high ozone concentrations observed in the Uinta Basin. The model required additional VOC inputs beyond EPA's emissions estimates in order to reproduce real-world conditions—suggesting that on-the-ground VOC emissions are higher than EPA estimates.[56]

Second, EPA's estimated impact of the CTG withdrawal through 2035 was based on a projected implementation of the *2008* ozone standard of 75 ppb. In 2015, however, EPA strengthened the national, health-based standard for ozone to 70 ppb and is under a court-ordered deadline to finalize non-attainment designations by April 30th of this year. Because EPA has adopted CTG for the oil and gas sector, these designations will require RACT SIP submittals in additional areas with unhealthy air quality and oil and gas development. Indeed, there are areas with oil and gas development that will be designated as nonattainment with the 2015 standard but are not out of attainment with the 2008 standard.[57] While the Agency has yet to establish RACT SIP submittal deadlines for the 2015 standard, EPA has proposed to require such submissions within two years of the effective date of the nonattainment designation, which would be the summer of 2020 for most areas. 81 Fed. Reg. at 81,280. Implementation of these controls would occur no later than January 1, 2023. *Id.* at 81,294 ("For CTGs in effect at the time of initial designations for a revised NAAQS, the EPA has interpreted the CAA provisions to require implementation of related RACT SIP revisions as expeditiously as practicable, but no later than January 1 of the fifth year after the effective date of the initial designations for the revised NAAQS."). Moreover, EPA is next required to review the ozone standards in 2020, and scientific evidence suggests that more protective standards are warranted.[58] Ultimately, EPA acted arbitrarily in failing to assess the impacts of the CTG withdrawal in light of the Agency's implementation of the more protective 2015 ozone standard and ongoing duty to review and revise the NAAQS.

EPA's, alternative, lower-bound estimate of the proposed withdrawal's foregone emissions reductions suffers from a number of additional flaws. First, and most importantly, if EPA

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[54] *Pennsylvania Oil and Gas Emissions Data: Air Toxics and Smog-Forming Pollution*, EDF.org, https://www.edf.org/pa-oil-gas/#/inventory (last visited Apr. 19, 2018).
[55] Zavala-Araiza, et al. (2015) (Barnett Shale); Pétron, et al. (2014) (Front Range).
[56] Ahmdaov, R., et al., (2015) "Understanding High Wintertime Ozone Pollution Events in an Oil- and Natural Gas-Producing Region of the Western US," Atmos. Chem. Phys, 15, 411–29, doi: 10.5194/acp-15-411-2015, *available at* https://www.atmos-chem-phys.net/15/411/2015/acp-15-411-2015.pdf.
[57] These counties include Duchesne, UT; Uintah, UT; St. Clair, MI; Wayne, MI; Macomb, MI; Monroe, MI; Muskegon, MI; Allegan, MI; Livingston, MI; Oakland, MI; and Washtenaw, MI.
[58] Letter from Dr. H. Christopher Frey, Chair, Clean Air Sci. Advisory Ctte., to Hon. Gina McCarthy, Adm'r, U.S. EPA (June 26, 2014).

withdraws the CTG, states will no longer be required to submit RACT SIPs in October 2018. Accordingly, emission reductions from the oil and gas sector that should have begun in 2021 based on these SIP submittals will no longer occur. Even if states were to adopt offsetting emission reductions from other source categories (as EPA's analysis assumes they will) through the normal SIP revision process for implementing the 2015 ozone standard, states will likely not be required to submit those SIP revisions until 2020 and to implement them by 2023. EPA's assumption of offsetting reductions in the preceding years is therefore baseless.

EPA's lower-bound estimate is also based on the fundamentally incorrect assumption that reductions across industries are fungible and that other sectors will fill the gap left by the withdrawal of the CTG. As an initial matter, there may not be sufficient opportunities for emission reductions from other sources, particularly in areas where oil and gas sources significantly contribute to ozone formation, and emissions from other sectors may not contribute to ozone formation in the same manner as oil and gas sector emissions. For instance, a recent study in Colorado found that oil and gas emissions could contribute between 20–30 ppb to overall ozone concentrations and that these sources were the primary driver of ozone pollution on days that exceeded the EPA standards.[59] EPA has provided no evidence that VOC reductions from other industrial source categories would compensate for foregone reductions from the oil and gas sector in areas such as this.

Even if reductions from other source categories are theoretically available, EPA wrongly assumes that they are, in all respects, identical. For instance, along with VOCs, the oil and gas sector emits toxic air pollutants, like benzene, as well as methane, a potent climate forcer. If states were to pursue alternative sources of VOC reductions, methane and HAP emissions from the oil and gas sector would persist, with harmful effects for nearby communities.[60] Finally, while EPA takes pains to assess the cost-savings to the oil and gas sector on account of its proposed repeal, it incorrectly assumes—without any substantiation—that other sectors will be able to secure the needed reductions for identical costs. The CTG are highly cost-effective and will deliver VOC reductions for approximately $1,200 per ton,[61] while states like Pennsylvania have presumptive RACT levels five times more expensive—anywhere from $5,500–7,000 per ton of VOCs reduced.[62] EPA has made no demonstration that compensating reductions from other sectors could be achieved at equal or lesser cost to the methods in the CTG it proposes to withdraw.

Ultimately, while EPA's analysis recognizes that the agency's proposed repeal of the CTG will result in additional pollution, it understates the likely scope and impacts of that pollution in a number of ways that render the analysis arbitrary and unreliable.

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[59] Cheadle, et al. (2017).
[60] *See* McKenzie, et al. (2018).
[61] Calculated using Withdrawal Memo at 7 tbl.2 (total annualized costs with product recovery divided by VOC emissions reductions).
[62] Penn. Dep't of Envtl. Prot., *Responses to Frequently Asked Questions: Final Rulemaking: Additional RACT Requirements for Major Sources of NO_x and VOCs* 12 (Oct. 20, 2016).

B. *EPA Failed to Consider the Significant Health and Climate Consequences Associated with these Emissions*

While EPA presented (flawed) estimates of the quantity of additional emissions that would occur in the absence of the CTG, the Agency did not consider the health impacts of that additional pollution. This omission is especially troubling given that the purpose of the CAA's NAAQS program, including the CTG, is to protect public health. *See* 42 U.S.C. § 7409(b) ("National primary ambient air quality standards . . . shall be ambient air quality standards the attainment and maintenance of which . . . *are requisite to protect the public health*." (emphasis added)).

We calculated the number of people living in counties with at least one CTG-affected well, who would face higher public health risks if the CTG were withdrawn. Our analysis used information from DrillingInfo and population data from the 2011–2015 American Community Survey at the Census Tract Level. Table 2, below, includes this population information.[63]

Table 2: Number of People Living in Counties with a CTG-Affected Well

State	People living in counties with at least one CTG-affected well
CA	23,983,334
CO	3,886,546
MD	58,248
PA	6,637,876
NY	322,813
TX	14,840,354
Total	**49,729,171**
Total without CO and CA[64]	**21,859,291**

CATF's *Gasping for Breath* report quantified the health impacts of ozone-forming pollution from the oil and gas sector, finding that nationally, these emissions would lead to more than 750,000 additional summertime asthma attacks in children under the age of 18; more than 2,000 additional asthma-related emergency room visits, and over 600 additional respiratory-related hospital admissions nationally due to ozone resulting from oil and gas pollution.[65] The report projects similarly significant impacts in areas covered by the CTG. For instance, the analysis reports that oil and gas emissions will lead to more than 30,000 additional summertime asthma

[63] For this analysis, we only selected wells that had active production in 2016. To calculate populations within a specified distance of a well, we make the assumption that populations are evenly distributed across the entire land-area of the tract.

[64] Colorado and California are omitted because these states already have mandatory state-level emission controls for existing oil and gas infrastructure. In fact, Colorado recently updated its existing source program in light of the CTG.

[65] CATF, *Gasping for Breath*.

attacks in children under the age of 18 and more than 22,000 additional missed school days each year in Pennsylvania.[66]

A 2012 study found that individuals living within one-half mile from natural gas development are at greater risk for negative health effects, including cancer, than individuals living more than one-half mile from a well.[67] A recent 2018 study in Colorado found that communities living in close proximity to oil and gas activity had higher measured HAP exposures and face increased risks to their health, including a heightened risk of cancer. [68] The study found that the lifetime cancer risk was 8.3 per 10,000 people for populations living within 152 meters of oil and gas activity, above EPA's allowable risk. The study also found elevated levels of acute and chronic blood system and developmental risks, and acute nervous system risks for the same population. Benzene exposures contributed to 80 to 95% of risks across the different health effects. Using the same methodology described above, Table 3 identifies the number of people living within one-half mile and 152 meters of a CTG-affected well.

Table 3: People Living Within ½ Mile and 152 Meters of a CTG-Affected Well

State	People living within 1/2 mile of CTG-affected well	People living within 152 meters of a CTG-affected well
PA	1,248,270	189,796
TX	1,337,401	93,668
CA	825,037	104,878
CO	282,648	49,506
Total	**3,693,357**	**437,847**
Total without CO and CA	**2,585,672**	**283,463**

Finally, EPA arbitrarily failed to monetize the foregone benefits of methane reductions using the social cost of methane. Using the Interagency Working Group's value for the social cost of methane ($1440 for year 2020 emission in 2017$) and discounting back to present value (at 3% discount rate), just three years' worth of emissions under the proposed withdrawal will generate climate damages of nearly three-quarters of a billion dollars. Several of the commenters here have submitted separate, detailed comments on the social cost of methane. Here, we underscore that EPA's failure to consider the climate impacts associated with the withdrawal is arbitrary and capricious.

Thus, while EPA failed to assess the health and climate impacts of its proposed CTG withdrawal, publicly available data and analysis makes clear that millions of residents living near oil and gas development will be affected by the proposal, facing an increased risk of respiratory ailments,

[66] *Id.*
[67] McKenzie, L., et al., (2012) "Human Health Risk Assessment of Air Emissions from Development of Unconventional Natural Gas Resources, Sci. Total Environ. 424: 79–87, doi: 10.1016/j.scitotenv.2012.02.018, *available at* https://www.ncbi.nlm.nih.gov/pubmed/22444058.
[68] McKenzie, et al. (2018).

cancer, and other health conditions, and that the proposal will likewise result in significant climate damages.

IV. Withdrawal of the CTG is Arbitrary, Capricious, and Contrary to Law

A. *EPA's Proposed Withdrawal Is Arbitrary, Capricious, and Contrary to Law Because the Agency's Reasons for the Withdrawal Are Not Grounded in the CAA*

EPA's proposed withdrawal of the CTG is arbitrary, capricious, and contrary to law for a number of reasons. First, the only reasons the Agency has articulated in support of the proposed withdrawal are not grounded in the CAA. In all cases, "EPA must ground its reasons for action or inaction in the statute." *Massachusetts v. EPA*, 549 U.S. 497, 535 (2007). Here, the statute requires EPA to work towards "the statutory goal of timely attainment of the NAAQS." *Nat. Res. Def. Council v. EPA*, 571 F.3d 1245, 1255 (D.C. Cir. 2009). To that end, it authorizes EPA to issue CTG for VOC sources, and requires the Agency to prioritize those source categories that "make the most significant contribution to the formation of ozone air pollution." 42 U.S.C. § 7511b(a), (b)(2).

But the proposed withdrawal is not consistent with these purposes—indeed, it makes no reference to them at all. EPA has not assessed the impact that withdrawing the CTG will have on timely attainment of the NAAQS. *Cf. Nat. Res. Def. Council*, 571 F.3d at 1252–53. Moreover, in the context of either strengthening or weakening a NAAQS,[69] the Act prohibits EPA from removing protections that would otherwise apply in nonattainment areas. *See* 42 U.S.C. § 7502(e) ("If the Administrator relaxes a national primary ambient air quality standard after November 15, 1990, the Administrator shall, within 12 months after the relaxation, promulgate requirements applicable to all areas which have not attained that standard as of the date of such relaxation. Such requirements shall provide for controls which are not less stringent than the controls applicable to areas designated nonattainment before such relaxation."); *see also S. Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882, 900 (D.C. Cir. 2006) (noting "[t]he Act placed states onto a one-way street whose only outlet is attainment" and so EPA's interpretation applying 172(e) anti-backsliding to actions strengthening the NAAQS is "consistent with Congress's expressed intent and therefore is reasonable."). Nor has the agency demonstrated (nor could it) that the oil and gas sector is no longer a significant contributor to ozone formation. *See* 42 U.S.C. § 7511b(b)(2).

Instead, EPA has offered one brief "reason[] not to regulate." *Massachusetts*, 549 U.S. at 533. Specifically, it suggests that the 2016 CTG should be withdrawn because the agency is reconsidering the 2016 NSPS, with which the CTG share "certain key pieces of data and information." 83 Fed. Reg. at 10,479. This slim justification is not grounded in the statute—it does not speak to whether emissions from the oil and gas sector contribute significantly to ozone formation, and whether these emissions can be reduced through the application of "reasonably available control technology." EPA likewise has not explained how its proposal—which the Agency itself concedes will result in additional emissions—is consistent with the Act's strict

[69] EPA is contemporaneously finalizing a parallel rule implementing the strengthened 2015 ozone standard.

prohibition against backsliding. EPA's cursory reason offered in support of the withdrawal is not grounded in the Agency's statutory authority and is therefore unlawful. *See Massachusetts*, 549 U.S. at 535.

B. *Withdrawal of the CTG Would Be a Constructive Denial of the 2012 Petition to Issue CTG, Without Adequately Responding to the Petition*

The 2012 petition, submitted to EPA by many of the undersigned organizations, requested that the Agency issue CTG for oil and gas operations in ozone non-attainment areas.[70] The petition cited numerous studies to demonstrate the need for pollution control measures to reduce ozone and protect human health, and it set forth EPA's legal authority to issue CTG for the oil and gas sector. Withdrawal of the CTG would constitute a constructive denial of the 2012 Petition. EPA's stated reason for the withdrawal is simply that it is reconsidering the 2016 NSPS—a reason entirely disconnected from the need for and purpose of the CTG, as discussed in more detail below. Denying the 2012 Petition in this fashion without any response to the concerns and arguments raised in the petition would be arbitrary and capricious. *Cf. Massachusetts*, 549 U.S. at 534 (holding that EPA's denial of petition for rulemaking was arbitrary, capricious, or otherwise not in accordance with law where EPA offered "no reasoned explanation for its refusal to decide" the issue). Specifically, a denial of the 2012 Petition through withdrawal of the CTG would fail to address: the need to reduce VOC emissions from the oil and gas sector in order to prevent ozone pollution and protect public health in areas already suffering from increased levels of such pollution; the way in which the CAA framework expects EPA to issue CTG to address this issue; states' need for EPA's guidance on technology the agency considers RACT for source of VOCs in the oil and gas sector; and the common-sense, widespread availability, and cost-effective nature of technologies to reduce VOC emissions.[71]

C. *Withdrawal of the CTG is Arbitrary and Capricious Because It Does Not Account for the Experiences of States and Other Entities that Have Already Made Regulatory and Policy Changes in Response to the CTG*

EPA's proposed withdrawal is also arbitrary and capricious because it fails to address the actions of states and other affected parties that have already taken measures to implement the CTG. The experiences of these states and other entities belie EPA's assertion that implementing the CTG would be in any way unreasonable and inefficient.

For example, the state of Colorado adopted the CTG's recommendations for VOC emissions from existing oil and gas sources in 2017. Despite Colorado's great strides in improving air quality over the past few decades, ozone remains a serious problem in the state, and its adoption of the CTG was an important effort towards addressing the ozone problem. The CTG now apply in Colorado's Denver Metro/North Front Range ozone nonattainment area, which consists of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, and parts of Larimer and Weld counties.

[70] *See generally* 2012 Petition.
[71] 2012 Petition at 4–13, 25–29.

The CTG were adopted by Colorado's Air Quality Control Commission ("AQCC") following a multi-month collaborative stakeholder process. Participants in the rulemaking included a wide range of oil and gas companies operating in Colorado, both large and small, as well as many oil and gas trade associations. None of these oil companies or trade associations objected to the adoption of the CTG in Colorado before the AQCC, underscoring the reasonable, cost-effective nature of these measures, particularly in non-attainment areas.

Consistent with state law, Colorado's Air Pollution Control Division ("APCD") completed an Economic Impact Analysis when the state adopted the CTG.[72] This analysis reviewed each element of the CTG that was adopted in Colorado and found them to be cost-effective.[73] In fact, in numerous instances, the APCD determined that any incremental costs resulting from the CTG recommendations "are likely minimal," and that some of the controls would pay for themselves immediately or in a period as short as three months.[74] The APCD concluded that implementation of the CTG "may result in positive economic impacts" to supporting businesses, including those providing services and equipment to support the regulations.[75] Colorado's experience demonstrates that the CTG are sound measures that should not be repealed or weakened. Conversely, EPA's failure to consider the effective deployment of the CTG in Colorado, as well as the underlying analysis that supports the state's action, is manifestly arbitrary and capricious. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S 29, 43 (1983) ("[A]n agency rule would be arbitrary and capricious if the agency has . . . entirely failed to consider an important aspect of the problem . . . .").

As Colorado has demonstrated, states are using the CTG to effect changes in state regulations and policy. And industry makes decisions in tandem with or as a result of those regulatory and policy changes. Withdrawal of the CTG yet again increases rather than decreases uncertainty for other state planners who may have been relying on the reductions delivered by the CTG (and its supporting analysis). *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009) (explaining that an agency departing from a prior policy must "provide a more detailed justification" when "its prior policy has engendered serious reliance interests that must be taken into account"); *see also Encino Motorcars, LLC v. Navarro*, 136 S. Ct. 2117, 2126 (2016) ("In explaining its changed position, an agency must also be cognizant that longstanding policies may have 'engendered certain reliance interests that must be taken into account.'"). As we describe more fully below, EPA has provided no legally cognizable explanation to support its reversal, let alone the considered explanation required when an agency reverses course.

Though some states, such as Colorado, are successfully incorporating the CTG into state regulatory requirements, existing state standards alone are not sufficient to address the problem of VOC emissions from the oil and gas sector. For example, with the CTG in place, *all* oil-and-gas sector sources of VOC emissions in Pennsylvania will be required to implement RACT. And the CTG will require Texas to establish far more stringent standards than currently apply in nonattainment areas. Thus, the CTG remain critical for securing reductions in smog-forming VOC emissions, and it would be arbitrary and capricious for EPA to withdraw the CTG based on

[72] Colo. Air Pollution Control Div., Economic Impact Analysis (Final) for Regulation 7, Sections II., XII., XVII., XVIII. (Oct. 2017).
[73] *Id.* at 22.
[74] *Id.* at 21–22.
[75] *Id.*

the flawed assumption that state standards will fill the regulatory gap.

D. *It Is Arbitrary and Capricious for EPA to Justify Withdrawing the CTG in Their Entirety Based Solely on Reconsideration of the 2016 NSPS*

EPA justifies its proposed withdrawal of the CTG based on the fact that it is reconsidering the 2016 NSPS and the CTG recommendations are "fundamentally linked to the conclusions in the 2016 NSPS." 83 Fed. Reg. at 10,478. As EPA notes in the Proposed Withdrawal, on June 3, 2017, the Agency issued a notice of reconsideration ("Reconsideration Notice") announcing its intent to revisit four aspects of the 2016 NSPS: (1) the applicability of fugitive emissions requirements to low production well sites; (2) the process and criteria for requesting and receiving approval for the use of an alternative means of emission limitations ("AMEL") for purposes of complying with the fugitive emissions requirements; (3) the requirements for certification of a closed vent system by a professional engineer; and (4) the well site pneumatic pump standards. 82 Fed. Reg. 25,730, 25,731 (June 5, 2017). EPA also stated its general "inten[t] to look broadly at the entire 2016 [NSPS]," without offering any detail as to the justification for that broader review or specific issues it would implicate. *Id.* On the basis of this nascent reconsideration and its purported linkage to the CTG, EPA concludes that it would be "prudent to withdraw the CTG in its entirety." 83 Fed. Reg. at 10,478.

This justification provides yet another reason why EPA's withdrawal proposal is arbitrary and capricious. As we discuss below, the mere fact that EPA is reconsidering a *different* regulation for the oil and gas sector under a *different* provision of the CAA, which covers a *different* universe of affected sources under a *different* standard is a wholly inadequate justification for eliminating the CTG in their entirety.

1. <u>EPA developed the CTG RACT recommendations after evaluating various sources, and the Agency previously rejected claims that the 2016 NSPS and CTG were inextricably linked</u>

EPA's justification for withdrawing the CTG is fundamentally at odds with the Agency's prior conclusion that the CTG were *not* inextricably linked to the NSPS. For instance, in the final CTG document, EPA identified the wide-ranging list of sources and documents it considered when developing its recommendations. These include EPA's 1983 CTG recommendations for VOC emissions from equipment leaks from natural gas processing plants; the 2012 and 2016 NSPS and four TSDs prepared in support of the NSPS; existing state and local VOC emission reduction approaches; a number of EPA technical white papers regarding emissions and mitigation techniques that target methane and VOC; data from the Greenhouse Gas Reporting Program and the Inventory of U.S. Greenhouse Gas Emissions and Sinks; and other information on costs, emissions, and available VOC emission control technologies. 2016 CTG at 2-4 to -6; *see also* 81 Fed. Reg. at 74,799. All of these diverse sources were helpful *analytical* precedents that EPA referred to in developing the CTG, but none of them—including the 2016 NSPS—were in any way *legal* predicates for the CTG. The notion that the NSPS (or any of these sources) is somehow *necessary* for the continued existence and implementation of the CTG, either as a legal or policy matter, is flatly wrong.

EPA's response to comments on the draft CTG further underscores its earlier conclusion that those guidelines were separate and distinct recommendations from the measures adopted in the 2016 NSPS. Commenters had objected that EPA had inappropriately concluded that its designations of the best system of emissions reduction for the oil and gas sector (the standard of control required for the NSPS under CAA section 111), on the one hand, and its recommendations for RACT in the CTG, on the other hand, are equivalent, and that EPA needed to "re-evaluate RACT based on the appropriate criteria and re-issue the draft CTG based on these appropriately conducted analyses."[76] In response, EPA affirmed that:

> [S]everal of the draft RACT recommendations are similar to what is included as BSER in subparts OOOO and OOOOa. However, contrary to the commenter's assertions, the EPA did not simply import the NSPS standards into the CTG. Although we recommended RACT based on analyses that used similar inputs, we considered different criteria for our RACT recommendations that took into account that the sources are existing and not new sources. The RACT recommendations included in the CTG are based on a separate supporting analysis.[77]

EPA went on to describe the procedure by which it developed the CTG recommendations, including the many ways in which its analysis was independent from the 2016 NSPS. For example, in developing RACT, EPA considered factors specific to existing rather than new sources, such as retrofit cost adjustments.[78]

An EPA memorandum to its Regional Air Division Directors regarding RACT implementation for sources covered by the 2016 CTG further affirms that the CTG's RACT recommendations and the NSPS are not interchangeable: "The EPA has not made a determination that the NSPS (40 CFR part 60, subpart OOOOa), which differs from the 2016 Oil and Gas CTG in several respects, is presumptively RACT."[79] EPA explained that if "the air agency believes the NSPS establish RACT-level controls for one or more sources, the air agency may submit those rules as a SIP revision," which EPA would then evaluate through the SIP revision process.[80]

Accordingly, EPA's conclusion in the proposed withdrawal that the NSPS and CTG are "fundamentally linked" is arbitrary and capricious—both because that conclusion is not supported by the record, and because EPA has entirely failed to explain the Agency's departure from its earlier finding, which came to the opposite conclusion.

[76] EPA, *Responses to Public Comments on the* Draft Control Techniques Guidelines for the Oil and Natural Gas Industry 1–2 (October 2016) ("CTG RTC"), Docket ID: EPA-HQ-OAR-2015-0216-0235; *see also id.* at 4–11.
[77] *Id.*
[78] *Id.* at 2–3.
[79] 2016 CTG RACT Memo at Attachment at 2.
[80] *Id.*

2. It is arbitrary and capricious for EPA to withdraw the CTG's RACT recommendations based on the 2012 NSPS when EPA is not reconsidering the 2012 NSPS

As explained above, EPA's rationale for withdrawing the CTG—the fact that it is reconsidering the 2016 oil and gas NSPS—is functionally and legally flawed: the CTG and 2016 NSPS are independent regulations resting on independent records and analysis, and the mere reconsideration of one may not in itself provide a basis for withdrawing the other. But even by its own internal logic, EPA's argument is wrong with respect to those aspects of the CTG that run parallel to the 2012 NSPS, since EPA is not reconsidering that regulation.[81] Of the six oil and gas sources for which the CTG included RACT recommendations to control VOC emissions, *four* of those sources—storage vessels, compressors, pneumatic controllers, and equipment leaks from natural gas processing plants—were covered under the 2012 NSPS, and EPA used the TSDs for that rule to inform its RACT recommendations. 83 Fed. Reg. at 10,478. Only two sets of RACT recommendations—for pneumatic pumps and for fugitive emissions from well sites and compressor stations—referred to the 2016 NSPS TSDs. *Id.* Even if the CTG were "linked" to the 2016 NSPS as EPA asserts—and they are not, as discussed in Part IV.D.1, *supra*, it would still be arbitrary and capricious for EPA to withdraw the entire suite of CTG RACT recommendations based on a reconsideration that implicates *at most* only two of the six covered source categories.

EPA's proposal is particularly concerning given that nearly *two-thirds* of the additional annual VOC emissions that it estimates will result from a withdrawal will be from the four sources that were covered under the 2012 NSPS. This is demonstrated in Table 4.

Table 4: Foregone VOC Emission Reductions by Source Category[82]

Source Category	**Foregone VOC Emission Reductions (short tons per year)**
Sources Covered Under 2012 NSPS	
Storage Vessels	12,100
Compressors	13,100
Pneumatic Controllers	15,204
Equipment leaks from natural gas processing plants	310
Total	**40,714 (63.3%)**
Sources Covered Under 2016 NSPS	
Pneumatic Pumps	10,700
Fugitive Emissions	12,870
Total	**23,570 (36.7%)**

[81] In fact, in August 2016, EPA denied the remaining petitions for reconsideration of the 2012 NSPS pending before the Agency. 81 Fed. Reg. 52,778, 52,778–89 (Aug. 10, 2016).
[82] Calculated using Withdrawal Memo at 19 tbl.A.6.

EPA believes withdrawal of the CTG in their entirety is nevertheless prudent because "it is more efficient for states not to be required to revise their SIPs to comply with aspects pertaining to the 2012 NSPS and then potentially have to revise their SIPs again after reconsideration of the 2016 NSPS." 83 Fed. Reg. at 10,479. This assertion betrays a deep misunderstanding of the CAA. While EPA may have referred to the technical findings and analysis from the NSPS in developing the CTG, the two regulations *are not otherwise linked*. Any change that EPA might make to either the 2012 or 2016 NSPS would have no effect on the CTG, and states would not be required to resubmit their SIPs in response to such a change. Only if EPA were to *re-issue* the CTG after its 2016 NSPS reconsideration would states have to take any action to update their SIPs, but the agency notably nowhere commits to such an action.

In any event, EPA's apparent desire to make the SIP revision process "more efficient" for states conflicts with its prior findings supporting the adoption of the CTG, which identified streamlined pathways available to states making multiple RACT SIP submissions. Indeed, when adopting the CTG, EPA rejected claims that two sets of SIP submission deadlines—one to implement the 2008 standard and the second to implement the 2015 standard—would be overly burdensome.[83]

Courts have made clear that "efficiency" is not a valid basis for removing protections designed to help ensure states are able to meet the NAAQS. *South Coast*, 472 F.3d at 903 ("[S]ection 172(e) does not condition its strict distaste for backsliding on EPA's determinations of expediency."). And withdrawing the CTG does not even advance the cause of efficiency. EPA "developed th[e] CTG document to provide air agencies information to assist them in determining what types of control could constitute RACT for VOC emissions from select oil and natural gas sources." 81 Fed. Reg. at 74,798–99. In formulating these RACT recommendations, "EPA evaluated the sources of VOC emissions from the oil and natural gas industry and the available control approaches for addressing these emissions, including the costs of such approaches." *Id.* at 74,799. Withdrawing those recommendations simply does not provide any greater efficiency to states as they develop strategies for reducing ozone in non-attainment areas. Accordingly, withdrawing the CTG based on purported efficiency concerns would be arbitrary and capricious and contrary to law. *See* Part IV.A, *supra*; *Massachusetts*, 549 U.S. at 535 ("EPA must ground its reasons for action or inaction in the statute.").

Additionally, it is worth noting that retaining, not removing, the CTG enhances efficiency for state air quality planners because the CTG include EPA's presumptive RACT determinations and supporting analyses—obviating the need for states to independently complete these analyses. States may find they can best and most efficiently protect the health of their citizens from harmful air pollution by adopting the recommendations EPA has identified as presumptive RACT in the CTG.

[83] CTG RTC at 40 ("After review, if the state concludes that the recent prior determinations have not changed, the state's SIP submission could consist of a RACT certification letter for the 2015 standard attesting that the state's SIP already contains adequate RACT for the sources covered by the Oil and Natural Gas Industry CTG.").

3. EPA specifically considered and rejected claims that ongoing reconsideration of the NSPS should delay adoption of the CTG, and offers no reason or explanation for its reversal of position here

During the comment period for the CTG, some stakeholders alleged that it would be premature for EPA to finalize the CTG recommendations before it finalized the 2016 NSPS and before it responded to petitions for reconsideration of the 2012 NSPS.[84] For example, one commenter noted that it was "possible that EPA [would] make additional changes to the Subpart OOOO standards as the agency continues to address outstanding issues raised by pending petitions for reconsideration."[85] In response, EPA stated that "those issues are separate and distinct from our recommended RACT for sources covered under the CTG."[86] Another commenter urged EPA to "pause its process on the CTGs until after the Subpart OOOO and Subpart OOOOa regulations are no longer subject to revision, and at that time provide a second comment period on the revised CTGs."[87] EPA roundly rejected this proposal: "The EPA does not agree that the CTG process should be halted until after the subpart OOOO and subpart OOOOa regulations are no longer subject to revision."[88] EPA's position that any uncertainty about the final subpart OOOO and OOOOa regulations should not affect finalization of the CTG was quite clear in 2016. EPA has now reached the opposite conclusion without any explanation, a hallmark of arbitrary and capricious agency action. *State Farm*, 463 U.S at 52 (explaining that an agency rescinding a regulation "must explain the evidence which is available, and must offer a 'rational connection between the facts found and the choices made'" (citation omitted)).

4. The reasons EPA has provided for reconsidering the 2016 NSPS do not apply to the CTG

As we describe above, there are a number of ways in which EPA's ongoing reconsideration of the 2016 NSPS provides no basis for its proposal to withdraw the CTG in their entirety. Moreover, the specific issues EPA has identified for reconsideration often have no analogue in the CTG, and the Agency draws no connection between its broad intent to reconsider the NSPS and its action to withdraw the CTG.[89]

[84] *E.g.*, CTG RTC at 6–7.
[85] *Id.* at 6.
[86] *Id.* at 7.
[87] *Id.* at 335.
[88] *Id.*
[89] Even if EPA could, by implication, claim that it is reconsidering aspects of the CTG and that reconsideration supports the CTG withdrawal, such a claim would violate CAA section 307(d)(7)(B). *See* § 42 U.S.C. § 7607(d)(7)(B) (setting forth standard for mandatory reconsideration of agency rule and noting that although "reconsideration shall not postpone the effectiveness of the rule[, t]he effectiveness of the rule may be stayed during such reconsideration . . . by the Administrator or the court for a period not to exceed three months"). Indeed, that provision underscores that reconsideration shall not postpone the effectiveness of a rule, providing only a limited exception for a 3-month stay if certain, mandatory reconsideration issues are met. *See Clean Air Council v. Pruitt*, 862 F.3d 1 (D.C. Cir. 2017). Here, in violation of section 307(d)(7)(B), EPA has proposed to use the mere fact of reconsideration (even if arguably applicable to the CTG) as a justification for its far more sweeping proposal to withdraw the guidelines in their entirety.

For instance, as explained above, the Reconsideration Notice is focused on several discrete issues. With respect to the applicability of fugitive emissions requirements to low production well sites, EPA granted reconsideration because its proposal would have exempted those wells from fugitive emissions requirements, but the final rule required those wells to comply based on information and a rationale that allegedly was not presented for public comment. 82 Fed. Reg. at 25,731. EPA concluded that reconsideration was justified because it was impracticable for interested parties to submit timely comment on its rationale for regulation. *Id.* However, despite the urging of many of the undersigned organizations in the 2015 Comments,[90] EPA *did not include* guidelines for emissions monitoring for low-producing wells in the CTG.[91] There is accordingly no connection between reconsideration of the 2016 NSPS requirement to monitor fugitive emissions from low-production wells and the CTG, which did *not* require low-production wells to conduct monitoring.

Similarly, while the Reconsideration Notice alleges reconsideration of the 2016 NSPS to be necessary because EPA added the AMEL provisions for reducing fugitive emissions to the final rule without proposing them for notice and comment, and because the petitions for reconsideration received by EPA "suggest that sources may have difficulty understanding and applying for AMEL," 82 Fed. Reg. at 25,731, the CTG do not contain corresponding AMEL provisions. Nor is there reason for the CTG to contain AMEL provisions—as explained above, the CTG are guidelines that trigger a process through which states may adopt EPA's RACT recommendations, but are also permitted to implement alternative methods, so long as the state's plan is approved by EPA and is consistent with RACT requirements. The 2016 NSPS fugitive emission AMEL provision permits owners or operators to "submit a request to the EPA" to use an "innovative technology" that "has been demonstrated to achieve a reduction in emissions at least equivalent to the reduction in emission achieved under the work practice or operational requirements for reducing fugitive emissions . . . in subpart OOOOa." 81 Fed. Reg. 35,824, 35,861 (June 3, 2016). The case-by-case, state- and source-specific RACT determination process is designed to allow states to consider such innovative technology. *See Nat. Res. Def. Council*, 571 F.3d at 1253–55 (EPA was not required to update CTG to reflect new control technology because "EPA's case-by-case approach adequately ensures that RACT determinations will take into account advances in technology"). The reconsideration of the 2016 NSPS AMEL provisions thus has no bearing on the CTG, and cannot be a valid reason for withdrawing the CTG.

While EPA's third and fourth reconsideration issues—both related to professional engineering certification for certain pieces of equipment—do have analogues in the CTG, the same reasons EPA initially provided for rejecting reconsideration as a valid basis for delaying adoption of the CTG apply with equal force to these issues. In particular, states may adopt alternative approaches that are consistent with their RACT obligations, which EPA explicitly recognized in guidelines

[90] 2015 Comments at 12 (urging EPA to remove exemption for wells that produce less than 15 BOE/d from final CTG).

[91] CTG RTC at 163–64; *id.* at 159–60 ("[A]s we are still working on a RACT recommendation, and welcome input from stakeholders, low production wells are not covered in this final CTG."); *see also* 2016 CTG at 9-1 ("For purposes of this CTG, the emissions and programs to control emissions discussed herein would apply to the collection of fugitive emissions components at well sites with an average production of greater than 15 barrel equivalents per well per day . . . .").

for these sources: "Although we include model rule language for closed vent systems, control devices, and performance tests (that apply across several model rule requirements for sources), it is acknowledged that states may have existing similar language in their programs that they may want to use in lieu of the model language provided."[92] In any event, these discrete reconsideration issues do not (and could not) justify the wholesale withdrawal of the CTG. For example, (though we do not concede it would be justified)[93] EPA could have proposed to withdraw only the professional engineer certification requirements in the CTG. An agency action withdrawing a regulation is arbitrary and capricious if the agency does not consider reasonable and less drastic alternatives. *State Farm,* 463 U.S. at 51 (finding it was arbitrary for NHTSA to withdraw a passive restraint standard in its entirety without considering the alternative of withdrawing a portion of the standard relating to automatic seatbelts and preserving airbag requirements).

The reasons EPA has given for reconsidering the 2016 NSPS do not apply to the CTG, and it is therefore arbitrary and capricious for EPA to withdraw the CTG in their entirety based on that unrelated reconsideration. The Administrator has failed to offer a "rational connection between the facts found and the choice made." *Id.* at 53.

5. Withdrawing the CTG while EPA is still in the process of reconsidering the 2016 NSPS is unwarranted

Despite stating in the Reconsideration Notice for the 2016 NSPS that it would "prepare a notice of proposed rulemaking that will provide the petitioners and the public an opportunity to comment on the rule requirements and associated issues," 82 Fed. Reg. at 25,732. EPA has yet to issue any such notice.[94] It is in no way clear what outcome EPA will reach after considering the issues specifically identified in the Reconsideration Notice, or how long the reconsideration will take. And it is likewise a mystery what additional issues EPA will address while "look[ing] broadly at the entire 2016 [NSPS]." 82 Fed. Reg. at 25,732. It is therefore arbitrary and capricious for EPA to determine based on the mere fact of reconsideration, without yet reaching any conclusion in that process, that reconsideration will render it prudent to withdraw the CTG in their entirety. *See Public Citizen v. Steed,* 733 F.2d 93, 105 (D.C. Cir. 1984) (holding that agency's "indefinite suspension" of program was arbitrary and capricious where agency "did not 'cogently explain' why suspension was necessary when the old system could have been retained while improvements were developed." (citation omitted)); *see also Clean Air Council v. Pruitt,* 862 F.3d 1, 14 (D.C. Cir. 2017) (concluding that agency reconsideration of final rule was not

[92] 2016 CTG at App.: ii.
[93] *See* note 89, *supra*.
[94] EPA has issued two proposals to stay certain of the 2016 NSPS requirements pending its reconsideration. Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources: Stay of Certain Requirements, 82 Fed. Reg. 27,645 (June 16, 2017); Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources: Three Month Stay of Certain Requirements, 82 Fed. Reg. 27,641 (June 16, 2017). But EPA specifically noted in those proposals that it was only seeking comment pertaining to the stay and that it was "not taking comment at this time on substantive issues concerning these requirements, or on any of the other provisions subject to reconsideration." 82 Fed. Reg. at 27,645; 82 Fed. Reg. at 27,641.

required under the statute, and therefore that agency stay of final rule pending reconsideration was arbitrary, capricious, and in excess of statutory authority).

The Proposed Withdrawal does not even attempt to explain why the mere fact of reconsideration means that immediate withdrawal is warranted. And the facts suggest that the opposite should be true: in the Proposed Withdrawal, EPA states that "[d]uring the time the EPA anticipates taking to complete the reconsideration of the 2016 NSPS, states would not have had to fully implement any new CTG-based RACT determinations for oil and gas sources." 83 Fed. Reg. at 10,479. The Agency's conclusion that it must withdraw the CTG *now*, when the outcome of the reconsideration of the 2016 NSPS is uncertain, and when EPA expects to complete the reconsideration well before states are required to fully implement RACT, is arbitrary and capricious.

E. *It is Arbitrary and Capricious for EPA to Change its Position Without Adequate Explanation*

When an agency changes a policy position, it must (1) "display awareness that it is changing position;" (2) show that the new policy is permissible under governing statutes; and (3) "show that there are good reasons for the new policy," which requires a more detailed explanation where the "new policy rests upon factual findings that contradict those which underlay its prior policy; or when its prior policy has engendered serious reliance interests that must be taken into account." *Fox*, 556 U.S. at 515–16 (emphasis omitted). As with any agency decision, a reversal in policy requires the agency to "examine the relevant data and articulate a satisfactory explanation for its action." *State Farm*, 463 U.S. at 43. Agency action is "arbitrary and capricious if the agency has . . . entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Id.* As a corollary, "the agency must explain the evidence which is available, and must offer a rational connection between the facts found and the choice made. Generally, one aspect of that explanation would be a justification for rescinding the regulation before engaging in a search for further evidence." *Id.* at 52 (quotation omitted).

These are bedrock principles of administrative law, and EPA's proposal to withdraw the CTG violates them: the Agency has failed to explain or provide "good reasons" for its reversal in position on the prudence of retaining the CTG and has failed to consider important factors relating to that issue. The withdrawal proposal is therefore arbitrary and capricious.

1. <u>EPA utterly fails to explain its reversal of position</u>

EPA now states that it "believes it is prudent to withdraw the CTG in its entirety," 83 Fed. Reg. at 10,479, reflecting an entirely unexplained reversal from its earlier position that the CTG is, in fact, a valuable and necessary means of achieving ozone-forming VOC reductions in affected areas.

In developing the guidelines, EPA conducted a thorough process when it issued the CTG, engaging in extensive fact-finding and public outreach, including extending the initial comment period on the draft document to allow for the submission of additional evidence. *See* 80 Fed.

Reg. 70,781. As the agency described in the notice of availability for the final CTG, the document's RACT recommendations reflect extensive evidence from a range of sources:

> Based on available information and data, the EPA is providing final recommendations for RACT for select oil and natural gas industry emission sources. The VOC RACT recommendations contained in this final CTG document were made based on a review of the 1983 CTG document on equipment leaks from natural gas processing plants, the Oil and Natural Gas New Source Performance Standards, existing state and local VOC emission reduction approaches, and information on costs, emissions, and available emission control technologies and in response to comments received on the draft CTG document released for review on September 18, 2015 (80 FR 56577). Also, the EPA released for external peer review five technical white papers on potentially significant sources of emissions in the oil and natural gas industry. We considered information included in these white papers, along with the input we received from the peer reviewers and the public, when evaluating and recommending a RACT level of control for emission sources.

81 Fed. Reg. at 74,799. Yet in its withdrawal notice, EPA casts aside this extensive prior process without so much as acknowledging it, let alone analyzing it to a legally satisfactory degree.

As Justice Kennedy has described, an "agency cannot simply disregard contrary or inconvenient factual determinations that it made in the past, any more than it can ignore inconvenient facts when it writes on a blank slate." *Fox*, 556 U.S. at 537 (Kennedy, J., concurring). Yet that is precisely what EPA is doing in its CTG withdrawal proposal. EPA states that "[i]n light of the fact that we are reconsidering the 2016 NSPS and because the 2016 NSPS and CTG share certain key pieces of data and information, the EPA believes it is prudent to withdraw the CTG in its entirety." 83 Fed. Reg. at 10,479. However, EPA fails to even identify the specific information "share[d]" between the CTG and the 2016 NSPS, much less explain why that information no longer supports the CTG beyond a vague assertion that EPA is "currently looking broadly at the 2016 NSPS." *Id.*

Furthermore, EPA utterly ignores the data and evidence that it considered when issuing the CTG that came from the many sources *other* than the 2016 NSPS—data that are not under "reconsideration"—including the 1983 CTG for natural gas processing plants, the 2012 NSPS, existing state and local VOC emission reduction approaches, information in comments on the draft CTG, and EPA's five technical white papers on potentially significant sources of emissions in the oil and natural gas industry. *See* 81 Fed. Reg. at 74,799. For each source for which EPA established RACT recommendations, EPA reviewed major studies on emissions and activity, and incorporated that data into the RACT recommendations in the CTG.[95] In the proposed withdrawal, EPA does not even acknowledge these studies, let alone provide the required explanation as to why it is now ignoring the data included therein.

[95] *E.g.*, 2016 CTG at 4-3, 5-5, 6-4, 7-5, 8-3, 9-3.

As such, EPA is "simply disregard[ing] . . . inconvenient factual determinations that it made in the past," *Fox*, 556 U.S. at 537 (Kennedy, J., concurring), without going through the process of marshalling facts and evidence to support its change in position. That is yet another reason why the withdrawal proposal is arbitrary and capricious.

2. EPA failed to consider the costs to the public resulting from a withdrawal of the CTG, an important aspect of the problem

As noted above, agency action is arbitrary and capricious if the agency "entirely failed to consider an important aspect of the problem." *State Farm*, 463 U.S. at 43. In proposing to withdraw the CTG, EPA violates this dictate by ignoring a key aspect of the problem: costs to the public from a withdrawal.

While EPA's proposal quantifies the avoided compliance costs that the CTG withdrawal will have for the oil and gas industry in the withdrawal proposal, *see* 83 Fed. Reg. at 10,479, the agency gives no parallel consideration to the *additional* costs that the public will bear due to the withdrawal. By failing to evaluate the withdrawal's impacts on public health and the environment, EPA "failed to consider an important aspect of the problem" that the CTG was issued to help address in the first place—emissions from the oil and gas sector contributing to unsafe ozone levels. *See State Farm*, 463 U.S. at 43.

In the withdrawal proposal, EPA fails to even mention the impacts of the withdrawal on public health or the environment. While the agency presents avoided cost estimates for industry in its proposed withdrawal notice, *see* 83 Fed. Reg. at 10,479, it did not so much as present the associated increases in VOC and other emissions attributable to a CTG withdrawal, despite acknowledging in a supporting memo that the withdrawal will cause additional emissions of up to 64,200 tons of VOC and 199,700 tons of methane per year.[96] Even more problematic, neither the proposed withdrawal nor any of its supporting documents discuss the negative effects that these additional emissions would have on public health, despite the contribution these additional VOC emissions will have to forming health-harming ozone, as well as additional emissions of climate-disrupting methane and HAPs. *See supra* Part I. As discussed above in Part III.B, EPA does not even mention, let alone evaluate, the foregone benefits of methane reductions using the social cost of methane. This failure to consider the climate impacts associated with the proposed withdrawal is arbitrary and capricious. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1198–99 (9th Cir. 2008) (holding that NHTSA's "fail[ure] to include in its analysis the benefit of carbon emissions reduction," which it found to be "the most significant benefit of more stringent [fuel economy] standards," was arbitrary and capricious).

In an analogous situation, a federal district court recently found that the Bureau of Land Management's decision to suspend standards for preventing the waste of natural gas on public and tribal lands was arbitrary and capricious, because the agency had only considered the cost savings to industry while failing to analyze the rule's foregone public benefits. *California v. BLM*, 277 F. Supp. 3d 1106, 1122-1123 (N.D. Cal. 2017). The court held that, by ignoring lost

[96] Withdrawal Memo at 12.

benefits to the public, the agency failed to consider "an important aspect of the problem" in contravention of *State Farm*:

> As the Supreme Court squarely held, an agency cannot ignore 'an important aspect of the problem.' Without considering both the costs and the benefits of postponement of the compliance dates, the Bureau's decision failed to take this 'important aspect' of the problem into account and was therefore arbitrary.

Id. at 1122 (citing *State Farm*, 463 U.S. at 43). The court further rejected the agency's determination "that the costs were not justified because circumstances had changed between the time the Rule was developed and finalized and the time it was postponed" without any evaluation of the foregone benefits. *Id.* at 1123.

EPA's attempts to justify the proposed CTG withdrawal based on the alleged changed circumstance of "the fact that we are reconsidering the 2016 NSPS," 83 Fed. Reg. at 10,479, and its recitation of the avoided costs to industry, likewise fall short. Like the agency decision held unlawful in *California*, EPA's proposed withdrawal of the CTG is "arbitrary and capricious because it only took into account the costs to the oil and gas industry of complying with the [CTG] and completely ignored the benefits that would result from compliance." 277 F. Supp. 3d at 1122.

V. Conclusion

For a host of reasons discussed in these comments, EPA's withdrawal proposal is arbitrary and capricious, and hence unlawful. The Agency must abandon its proposal to withdraw the CTG. The CTG provide the states with common-sense, cost-effective tools to reduce harmful VOC emissions from the oil and gas sector, and EPA must keep these critical protections in place in order to fulfill its mission to protect public health and the environment.

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