

U.S. Climate Change Regulation and Litigation: Selected Legal Issues

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Summary

On March 28, 2017, President Trump signed an executive order to encourage and promote energy development by modifying climate change policies. As the Trump Administration implements its environmental policies, various legal challenges to Obama Administration climate change regulations remain pending before courts. During the last term of the Obama Administration, the Environmental Protection Agency (EPA) and the National Highway and Traffic Safety Administration finalized a series of regulations to address emissions from cars, trucks, and their engines that may contribute to climate change. In addition, EPA finalized regulations pursuant to its authority under the Clean Air Act (CAA) to reduce GHG emissions from stationary sources such as power plants, GHG-emitting oil and gas sources, and landfills. Various stakeholders have challenged a majority of these rules generally contesting the scope of EPA's authority and its methods for regulating GHG emissions.

In addition to the CAA, other environmental statutes such as the Endangered Species Act and the National Environmental Policy Act require federal agencies to consider climate change in their actions and decisions. The extent to which agencies may consider climate change effects and rely on predictive models, studies, and assumptions, however, has been challenged in court. Federal agencies are also required to consider the cost of GHG emissions in their rulemakings and environmental reviews. As the Trump Administration implements its policies on climate change, stakeholders may sue to ensure compliance with laws and judicial precedent that require consideration of climate change effects or costs.

Climate change litigation may potentially increase as some stakeholders seek to reduce GHG emissions and address climate change effects. In the past, plaintiffs have had little success in using federal common law nuisance claims to force private entities to reduce their GHG emissions or pay damages for alleged injuries caused by their emissions. In 2011, the Supreme Court determined that these claims were displaced when Congress granted EPA authority to regulate GHG emissions under the CAA. If Congress amends the CAA to remove EPA's authority, plaintiffs may seek to reintroduce these common law nuisance claims. However, they will likely face jurisdictional barriers that may be difficult to overcome.

Federal courts often do not reach the merits of climate change suits due to threshold procedural and jurisdictional barriers, such as whether a plaintiff or petitioner has the right to bring a lawsuit in the first place or whether the court has jurisdiction over a type of claim. These difficult procedural and jurisdictional barriers are at the center of a recent case claiming that the government has a duty to safeguard certain natural resources for the benefit of the public and that duty compels the government to address climate change.

This report will cover a brief history of U.S. climate change regulation; review the different types of regulation and legal actions that have been pursued in the national debate over GHGs; examine selected legal issues and next steps in related litigation; and address what these legal and regulatory developments mean for Congress.

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In 2013, President Obama released a Climate Action Plan (CAP) to reduce greenhouse gases (GHG) emissions and to encourage adaptation to expected climate change.¹ Subsequently, the Obama Administration implemented the CAP pursuant to presidential powers and existing statutory authority. The President, the U.S. Environmental Protection Agency (EPA), and other agencies issued various executive orders, guidance, and regulations to reduce GHG emissions from motor vehicles,² new and existing power plants,³ facilities in the oil-and-gas sector,⁴ and other GHG-emitting sources and federal facilities.⁵

On March 28, 2017, President Trump signed Executive Order 13783, which rescinds the CAP and requires agencies to review their existing regulations and “appropriately suspend, revise, or rescind those that unduly burden” domestic energy production and use.⁶ The executive order, entitled *Promoting Energy Independence and Economic Growth*, rescinds or withdraws various Obama Administration orders and directions that were intended to address climate change and regulate GHG emissions, including the following:⁷

- **Presidential Orders/Reports**
 - Executive Order 13653, Preparing the United States for the Impacts of Climate Change (Nov. 1, 2013)
 - Power Sector Carbon Pollution Standards, Pres. Memo. (June 25, 2013)
 - Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment, Pres. Memo. (Nov. 3, 2015)
 - Climate Change and National Security, Pres. Memo. (Sept. 21, 2016)
 - The President’s Climate Action Plan (June, 2013)
 - Climate Action Plan Strategy to Reduce Methane Emissions (March 2014)
- **Agency Guidance**
 - Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 81 Fed. Reg. 51,866 (Aug. 5, 2016)
 - All technical documents related to the Social Cost of Carbon
- **Agency Orders**
 - All moratoria on federal land coal leasing activities related to Order 3338, Discretionary Programmatic Environmental Impact Statement (PEIS) to Modernize the Federal Coal Program (Jan. 15, 2016)

¹ Exec. Off. of the President, The President’s Climate Action Plan (2013), available at <https://obamawhitehouse.archives.gov/sites/default/files/image/president27sclimateactionplan.pdf>. For additional background on the Climate Action Plan, see CRS Report R43120, *President Obama’s Climate Action Plan*, coordinated by Jane A. Leggett.

² See *infra* “Mobile Sources under the Clean Air Act” section.

³ See *infra* “Power Plants” section.

⁴ See *infra* “Regulation of Methane Emissions from Stationary Sources” section.

⁵ See, e.g., Exec. Order No. 13693, 80 Fed. Reg. 15,871 (Mar. 25, 2015).

⁶ See Exec. Order No. 13783, 82 Fed. Reg. 16, 093 (Mar. 31, 2017) (signed on Mar. 28, 2017), <https://www.federalregister.gov/d/2017-06576>. Michael Phillis, Trump Orders EPA To Undo Clean Power Plan, LAW360, Mar. 28, 2017, <https://www.law360.com/energy/articles/906980/breaking-trump-orders-epa-to-undo-clean-power-plan>.

⁷ *Id.*

The executive order also directs EPA to review GHG regulations for power plants and methane regulations for existing oil and gas sources, and “as soon as practicable, suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules.”⁸

Because the evolution and scope of U.S. climate change regulation and litigation are extensive, this report will focus on existing federal laws and regulations and will not address international agreements or legislation related to climate change.⁹ This report will provide a brief history of U.S. climate change regulation; review the different types of regulation and legal actions that have been pursued in the national debate over GHGs; examine selected legal issues and related litigation; and address what these legal and regulatory developments mean for Congress.

Background

History of U.S. Climate Change Regulation and Litigation

Since the late 1970s, Congress has provided authority and funds for federal agencies to research and better understand climate science. In 1978, Congress passed the National Climate Program Act (NCPA) that created the National Climate Program in the Department of Commerce.¹⁰ The NCPA required the program it established to assess climate change effects, improve understanding of climate change science, and collect global and domestic climate data.¹¹ Congress subsequently passed additional legislation authorizing federal climate change research, interagency collaboration, and collection of GHG emissions data.¹² These statutes authorized federal agencies to investigate climate change and its potential impacts, but did not direct agencies to reduce GHG emissions.

Various executive orders and environmental, energy, and natural resources statutes address climate change in different ways. For example, under the Clean Air Act (CAA), EPA has sought to reduce GHG emissions from stationary and mobile sources.¹³ Similarly, the Department of Energy has established efficiency standards for certain consumer products to reduce energy consumption,¹⁴ while the Council on Environmental Quality has issued guidance on how agencies should consider potential GHG impacts resulting from proposed federal actions under the National Environmental Policy Act.¹⁵

⁸ *Id.* §§4, 7.

⁹ For information related to international climate change agreements, see CRS Report R44609, *Climate Change: Frequently Asked Questions about the 2015 Paris Agreement*, by Jane A. Leggett and Richard K. Lattanzio, and CRS Report R44761, *Withdrawal from International Agreements: Legal Framework, the Paris Agreement, and the Iran Nuclear Agreement*, by Stephen P. Mulligan.

¹⁰ National Climate Program Act of 1978, P.L. 95-367, 92 Stat. 601 (1978) (as amended at 15 U.S.C. §§29.1-2908); 15 U.S.C. §2904(c).

¹¹ 15 U.S.C. §2904(d).

¹² See, e.g., Global Change Research Act of 1990, 15 U.S.C. §§2921-2938 (establishing the Global Change Research Program to coordinate federal climate research to aid in “understand[ing] ... human-induced and natural processes of climate change”); Global Climate Change Prevention Act of 1990, 7 U.S.C. §6701 (directing the Dept. of Agriculture to study the effects of climate change on forestry and agriculture); Energy Policy Act of 1992, 42 U.S.C. §§13381-13388 (requiring the Secretary of Energy to prepare an annual inventory of GHG emissions).

¹³ See *infra* “Stationary Sources under Clean Air Act” and “Mobile Sources under the Clean Air Act” sections.

¹⁴ See *infra* “Social Cost of Carbon” section.

¹⁵ See *infra* “National Environmental Policy Act” section.

Federal authority to regulate GHGs under existing law and policies has been challenged in court. Many of these challenges have focused on EPA's authority to regulate GHGs under the CAA. In 1998, EPA General Counsel Jonathan Cannon concluded in a memorandum that GHGs were air pollutants within the CAA definition of the term, and therefore could be regulated under the CAA.¹⁶ On October 20, 1999, relying on the Cannon memorandum as well as on the CAA, a group of 19 organizations petitioned EPA to regulate GHG emissions from new motor vehicles under CAA Section 202,¹⁷ which directs EPA to develop emission standards for "any air pollutant" from new motor vehicles "which, in his judgment cause[s], or contribute[s] to air pollution which may reasonably be anticipated to endanger public health or welfare."¹⁸

On August 28, 2003, EPA denied the petition¹⁹ based on a new General Counsel memorandum that concluded that the CAA does not grant EPA authority to regulate carbon dioxide (CO₂) and other GHG emissions based on their climate change impacts.²⁰ Massachusetts, 11 other states, and various other petitioners challenged EPA's denial of the petition in a case that ultimately reached the Supreme Court.²¹

Massachusetts v. EPA and Its Effects

In 2007, the Supreme Court defined the contours of EPA's authority to regulate GHGs under the Clean Air Act in *Massachusetts v. EPA*.²² In its 5-4 decision, the Supreme Court held that EPA has authority to regulate GHGs as "air pollutants" under the CAA.²³ The Court determined that the CAA authorized EPA to regulate GHG emissions from new motor vehicles because CO₂ and other GHGs "fit well within the CAA's capacious [and unambiguous] definition of 'air pollutant.'"²⁴ Rejecting EPA's argument that the agency could not regulate vehicle GHG emissions because to do so would conflict with the Department of Transportation's (DOT's) fuel economy standards, the Court explained that EPA's statutory obligation to protect public health

¹⁶ Memorandum from Jonathan Z. Cannon, EPA Gen. Counsel, on EPA's Authority to Regulate Pollutants Emitted by Electric Power Generation Sources, to Carol M. Browner, Admin., EPA (Apr. 10, 1998), <http://www.law.umaryland.edu/environment/casebook/documents/epaco2memo1.pdf>.

¹⁷ The lead petitioner was the International Center for Technology Assessment (ICTA). The petition may be found at http://www.ciel.org/Publications/greenhouse_petition_EPA.pdf.

¹⁸ *Id.*

¹⁹ Control of Emissions From New Highway Vehicles and Engines, 68 Fed. Reg. 52,922 (Sept. 8, 2003). The agency argued that it lacked statutory authority to regulate GHGs: Congress "was well aware of the global climate change issue" when it last comprehensively amended the CAA in 1990, according to the agency, but "it declined to adopt a proposed amendment establishing binding emissions limitations." *Massachusetts v. EPA*, 549 U.S. 497 (2007).

²⁰ Memorandum from Robert E. Fabricant, Gen. Counsel, EPA, on EPA's Authority to Impose Mandatory Controls to Address Global Climate Change Under the Clean Air Act, to Marianne L. Horinko, Acting Admin., EPA (Aug. 28, 2003), <http://bit.ly/2nMx5Dy>.

²¹ The D.C. Circuit, in a split decision, rejected the suit. See *Massachusetts v. EPA*, 415 F.3d 50, 56, 59-60 (2005) (Randolph, J., dissenting) (holding that EPA reasonably denied the petition based on scientific uncertainty and policy considerations).

²² *Massachusetts v. EPA*, 549 U.S. 497 (2007). For additional discussion of this case, see CRS Report RS22665, *The Supreme Court's First Climate Change Decision: Massachusetts v. EPA*, by Alexandra M. Wyatt. Issues related to standing addressed by the Court are discussed in the "Standing Doctrine" section.

²³ *Id.*

²⁴ *Massachusetts v. EPA*, 549 U.S. at 529, 532. The majority held that "The Clean Air Act's sweeping definition of 'air pollutant' includes 'any air pollution agent or combination of such agents, including any physical, chemical ... substance or matter which is emitted into or otherwise enters the ambient air....' ... Carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons are without a doubt 'physical [and] chemical ... substances[s] which [are] emitted into ... the ambient air.' The statute is unambiguous." *Id.* at 528-29.

and welfare under the CAA is “wholly independent of DOT’s mandate to promote energy efficiency.”²⁵ In addition, the Court held that CAA Section 202 does not allow EPA to refuse to regulate GHG emissions from new motor vehicles based on policy considerations, but that EPA must regulate GHG emissions if EPA finds that GHGs “cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare.”²⁶

Based on this reasoning, the Court identified three ways EPA could respond to the rulemaking petition: (1) make a finding that motor vehicle GHG emissions may “endanger public health or welfare” and issue emissions standards; (2) make a finding that there is no endangerment from these emissions; (3) or provide a “reasonable explanation” as to why the Agency cannot or will not make an endangerment finding.²⁷ Because EPA “offered no reasoned explanation for its refusal to decide whether greenhouse gases cause or contribute to climate change,” the Court held that EPA’s denial of the petition for rulemaking was arbitrary and capricious, reversed the D.C. Circuit opinion, and remanded the case to that court for further proceedings.²⁸

Following the Supreme Court’s decision in *Massachusetts v. EPA*, EPA found that GHG emissions from motor vehicles endanger public health and welfare²⁹ and subsequently issued a series of regulations under the CAA to reduce GHG emissions from both mobile and stationary sources. EPA has consequently regulated GHG emissions from new motor vehicles under CAA Section 202.³⁰ EPA has also regulated GHG emissions from various stationary sources, including new and existing fossil fuel-fired power plants and GHG-emitting sources from municipal landfills, and the oil and gas sector under other CAA sections.³¹

Most of EPA’s GHG regulatory actions have been challenged in court. These challenges generally concern the scope of EPA’s authority and its methods for regulating GHG emissions—not whether EPA has authority to regulate GHG emissions under the CAA, which the Supreme Court held in *Massachusetts v. EPA*. Although the Supreme Court has clarified EPA’s authority to regulate GHGs under specific CAA programs in subsequent cases,³² *Massachusetts v. EPA* remains the governing law.

Types of GHG Regulation and Related Litigation

This report will focus on two types of GHG regulations: (1) laws that seek to reduce GHG emissions from stationary and mobile sources, and (2) laws that require that climate change

²⁵ *Id.*

²⁶ *Id.* at 532-33.

²⁷ *Id.* at 533.

²⁸ *Id.* at 534-35. A four-justice dissent by Chief Justice Roberts in *Massachusetts v. EPA* disputed the majority’s holding of standing. *Id.* at 535-49 (Roberts, C.J., dissenting). Justice Scalia, for the same four justices, issued a dissent, arguing that EPA may appropriately consider agency policy preferences in determining whether to issue or defer an endangerment finding. *Id.* at 535-49 (Scalia, J., dissenting). Justice Scalia also disputed the majority’s holding that “air pollutant” in Clean Air Act §202 includes GHGs. *Id.* at 559-60. For further discussion of the standing issues in *Massachusetts v. EPA*, see “Standing Doctrine” section.

²⁹ See *infra* “Reducing GHG Emissions” section.

³⁰ See *infra* “Mobile Sources under the Clean Air Act” section.

³¹ See *infra* “Stationary Sources under Clean Air Act” section.

³² See, e.g., *Util. Air Regulatory Group v. EPA*, —U.S.—, 134 S. Ct. 2427, 2439-46 (2014); *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410 (2011). These cases are discussed in “Regulation of GHG Emissions from Stationary Sources through Permits” and “Common Law Nuisance and Political Question Doctrine” sections.

effects be considered when the federal government takes certain actions. This section will review examples of these types of regulations and related legal challenges.

Reducing GHG Emissions

The majority of regulations addressing GHG emissions from stationary and mobile sources have been promulgated under the CAA. Following the *Massachusetts* decision, EPA began to explore “whether and how greenhouse gases could be effectively controlled under the Clean Air Act” in an advanced notice of proposed rulemaking (ANPR).³³ In 2009, EPA made two findings under CAA Section 202: (1) that GHGs currently in the atmosphere potentially endanger public health and welfare, and (2) that new motor vehicle emissions cause or contribute to that pollution (collectively these findings are known as the “endangerment finding”).³⁴ The endangerment finding triggered EPA’s duty under CAA Section 202(a) to promulgate emission standards for new motor vehicles.³⁵

Mobile Sources under the Clean Air Act

In general, the CAA divides mobile sources into three broad categories: on-road vehicles (cars, trucks, and buses); aircraft; and nonroad vehicles and engines. Following the *Massachusetts v. EPA* decision, EPA has exercised its authority under Title II of the CAA to address GHG emissions from some mobile sources. This section will focus on EPA’s regulation of motor vehicles, and briefly discuss EPA’s ability to regulate GHG emissions from aircrafts and other nonroad mobile sources and engines.³⁶

Light-Duty Motor Vehicles

While EPA’s endangerment finding was pending, President Obama announced that EPA would develop its GHG emission standards in coordination with the National Highway Traffic Safety Administration’s (NHTSA) development of corporate average fuel economy (CAFE) standards, which NHTSA administers for new cars and light trucks.³⁷ By developing these standards jointly, the Obama Administration sought to create a national program to reduce GHG levels to levels similar to those the California Air Resources Board (CARB) had adopted earlier.³⁸ CARB further agreed to harmonize its motor vehicle GHG emissions standards with EPA’s standards.³⁹

³³ Regulating Greenhouse Gas Emissions Under the Clean Air Act; Advance Notice of Proposed Rulemaking, 73 Fed. Reg. 44,354, 44,355 (July 30, 2008).

³⁴ 74 Fed. Reg. 66,496 (Dec. 15, 2009).

³⁵ *Id.*

³⁶ For additional information regarding GHG regulations of motor vehicles under the Clean Air Act, see CRS Report R40506, *Cars, Trucks, Aircraft, and EPA Climate Regulations*, by James E. McCarthy and Richard K. Lattanzio.

³⁷ Press Release, White House, Off. of the Secretary, President Obama Announces National Fuel Efficiency Policy (May 19, 2009), <https://obamawhitehouse.archives.gov/the-press-office/president-obama-announces-national-fuel-efficiency-policy>.

³⁸ Proposed Rulemaking To Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 74 Fed. Reg. 49,468 (Sept. 28, 2009).

³⁹ Letter from Mary D. Nichols, Chairman, Ca. Air Res. Bd, to Lisa P. Jackson, Admin., EPA & Ray LaHood, Secretary, Dept. of Transp. (May 18, 2009), <https://www.epa.gov/sites/production/files/2016-10/documents/air-resources-board.pdf>. EPA officially granted California’s waiver for its 2009 GHG standards on July 8, 2009. California State Motor Vehicle Pollution Control Standards; Notice of Decision Granting a Waiver of Clean Air Act Preemption for California’s 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles, 74 Fed. Reg. 32,744 (July 8, 2009). For discussion of state preemption waivers under CAA Section 209, see “California

EPA and NHTSA subsequently promulgated GHG emission and fuel economy standards in two phases for specific model years of light-duty motor vehicles. On May 7, 2010, EPA and NHTSA issued Phase 1 standards, which applied to Model Year (MY) 2012-2016 light-duty vehicles (cars, sport-utility vehicles, crossovers, minivans, and most pickups), setting a combined average emissions standard of 250 grams/mile of CO₂ and a combined average fuel economy level of 34.1 mpg in MY2016.⁴⁰ On October 15, 2012, EPA and NHTSA issued Phase 2 standards, which applied to MY2017-2025 light-duty vehicles, to reduce further the combined average emissions to 163 grams/mile of CO₂ by MY2025 and combined average fuel economy to a range of 40.3 to 41 mpg by MY2021.⁴¹

To allow EPA and NHTSA to modify the GHG standards, the Phase 2 MY2017-2025 light-duty vehicle regulations provided for a Midterm Evaluation (MTE) of the MY2022-2025 standards.⁴² Under the regulations, EPA had to determine by April 1, 2018, whether the GHG standards for MY2022-2025 would still be appropriate given the latest available data and information, and could strengthen, weaken, or retain the promulgated standards.⁴³ On January 12, 2017, EPA issued a final decision finding that the standards remained appropriate and should be maintained for the model years.⁴⁴ EPA based its findings on a technical support document; a previously released Draft Technical Assessment Report (which was issued jointly by EPA, NHTSA, and CARB); and input from the auto industry and other stakeholders.⁴⁵

EPA has been criticized for finalizing the MTE determination prior to the April 1, 2018, deadline and separate from NHTSA's rulemaking on CAFE standards for MY2022-2025.⁴⁶ On March 13, 2017, the Alliance of Automobile Manufacturers filed a petition for review of EPA's final MTE determination in the D.C. Circuit, claiming that EPA's determination is "in excess of EPA's statutory authority, contrary to the CAA, arbitrary and capricious, and otherwise contrary to law."⁴⁷ Supporters of EPA's MTE determination have urged EPA not to reopen or withdraw the determination, arguing that the GHG standards are "economically feasible and technological

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⁴⁰ Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule, 75 Fed. Reg. 25,323, 25,329-30 (May 7, 2010).

⁴¹ 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards; Final Rule, 77 Fed. Reg. 62,624, 62,638-39 (Oct. 15, 2012).

⁴² 40 C.F.R. §86.1818-12(h). For more information on the MTE and determination, see CRS Insight IN10619, *EPA's Mid-Term Evaluation of Vehicle Greenhouse Gas Emissions Standards*, by Richard K. Lattanzio.

⁴³ *Id.*

⁴⁴ EPA, FINAL DETERMINATION ON THE APPROPRIATENESS OF THE MODEL YEAR 2022-2025 LIGHT-DUTY VEHICLE GREENHOUSE GAS EMISSIONS STANDARDS UNDER THE MIDTERM EVALUATION (2017), <https://www.epa.gov/sites/production/files/2017-01/documents/420r17001.pdf>.

⁴⁵ *Id.* at 2. The draft and final determinations and supporting documents can be found on EPA's website at <https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas-ghg>.

⁴⁶ *Id.* at 27. Some industry groups have asked the Trump Administration to revisit EPA's determination—citing a "rush" to finalize a determination that contradicted the objectives of a unified national program GHG and CAFE standards. See, e.g., Letter from Alliance of Auto. Mfrs. et. al., to Mike Pence, Vice-President Elect (Dec. 22, 2016), <https://www.uschamber.com/letter/multi-association-letter-trump-transition-team-proposed-determination-midterm-evaluation-ghg>; Camille von Kaenel, *Automakers ask Pruitt to Revisit Obama's Emissions Rules*, E&E NEWS, Feb. 22, 2017, <http://www.eenews.net/climatewire/stories/1060050394/search?keyword=alliance+automobile+manufacturers>.

⁴⁷ Petition for Review, Alliance of Auto. Mfrs. v. EPA, No. 17-1086 (D.C. Cir. Mar. 13, 2017).

achievable.”⁴⁸ On March 24, 2017, CARB voted unanimously to retain California’s vehicle GHG standards for MY2022-2025 for light-duty vehicles based on its own mid-term evaluation.⁴⁹

On March 15, 2017, EPA and DOT announced that EPA would reconsider its MTE determination⁵⁰ and would coordinate with NHTSA in order to harmonize NHTSA’s CAFE standards with EPA’s GHG emission standards.⁵¹ EPA intends to issue a new MTE determination by April 1, 2018.⁵² Given that EPA is reconsidering its MTE determination, the Alliance of Automobile Manufacturers has moved to dismiss its lawsuit.⁵³

Medium and Heavy-Duty Trucks

Section 202(a) of the CAA requires EPA to set “standards applicable to the emission of any air pollutant from *any class or classes of new motor vehicles or new motor vehicle engines*, which in the agency’s judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.”⁵⁴ In the endangerment finding, EPA specifically identified medium- and heavy-duty trucks as contributing to endangerment caused by GHG emissions.⁵⁵ Similar to the light-duty vehicles standards, EPA and NHTSA⁵⁶ issued GHG emissions and fuel economy standards for medium- and heavy-duty trucks in two phases. On September 15, 2011, EPA and NHTSA issued Phase 1 standards for MY2014-2018 medium- and heavy-duty trucks.⁵⁷ On October 25, 2016, EPA and NHTSA issued Phase 2 standards for MY2021-2027 medium- and heavy-duty trucks and engines and MY2018-MY2027 trailers.⁵⁸

In December 2016, a truck trailer group and racing vehicle coalition filed separate petitions for review of the Phase 2 GHG emission and fuel economy standards for medium- and heavy-duty

⁴⁸ See, e.g., Letter from Edward J. Markey, at. al, Senator, to Scott Pruitt, Admin., EPA (Mar. 7, 2017), <http://www.markey.senate.gov/imo/media/doc/EPA%20auto%20emissions%20final%20determination%20letter.pdf>.

⁴⁹ *California Air Regulators Vote to Keep Tough Fuel Standards*, ASSOCIATED PRESS, Mar. 24, 2017, http://hosted2.ap.org/APDEFAULT/b2f0ca3a594644ee9e50a8ec4ce2d6de/Article_2017-03-24-US-California-Fuel-Standards/id-dce9c6442699433ebde1497672537f30.

⁵⁰ See Notice of Intention To Reconsider the Final Determination of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light Duty Vehicles, 82 Fed. Reg. 14,671 (Mar. 22, 2017) (signed on Mar. 3, 2017).

⁵¹ See *id.* at 4 (citing 40 C.F.R. §86.1818-12(h)(1)(vii), which states that EPA “shall consider the information available on the factors relevant to setting greenhouse gas emission standards ... including but not limited to: ... [t]he impact of the greenhouse gas emission standards on the Corporate Average Fuel Economy standards and a national harmonized program”).

⁵² *Id.*

⁵³ Motion of Petitioner to Dismiss Petition for Review, Alliance of Auto. Mfrs. v. EPA, No. 17-1086, No. 17-1086 (D.C. Cir. Mar. 20, 2017).

⁵⁴ 42 U.S.C. §7521(a)(1) (emphasis added).

⁵⁵ Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,537 (Dec. 15, 2009).

⁵⁶ Separate from EPA’s authority to set GHG standards, the Energy Independence and Security Act of 2007 directed NHTSA to study the potential for fuel efficiency standards for medium- and heavy-duty trucks, and, if feasible, set efficiency standards reflecting the “maximum feasible improvement.” 49 U.S.C. §32902(k)(2). Similar to light-duty vehicles standards, in order to harmonize their GHG and fuel efficiency requirements, EPA and NHTSA have cooperated on the setting of motor vehicle standards.

⁵⁷ Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles; Final Rules, 76 Fed. Reg. 57,106 (Sept. 15, 2011).

⁵⁸ Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty; Final Rule, 81 Fed. Reg. 73,478 (Oct. 25, 2016). For more information on this rule, see CRS Insight IN10511, *Phase 2 Greenhouse Gas Emissions and Fuel Efficiency Standards for Heavy-Duty Vehicles*, by Richard K. Lattanzio.

engines and vehicles with the D.C. Circuit.⁵⁹ The Truck Trailer Manufacturers Association argued that EPA and NHTSA do not have authority to regulate GHG emissions and fuel economy of trailers because trailers are not “vehicles” under the CAA or the Energy Independence and Security Act.⁶⁰ The Racing Enthusiasts & Suppliers Coalition challenged EPA’s prohibition on tampering and defeat devices, arguing that modifying vehicles for off-road racing or competition vehicles is beyond the scope of the CAA.⁶¹ The court has granted motions to intervene from five environmental groups (Natural Resources Defense Council, the Environmental Defense Fund, Sierra Club, Center for Biological Diversity, and the Union of Concerned Scientists) and eight states (Connecticut, Washington, Massachusetts, Rhode Island, Vermont, Oregon, Iowa, and California, through its state Air Resources Board).⁶²

California Preemption Waiver

In 1966, the California Motor Vehicle Pollution Control Board adopted auto emission standards for hydrocarbons and carbon monoxide, making California the first state to do so.⁶³ Decades later, in 2004, California adopted regulations requiring new motor vehicles to reduce GHG emissions, beginning in model year 2009.⁶⁴ While the CAA generally preempts states from adopting their own emission standards for mobile sources,⁶⁵ the CAA allows states with standards adopted prior to March 30, 1966, to obtain a waiver of preemption from EPA.⁶⁶ This waiver provision applies exclusively to California because it is the only state that had adopted standards within the prescribed timeframe. Other states, however, can adopt the California standards, provided that (1) the state has an EPA-approved State Implementation Plan; (2) the standards are identical to standards for which California has been granted a waiver; and (3) California and such state have adopted the standards at least two years before the commencement of the model year to which the standards apply.⁶⁷ Based on EPA’s records, 14 states and the District of Columbia have adopted California standards.⁶⁸

CAA Section 209(b) directs EPA to grant waivers unless certain factors warrant denial, providing that EPA “shall ... waive” the prohibition on state emission standards “if the State determines that the State standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards.”⁶⁹ If California determines that its standards will be at least as protective as applicable federal standards, EPA can deny the waiver request only if EPA finds that California’s determination is arbitrary and capricious (California is not required to show that its

⁵⁹ The cases have been consolidated under *Truck Trailer Mfr. Ass’n, et. al. v. EPA*, Nos. 16-1430, 16-1447 (D.C. Cir. Dec. 22, 2016).

⁶⁰ Petitioner’s Non-Binding Statement of Issues at 2-3, *Truck Trailer Mfr. Ass’n, et. al., v. EPA*, No. 16-1430 (D.C. Cir. Feb. 22, 2017).

⁶¹ Non-Binding Statement of Issues of Petitioner Racing Enthusiasts and Suppliers Coalition at 2, *Racing Enthusiasts and Suppliers Coalition, v. EPA*, No. 16-1447 (D.C. Cir. Feb. 22, 2017).

⁶² Clerk’s Order, *Truck Trailer Manuf. Ass’n, et. al., v. EPA*, No. 16-1430 (D.C. Cir. Mar. 10, 2017).

⁶³ Cal. Envtl. Prot. Agency, History of Air Resources Board, <https://www.arb.ca.gov/knowzone/history.htm>.

⁶⁴ Cal. Code Regs. tit. 13, §1961.1.

⁶⁵ 42 U.S.C. §7543(a).

⁶⁶ *Id.* §7543(b).

⁶⁷ *Id.* §7507.

⁶⁸ See EPA, SALES OF CALIFORNIA VEHICLES FOR 2011 MODEL YEAR AND BEYOND (CROSS- BORDER SALES POLICY) Fig. 2 (2011) (listing state adoption of California standards as of Mar. 22, 2011), https://iaspub.epa.gov/otaqpub/display_file.jsp?docid=24724&flag=1.

⁶⁹ 42 U.S.C. §7543(b).

standards meet compelling and extraordinary conditions) or the California standards and accompanying enforcement procedures are inconsistent with CAA Section 202(a).⁷⁰ Legislative history indicates that when Congress amended the waiver provision in 1977, at least some Members of Congress intended for the provision to “afford California the broadest discretion possible in selecting the best means to protect the health of its citizens and the public welfare.”⁷¹

EPA has granted in whole or in part numerous California waiver requests under Section 209(b). According to EPA records, California has submitted over 100 waiver requests for new or amended standards or “within the scope” determinations (i.e., a request that EPA rule on whether a new regulation is within the scope of a waiver that the agency has already issued).⁷² In 2013, EPA granted a waiver to California to regulate GHG emissions from light-duty vehicles through MY2025.⁷³ Most recently, in January 2017, the Obama Administration granted a series of waiver requests related to non-GHG emission standards for different types of mobile sources and engines.⁷⁴ If EPA revises its MTE determination and reduces the GHG standards for MY2022-2025 light-duty vehicles,⁷⁵ California, and those states that have adopted California’s standards, may potentially have standards different from the federal standards, resulting in a national patchwork of standards.

Aircraft

On August 15, 2016, and in response to various petitions,⁷⁶ EPA issued a finding that GHG emissions from commercial aircraft (1) contribute to the pollution that causes climate change, and (2) endanger the health and welfare of Americans.⁷⁷ The finding, under Section 231 of the CAA,

⁷⁰ 42 U.S.C. §7543(b)(1)(A)-(C).

⁷¹ H.R. Rep. No. 95-294, at 301-302 (May 12, 1977).

⁷² See EPA, VEHICLE EMISSIONS CALIFORNIA WAIVERS AND AUTHORIZATIONS, <https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations#state> (listing Federal Register notices of waiver requests and decisions); Letter from Kevin de Leon, Pres. pro Tempore, 24 Cal. Senate District, et. al., to Xavier Becerra, Att’y Gen., Cal. Dep’t of Justice (Mar. 16, 2017).

⁷³ California State Motor Vehicle Pollution Control Standards; Notice of Decision Granting a Waiver of Clean Air Act Preemption for California’s Advanced Clean Car Program and a Within the Scope Confirmation for California’s Zero Emission Vehicle Amendments for 2017 and Earlier Model Years, 78 Fed. Reg. 2,112 (Jan. 9, 2013).

⁷⁴ See, e.g., California State Nonroad Engine Pollution Control Standards; Evaporative Emission Standards and Test Procedures for Off-Highway Recreational Vehicles (OHRVs); Notice of Decision, 82 Fed. Reg. 6,540 (Jan. 19, 2017); California State Motor Vehicle Pollution Control Standards; Amendments to On Highway Heavy-Duty Vehicle In-Use Compliance Program, Amendments to 2007 and Subsequent Model Year On-Highway Heavy-Duty Engines and Vehicles, and Amendments to Truck Requirements; Notice of Decision, 82 Fed. Reg. 4,867 (Jan. 17, 2017).

⁷⁵ See *supra* “Light-Duty Motor Vehicles” section.

⁷⁶ See Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. 44,354, 44,460 (July 30, 2008) (discussing the petitions asking EPA to make a finding that aircraft GHG emissions endanger public health or welfare, and that the agency adopt regulations that allow a range of compliance approaches, including emission limits, operational practices, fees, a cap-and-trade system, minimizing engine idling time, employing single engine taxiing, or use of ground-side electricity measures to replace the use of fuel-burning auxiliary power units at airport gates). Besides petitioning EPA for action on aviation emissions, environmental groups brought suit in the U.S. District Court for the District of Columbia seeking to force EPA to respond to their petitions on aircraft (as well as their petitions on marine vessels, and nonroad engines and vehicles). *Ctr. for Biological Diversity v. U.S. EPA*, 794 F.Supp. 2d 151 (D.D.C. 2011). On July 5, 2011, the court found that EPA has a mandatory duty to determine whether aircraft emissions endanger public health or welfare, and may be sued for unreasonable delay in doing so. *Id.* at 162. In March 2012, however, the court ruled that plaintiffs had not shown that EPA had unreasonably delayed such a decision. *Ctr. for Biological Diversity v. EPA*, No. 1:10-CV-985 (FJS), 2012 U.S. Dist. LEXIS 37870 (D.D.C. Mar. 20, 2012).

⁷⁷ 42 U.S.C. § 7571(a)(2). Finding That Greenhouse Gas Emissions from Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated to Endanger Public Health and Welfare, 81 Fed. Reg. 54,422 (Aug. 15, 2016).

is the precondition for setting GHG emission standards for commercial aircraft. Aircraft manufacturers and airlines have not challenged EPA's finding.⁷⁸ It should be noted that the aircraft manufacturing and aviation industries have participated in international negotiations that resulted in an agreement on emission standards for new aircraft and a voluntary system to offset what might otherwise be a growth in emissions from air travel.⁷⁹

Under the CAA, the EPA Administrator must consult with the Administrator of the Federal Aviation Administration and the Secretary of Transportation when developing emission standards, and may not impose new standards if doing so would significantly increase noise or adversely affect safety.⁸⁰ The President may also disapprove any such standards if the Secretary of Transportation finds that they would create a hazard to aircraft safety.⁸¹

Other Mobile Sources

CAA Section 213(a)(4), provides for EPA to promulgate emission standards for pollutants other than carbon monoxide (CO), oxides of nitrogen (NOx), and volatile organic compounds (VOCs)⁸² from "nonroad engines and vehicles" (other than locomotives or their engines) if it makes an endangerment finding.⁸³ The endangerment language of Section 213 is similar to that for new motor vehicles in Section 202.⁸⁴ While CAA Section 213 does not set a deadline by which EPA must set standards for nonroad engines and vehicles, it provides for petitioners seeking GHG regulation of these mobile sources to file a suit against EPA for unreasonable delay in responding to rulemaking petitions.⁸⁵

For additional information on aircraft GHG emissions, see CRS Report R40090, *Aviation and Climate Change*, by James E. McCarthy.

⁷⁸ The finding was challenged by the Biogenic CO₂ Coalition, and the case is in abeyance pending the resolution of other proceedings. See *Biogenic CO₂ Coalition v. EPA*, D.C. Cir. No. 16-1358 (D.C. Cir. Oct. 14, 2016) (arguing that EPA did not distinguish the effects of biofuel CO₂ emissions from the effects of similar emissions from fossil fuels). The coalition represents growers and processors of agricultural feedstocks that can be used for biofuels. THE BIOGENIC CO₂ COALITION, <http://www.biogenicco2.org/>.

⁷⁹ For additional information on the international negotiations and agreement on aircraft GHG emissions and the ICAO process, see CRS Report R40506, *Cars, Trucks, Aircraft, and EPA Climate Regulations*, by James E. McCarthy and Richard K. Lattanzio, which notes: "In October 2016, the International Civil Aviation Organization (ICAO) agreed on international CO₂ standards for aircraft, beginning in 2020. In October 2016, ICAO's governing council also agreed on a system for offsetting future carbon emissions from aviation—dubbed the Market-Based Mechanism, or MBM. The MBM agreed to in the ICAO process is voluntary for the next decade and has been agreed to by the U.S. industry." *Id.* at 13.

⁸⁰ 42 U.S.C. §7571(a)-(b).

⁸¹ *Id.* §7571(c).

⁸² See 42 U.S.C. §7547(a)(4) (referring to regulating pollutants other than "carbon monoxide, oxides of nitrogen, and volatile organic compounds" which are regulated under 42 U.S.C. §7547(a)(2)).

⁸³ 42 U.S.C. §7547(a)(4). The listed non-GHG pollutants are regulated under CAA §213(a)(3), which requires the imposition of best available control technology, and sets a deadline for such regulation.

⁸⁴ In place of the Section 209 words "cause, or contribute," Section 213 uses the phrase "significantly contribute": if the Administrator determines that emissions of GHGs from ships *significantly contribute* to air pollution which may reasonably be anticipated to endanger public health or welfare, he may promulgate such regulations as he deems "appropriate." *Id.* (emphasis added).

⁸⁵ Section 304(a)(3) of the Clean Air Act provides that "the district courts of the United States shall have jurisdiction to compel ... agency action unreasonably delayed," and requires that any person intending to file a legal action against the Administrator for unreasonable delay must provide notice of his or her intention to sue 180 days before commencing such action. 42 U.S.C. §7604; see 40 C.F.R. pt. 54. When notice of intent to sue is based on a failure to act, the notice must identify the provisions of the Clean Air Act that require the agency to take action, and describe the agency's failure to perform. 40 C.F.R. §54.3(a).

Following the *Massachusetts v. EPA* decision, EPA received petitions requesting EPA to regulate GHGs from mobile source categories.⁸⁶ These petitions covered aircraft, ocean-going ships and their fuels, motor fuels in general, locomotives, and nonroad vehicles and engines (construction equipment, farm equipment, logging equipment, outdoor power equipment, forklifts, marine vessels, recreational vehicles, and lawn and garden equipment).⁸⁷ In 2010, petitioners filed an “unreasonable delay” suit against EPA for failing to respond to three separate petitions submitted in 2007 for GHG emissions rulemaking to cover marine vessels, nonroad vehicles, and aircraft engines.⁸⁸ In 2011, the federal district court ruled that EPA has discretion under Section 213 as to whether to issue endangerment findings for GHG emissions from marine vessels and nonroad vehicles.⁸⁹ The court explained that Section 213(a)(4) is “simply silent as to when—or whether—EPA must make endangerment findings; it merely says what EPA ‘may’ do ‘if’ an affirmative finding is made.”⁹⁰ (The court ruled, however, that EPA does not have discretion under Section 231 over whether to make determinations regarding endangerment from aircraft GHG emissions.)⁹¹ In 2012, EPA denied the petitions to regulate GHG and black carbon emissions from nonroad engines and vehicles, including marine vessels and engines.⁹²

Executive Order Implications for GHG Regulation of Mobile Sources

The March 28, 2017, executive order did not specifically address mobile source GHG emission regulations or EPA’s aircraft endangerment finding. While EPA and NHTSA could potentially identify these regulations or findings as rules that burden the “development or use” of energy resources that should be revised or rescinded, EPA and NHTSA would have to initiate a rulemaking to change the rules.

Stationary Sources under Clean Air Act

While mobile sources emit approximately 26% of total U.S. GHG emissions, stationary sources account for about 73% of the nation’s GHG emissions.⁹³ According to EPA, electricity production generates the largest share of GHG emissions from stationary sources, producing 30% of 2014 domestic GHG emissions.⁹⁴

Regulation of GHG Emissions Under CAA Section 111

The Supreme Court’s second decision on GHG emissions, *American Electric Power Co. v. Connecticut (AEP)*,⁹⁵ unanimously held that EPA had authority to regulate GHGs under CAA

⁸⁶ 5 U.S.C. §553(e). For a list of these petitions, see Table 2 in CRS Report R40506, *Cars, Trucks, Aircraft, and EPA Climate Regulations*, by James E. McCarthy and Richard K. Lattanzio.

⁸⁷ *Id.*

⁸⁸ Complaint, *Ctr. for Biological Diversity et al. v. EPA*, No. 10-00985 (D.D.C. Jun. 6, 2010).

⁸⁹ *Ctr. for Biological Diversity et al. v. EPA*, 794 F. Supp. 2d 151, 157-158 (D.D.C. 2011).

⁹⁰ *Id.*

⁹¹ *Id.* at 159-162.

⁹² Memorandum in Response to Petitions Regarding Greenhouse Gas and other Emissions from Marine Vessels and Nonroad Engines and Vehicles (June 18, 2012), available at http://www.eenews.net/assets/2012/06/18/document_pm_06.pdf.

⁹³ EPA, SOURCES OF GREENHOUSE GAS EMISSIONS, at <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>.

⁹⁴ *Id.*

⁹⁵ 564 U.S. 410 (2011).

Section 111(b) with respect to stationary sources. In *AEP*, the Court also held that the CAA displaced federal common law public nuisance claims related to GHG emissions from power plants because Congress had delegated to EPA the decision as to whether and how to regulate GHG emissions from power plants under CAA Section 111.⁹⁶

New Source Performance Standards under Section 111(b)

CAA Section 111(b) directs EPA to establish standards of performance for listed categories of new, modified, or reconstructed stationary sources that “cause[], or contribute[] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.”⁹⁷ These standards are commonly referred to as new source performance standards or NSPSs. CAA Section 111 defines a “standard of performance” as an air pollution emission standard that reflects the “best system of emission reduction” (BSER) that has been “adequately demonstrated.”⁹⁸ In determining the BSER, EPA must take into account the cost of achieving the emission reductions; non-air quality health and environmental impacts; and the energy requirements of the regulated sources.⁹⁹

Emission Guidelines under Section 111(d)

Coincident or after EPA issues CAA Section 111(b) standards for new, modified, and reconstructed sources, CAA Section 111(d) requires EPA to establish, under certain circumstances, standards of performance for *existing* sources in that category. Because Congress established a single definition for standards of performance promulgated pursuant to Sections 111(b) and 111(d), EPA must consider the same factors when establishing standards of performance for new, modified, reconstructed, and existing sources.¹⁰⁰

CAA Section 111(d) directs EPA to establish state plan “procedures,” which are similar to the CAA Section 110 guidelines, which EPA adopts to guide states in developing and revising implementation plans to achieve national ambient air quality standards (NAAQS).¹⁰¹ EPA’s Section 111(d) emission guidelines establish binding requirements that states must address when

⁹⁶ 564 U.S. at 424-26. For further discussion of *AEP*, see “Common Law Nuisance and Political Question Doctrine” section.

⁹⁷ 42 U.S.C. §7411(b)(1)(A). For example, EPA added “municipal solid waste landfills” as a Section 111 source category “because, in the judgement of the [EPA] Administrator, it contributes significantly to air pollution which may reasonably be anticipated to endanger public health and welfare.” Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources: Municipal Solid Waste Landfills, 61 Fed. Reg. 9,905 (March 12, 1996). See also Priority List and Additions to the List of Categories of Stationary Sources; Final Rule, 44 Fed. Reg. 49,222, 49,226 (Aug. 21, 1979) (listing “crude oil and natural gas production” as a source category under Section 111). Once EPA has promulgated new standards, states are allowed to develop and submit to EPA for approval a procedure for implementing and enforcing the standards of performance for new, modified, or reconstructed stationary sources. 42 U.S.C. §7411(b)(6). If the state procedure is approved, EPA will delegate implementation and enforcement authority to the state. *Id.*

⁹⁸ 42 U.S.C. §7411(a).

⁹⁹ *Id.*

¹⁰⁰ Compare 42 U.S.C. §7411(b)(1)(B) (requiring EPA to establish “standards of performance”), with 42 U.S.C. §7411(d)(1) (requiring EPA to establish a procedure “under which each State shall submit ... a plan which ... establishes standards of performance for any existing source”). The definition of “standards of performance” is provided under 42 U.S.C. §7411(a)(1), and applies to the provisions under Section 111.

¹⁰¹ *Id.*; see also 42 U.S.C. §7410.

they develop plans to implement standards of performance for existing sources in their jurisdictions.¹⁰²

Power Plants

In 2011, EPA finalized a settlement agreement with states and others to promulgate NSPSs for GHG emissions from new, modified, and reconstructed fossil fuel-fired power plants under Section 111(b), and emission guidelines covering existing power plants under CAA Section 111(d).¹⁰³ In October 2015, EPA finalized the Section 111(b) NSPSs for GHGs from new power plants and Section 111(d) emission guidelines for GHGs from existing power plants.¹⁰⁴

Both rules have been challenged in the D.C. Circuit; EPA's Section 111(d) emission guidelines rule, known as the Clean Power Plan (CPP), is stayed during the litigation.¹⁰⁵ On September 27, 2016, the en banc court heard oral arguments for the CPP,¹⁰⁶ but has not issued a decision yet. To resolve litigation challenging the Section 111(b) NSPSs for new power plants, a separate the three-judge panel has scheduled oral argument for April 17, 2017.¹⁰⁷

In the March 28, 2017, executive order, President Trump directed EPA to take "immediate steps" to review the CPP and the GHG standards for new power plants, and, if the rules were inconsistent with the Administration's policy to promote coal, oil, natural gas, and nuclear energy production and use, to initiate a rulemaking to suspend, revise, or rescind the rules.¹⁰⁸ The executive order also requires EPA to review its proposed plan for states that choose not to develop their own plans to implement the CPP.¹⁰⁹ Under the executive order, EPA must notify the Attorney General of actions affecting the rules so that the Attorney General can take "appropriate" action in related litigation.¹¹⁰ On March 28, 2017, the Department of Justice filed motions in both power plant cases, seeking to hold the cases in abeyance until 30 days after EPA completes its review of the rules and subsequent rulemakings resulting from its review.¹¹¹

The executive order also directs EPA to review and potentially revise or rescind the legal memorandum that EPA released with the final rule.¹¹² It is possible that EPA could revise its

¹⁰² 42 U.S.C. §7411(d)(1).

¹⁰³ See Settlement Agreement, *New York v. EPA*, No. 06-1322; and *Am. Petroleum Inst. v. EPA*, No. 08-1277 (D.C. Cir. Dec. 23, 2010), available at <http://www2.epa.gov/sites/production/files/2013-09/documents/boilerghgsettlement.pdf>.

¹⁰⁴ Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 Fed. Reg. 64,661 (Oct. 23, 2015) [hereinafter *Clean Power Plan*]; Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," Final Rule, 80 Fed. Reg. 64,510 (Oct. 23, 2015) [hereinafter *New Power Plant NSPS*].

¹⁰⁵ For more information on the litigation and the stay, see CRS Report R44480, *Clean Power Plan: Legal Background and Pending Litigation in West Virginia v. EPA*, by Linda Tsang and Alexandra M. Wyatt.

¹⁰⁶ See *id.*; see also Ellen M. Gilmer, *Clean Power Plan: Oral Arguments: The Blow by Blow*, E&E NEWS, September 28, 2016, <http://www.eenews.net/stories/1060043538>.

¹⁰⁷ Order, *North Dakota, et. al., v. EPA*, No. 15-1381 (D.C. Cir. Dec. 2, 2016).

¹⁰⁸ Exec. Order, Promoting Energy Independence and Economic Growth §4 (Mar. 28, 2017).

¹⁰⁹ *Id.* §4(b)(iii).

¹¹⁰ *Id.* §4(d).

¹¹¹ Notice of Exec. Order, EPA Review of Clean Power Plan and Forthcoming Rulemaking, and Motion to Hold Cases in Abeyance, *West Virginia, et. al. v. EPA*, No. 15-1363 (D.C. Cir. Mar. 28, 2017); Notice of Exec. Order, EPA Review of Rule and Forthcoming Rulemaking, and Motion to Hold Cases in Abeyance, *North Dakota, et. al. v. EPA*, No. 15-1381 (D.C. Cir. Mar. 28, 2017).

¹¹² Exec. Order, Promoting Energy Independence and Economic Growth §4(c) (Mar. 28, 2017).

interpretation of two different versions of a 1990 amendment to CAA Section 111(d) to accord with the view that regulation of hazardous air pollutant from power plants under CAA Section 112 bars EPA's regulation of CO₂ emissions from power plants under CAA Section 111(d).¹¹³ It is also possible that, through a new rulemaking, EPA could rescind the NSPS for new power plants, which is a prerequisite for EPA's authority under Section 111(d) to regulate existing power plants.¹¹⁴ Administrator Pruitt has also mentioned that EPA may reconsider its 2009 endangerment finding¹¹⁵ that underlies almost all CAA GHG regulation.¹¹⁶ All of these options would effectively remove EPA's authority to implement the CPP or issue any Section 111(d) emission guidelines for existing power plants.

EPA could also revise the stringency of the GHG standards and emissions guidelines for new power plants and focus the emission guidelines on what GHG reductions for existing power plants can achieve "inside the fenceline."¹¹⁷ Exercising these options would affect issues central to litigation over the rules. Petitioners have argued that EPA exceeded its authority in basing the best system for emission reduction for new power plants on carbon capture and sequestration technology and going beyond the fenceline of existing power plants to achieve greater GHG reductions.¹¹⁸ Further, retaining some version of the GHG power plant rules would support that EPA has fulfilled its duty to promulgate GHG regulations for power plants pursuant to the judicial settlement agreement that initiated, in part, the promulgation of these rules.¹¹⁹

As discussed above, for EPA to pursue any of these actions, the agency would have to go through a new rulemaking and would be required to provide a "reasonable justification" for reversing course on the legal theories that supported the rules or reducing the stringency of the GHG standards.¹²⁰

Refineries

Petroleum refineries have been subject to NSPSs for a variety of pollutants since the CAA was passed in 1970.¹²¹ In 2010, EPA entered into a judicial settlement that required EPA to issue

¹¹³ See discussion of the Section 112 Exclusion in CRS Report R44480, *Clean Power Plan: Legal Background and Pending Litigation in West Virginia v. EPA*, by Linda Tsang and Alexandra M. Wyatt.

¹¹⁴ See *id.*, "Clean Air Act Section 111" section.

¹¹⁵ See *supra* "Reducing GHG Emissions" section.

¹¹⁶ Coral Davenport, *E.P.A. Chief Doubts Consensus View of Climate Change*, N.Y. Times, Mar. 9, 2017. One stakeholder has filed a petition for reconsideration of the 2009 endangerment finding. See Petition of the Competitive Enterprise Institute and the Science and Environmental Policy Project for Rulemaking on the Subject of Greenhouse Gases and Their Impact on Public Health and Welfare, in Connection with EPA's 2009 Endangerment Finding, 74 FR 66,496 (Dec. 15, 2009) (filed on Feb. 17, 2017).

¹¹⁷ Petitioners challenging the CPP have argued that Section 111 authorizes EPA to require only measures that can be applied to the "performance" of an individual "source" (also known as measures "inside the fenceline"), such as adoption of pollution control devices or other design or operational standards. See *generally* Opening Br. of Pet'rs on Core Legal Issues, at 29-61, *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. Feb. 19, 2016).

¹¹⁸ See "Section 111(d) Scope of Authority" and "North Dakota v. EPA: Section 111(b) Litigation" sections, CRS Report R44480, *Clean Power Plan: Legal Background and Pending Litigation in West Virginia v. EPA*, by Linda Tsang and Alexandra M. Wyatt.

¹¹⁹ See Settlement Agreement, *supra* note 103.

¹²⁰ See CRS Legal Sidebar WSLG888, *How to Repeal a Rule*, by Jared P. Cole, The Federal Rulemaking Process: An Overview, coordinated by Maeve P. Carey.

¹²¹ See Standards of Performance for Electric Utility Steam Generating Units, 40 C.F.R. pt. 60, subpt. Da (specifying rate-based performance standards or percent reduction standards for particulate matter, sulfur dioxide, and nitrogen oxides from power plants built after certain dates); National Emission Standards for Hazardous Air Pollutants: Coal-

regulations addressing GHGs from petroleum refineries.¹²² The deadline for a final refinery rule identified in the settlement was originally November 10, 2012.¹²³ At EPA's request, this deadline was extended four times.¹²⁴

During these delays, EPA was working to finalize the NSPSs and emission guidelines to address CO₂ emissions from power plants, and methane emissions from oil and gas sources.¹²⁵ In the most recent status report filed with the court, EPA stated that it is “working diligently” on a rule and will continue to assess how best to resolve the remaining obligations (including the promulgation of a GHG rule for refineries) from the settlement agreement.¹²⁶ As part of the agreement, the environmental groups and states have retained the right to sue the EPA if the agency does not meet its obligations.¹²⁷

Regulation of Methane Emissions from Stationary Sources

One of the initiatives in the Obama Administration's CAP focused on controlling methane emissions, a short-lived climate pollutant with a potential Global Warming Potential¹²⁸ of more than 25 times that of CO₂.¹²⁹ EPA and other federal agencies developed an interagency “Strategy to Reduce Methane Emissions” (Methane Strategy) that outlined voluntary actions and potential agency rulemakings to cut methane emissions.¹³⁰ To implement the strategy, EPA focused on updating and revising NSPSs and emissions guidelines to reduce methane emissions from new and existing municipal landfills and sources in the oil and gas sector.¹³¹ The Department of the Interior's Bureau of Land Management (BLM) released a rule to address the venting and flaring

and Oil-Fired Electric Utility Steam Generating Units, 40 C.F.R. pt. 63, subpt. UUUUU (specifying standards to limit mercury, acid gases and other hazardous air pollution from power plants).

¹²² See Settlement Agreement, *New York v. EPA*, No. 06-1322; and *Am. Petroleum Inst. v. EPA*, No. 08-1277 (D.C. Cir. Dec. 23, 2010), available at <https://www.epa.gov/sites/production/files/2013-09/documents/refineryghgsettlement.pdf> [hereinafter *Refinery Settlement Agreement*].

¹²³ *Id.* at 4.

¹²⁴ Maria Chutchian, *EPA Will Miss 2012 Deadline For GHG Refinery Rule*, LAW360, Feb. 29, 2012, <https://www.law360.com/articles/314527>.

¹²⁵ See *supra* “Power Plants” and “Regulation of Methane Emissions from Stationary Sources” sections.

¹²⁶ Status Report, *Am. Petroleum Inst. v. EPA*, No. 08-1277 (D.C. Cir. Feb. 14, 2017).

¹²⁷ *Refinery Settlement Agreement*, *supra* footnote 122, at 6.

¹²⁸ The Global Warming Potential (GWP) is a metric adopted by EPA to compare the climate impacts of different gases. EPA, *Understanding Global Warming Potentials*, <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>. The GWP measures the total energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO₂. *Id.*

¹²⁹ Methane (CH₄) is estimated to have a GWP of 28–36 over 100 years. *Id.* For additional information on the GWP of methane, see CRS Report R43860, *Methane: An Introduction to Emission Sources and Reduction Strategies*, coordinated by Richard K. Lattanzio.

¹³⁰ Exec. Off. of the President, *Climate Action Plan: Strategy to Reduce Methane Emissions 1-2* (2014), available at <https://obamawhitehouse.archives.gov/blog/2014/03/28/strategy-cut-methane-emissions> [hereinafter *Methane Strategy*]. For additional information and background on methane and the Strategy, see CRS Report R43860, *Methane: An Introduction to Emission Sources and Reduction Strategies*, coordinated by Richard K. Lattanzio.

¹³¹ Standards of Performance for Municipal Solid Waste Landfills, Final Rule, 81 Fed. Reg. 59,332 (Aug. 29, 2016) (codified at 40 C.F.R. pt. 60, subpt. XXX) [hereinafter *2016 Landfill NSPS*]; Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills; Final Rule, 81 Fed. Reg. 59,276 (Aug. 29, 2016) (codified at 40 C.F.R. pt. 60, subpt. WWW); Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, Final Rule, 81 Fed. Reg. 35,824, at 35,840, 35,848 (June 3, 2016) (to be codified at 40 C.F.R. pt. 60, subpts. OOOO and OOOOa) [hereinafter “2016 Oil & Gas NSPS”].

of methane gas on federal and Indian lands.¹³² This section will review these rules and related legal challenges and pending congressional actions.

Municipal Landfills

In response to a consent decree resolving a lawsuit¹³³ and the Obama Administration's goal to reduce methane under the CAP,¹³⁴ EPA proposed updates to the 1996 municipal solid waste (MSW) landfill NSPSs and emission guidelines in 2014.¹³⁵ Over 20 years after the original NSPSs and emission guidelines were issued, EPA published on August 29, 2016, its updated NSPSs to reduce landfill gas emissions from MSW landfills built, modified, or reconstructed after July 17, 2014.¹³⁶ EPA also revised emission guidelines for existing landfills operating prior to that date.¹³⁷ Both rules became effective on October 28, 2016.¹³⁸ While the March 28, 2017, executive order did not address specifically the MSW landfill rules, EPA could potentially identify these regulations as burdening the “development or use” of energy resources and recommend their revision or rescission.¹³⁹ EPA would then have to initiate a rulemaking to do so.¹⁴⁰

Industry trade associations and waste management and recycling companies have challenged EPA's 2016 revised emission guidelines for existing MSW landfills in the D.C. Circuit.¹⁴¹ The court has not set a briefing schedule yet. Petitioners challenging the landfill emissions guidelines question whether EPA has the authority to revise the 1996 emission guidelines for existing MSW landfills under CAA Section 111(d).¹⁴² Pursuant to CAA Section 111(b), EPA is required “at least every 8 years [to] review and, if appropriate, revise” NSPSs for new, modified, and reconstructed

¹³² Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 83,008 (Nov. 18, 2016).

¹³³ Environmental Defense Fund filed a lawsuit against EPA for failure to review the 1996 NSPS by the statutorily required deadline. *Env'tl Def. Fund v. EPA*, No. 1:11-cv-04492 (S.D.N.Y. June 30, 2011). Under a consent decree resolving that lawsuit, EPA agreed to review the 1996 landfill NSPS and take final action on whether to revise them. Consent Decree, *Env'tl Def. Fund v. EPA*, No. 1:11-cv-04492 (S.D.N.Y. October 1, 2012).

¹³⁴ *Methane Strategy*, *supra* note 130. For additional information and background on methane and the Strategy, see CRS Report R43860, *Methane: An Introduction to Emission Sources and Reduction Strategies*, coordinated by Richard K. Lattanzio.

¹³⁵ In 1996, EPA listed MSW landfills as a CAA Section 111 source category, and issued NSPSs for new, modified, and reconstructed MSW landfills pursuant to Section 111(b) and emission guidelines for existing landfills pursuant to Section 111(d) to address nonmethane organic compounds (NMOCs) and methane emissions. Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources: Municipal Solid Waste Landfills, 61 Fed. Reg. 9,905 (March 12, 1996). For additional information on previous MSW emission standards, see CRS Report R43860, *Methane: An Introduction to Emission Sources and Reduction Strategies*, coordinated by Richard K. Lattanzio, and CRS Report R44615, *EPA's Recent Methane Regulations: Legal Overview*, by Linda Tsang.

¹³⁶ See 2016 Landfill NSPS. For additional information on landfill standards, see CRS Report R43860, *Methane: An Introduction to Emission Sources and Reduction Strategies*, coordinated by Richard K. Lattanzio, and CRS Report R44615, *EPA's Recent Methane Regulations: Legal Overview*, by Linda Tsang.

¹³⁷ Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills; Final Rule, 81 Fed. Reg. 59,276 (Aug. 29, 2016) (codified at 40 C.F.R. pt. 60, subpt. WWW).

¹³⁸ *Id.*; 2016 Landfill NSPS, at 59,322.

¹³⁹ Exec. Order, Promoting Energy Independence and Economic Growth §2 (Mar. 28, 2017).

¹⁴⁰ *Id.* §2(g).

¹⁴¹ *Nat'l Waste & Recycling Ass'n v. EPA*, No. 16-1371 (D.C. Cir., filed Oct. 27, 2016); *Utility Air Regulatory Group v. EPA*, No. 16-1374 (D.C. Cir., filed Oct. 28, 2016).

¹⁴² Nonbinding Statement of Issues of Petition *Utility Air Reg. Group*, No. 16-1374 (consolidated with No. 16-1371) (D.C. Cir. Dec. 1, 2016). For additional information on this legal argument, see CRS Report R44615, *EPA's Recent Methane Regulations: Legal Overview*, by Linda Tsang.

sources.¹⁴³ However, Section 111(d) does not include a similar mandated review period for emission guidelines for *existing* sources.¹⁴⁴ EPA’s implementing regulations for Section 111(d) emission guidelines only address revisions to the agency’s determination regarding adverse public health effects that may alter compliance times under the guidelines and require states to make corresponding revisions to their state plans.¹⁴⁵

A ruling upholding EPA’s implicit authority to review and revise Section 111(d) guidelines would support future EPA review and revision of other Section 111(d) emissions guidelines to require additional emission reductions based on a new analysis of the “best system of emission reduction.”¹⁴⁶ For example, if EPA follows the Section 111(b) eight-year review cycle, EPA could consider revisions of the CPP (if upheld) in 2023—one year after the CPP’s first mandatory emission reduction period starts.¹⁴⁷

Sources from the Oil & Gas Sector

In 2012, EPA issued a final rule setting standards of performance to limit emissions of VOCs from new, reconstructed, and modified sources in the oil and gas industry pursuant to CAA Section 111(b) (2012 NSPSs).¹⁴⁸ In response to the Methane Strategy and petitions for reconsideration of the 2012 NSPSs to address methane emissions,¹⁴⁹ EPA issued a rule revising and updating the 2012 NSPSs on June 3, 2016.¹⁵⁰ EPA’s final rule amends the 2012 NSPS, expanding the emission sources covered by the rule, and establishes performance standards for GHGs (in the form of methane limitations) from a number of oil and gas emission sources.¹⁵¹ The

¹⁴³ 42 U.S.C. §7411(b)(1)(B).

¹⁴⁴ See *id.* §7411(d).

¹⁴⁵ See 40 C.F.R. §60.22(d) (requiring EPA to “publish notice of the determination in the Federal Register, revise the guideline document as necessary ... , and propose and promulgate emission guidelines and compliance times” if the agency concludes that on the basis of new information that a prior determination regarding adverse health effects of a designated pollutant is incorrect or no longer correct).

¹⁴⁶ In addition to the Clean Power Plan and the 1996 guidelines for landfills, EPA has issued Section 111(d) emission guidelines to address acid mist from sulfuric acid production units; fluoride emissions from phosphate fertilizer plants; reduced sulfur emissions from kraft pulp mills; and fluoride emissions from primary aluminum plants. See 80 Fed. Reg. 64,662 (October 23, 2015); 61 Fed. Reg. 9,905 (Mar. 12, 1996); 60 Fed. Reg. 65,387 (December 19, 1995); 45 Fed. Reg. 26,294 (Apr. 17, 1980); 44 Fed. Reg. 29,828 (May 22, 1979); 42 Fed. Reg. 12,022 (Mar. 1, 1977). In addition, EPA’s 2005 Clean Air Mercury Rule (CAMR) delisted coal-fired power plants from CAA Section 112 and, instead, established a cap-and-trade system for mercury under Section 111(d). 70 Fed. Reg. 28,606 (May 18, 2005). The D.C. Circuit Court vacated CAMR in 2008 on grounds unrelated to the guidelines’ substantive requirements. See *New Jersey v. EPA*, 517 F.3d 574, 581-84 (D.C. Cir. 2008) (holding that EPA’s delisting of the source category from Section 112 was unlawful and that EPA was obligated to promulgate standards for mercury and other hazardous air pollutants under § 112).

¹⁴⁷ Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64,662, 64,673 (October 23, 2015).

¹⁴⁸ Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews; Final Rule, 77 Fed. Reg. 49,542 (Aug. 16, 2012) (codified at 40 C.F.R. pt. 60, subpt. OOOO).

¹⁴⁹ See *e.g.*, Clean Air Council et al., Petition for Reconsideration, In the Matter of: Final Rule Published at 77 FR 49490 (Aug. 16, 2012).

¹⁵⁰ Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, Final Rule, 81 Fed. Reg. 35,824, at 35,840, 35,848 (June 3, 2016) (to be codified at 40 C.F.R. pt. 60, subpts. OOOO and OOOOa) (hereinafter “2016 Oil & Gas NSPS”); 42 U.S.C. §7411. The rule took effect on Aug. 2, 2016, and remains in effect during litigation unless the petitioners seek and are granted a stay of implementation of the rule by the court. *Id.* at 35,824.

¹⁵¹ *Id.* at 35,825. For additional information on the requirements of the rule, see CRS Report R43860, *Methane: An Introduction to Emission Sources and Reduction Strategies*, coordinated by Richard K. Lattanzio, and CRS Report

March 28, 2017, executive order requires EPA to review this rule, and if inconsistent with the Administration's policy to promote coal, oil, natural gas, and nuclear energy production and use, initiate a rulemaking to suspend, revise, or rescind the rule.¹⁵²

North Dakota,¹⁵³ Texas (including the Railroad Commission of Texas and the Texas Commission on Environmental Quality as named parties),¹⁵⁴ a coalition of 14 states (including several state agencies),¹⁵⁵ and various gas associations filed petitions for review of the final rule.¹⁵⁶ Nine states and the city of Chicago moved to intervene on behalf of EPA to support the final rule.¹⁵⁷ In addition, environmental advocacy groups filed their own motion to intervene in the case.¹⁵⁸ All petitions have been consolidated with the lead case, *North Dakota v. EPA*.¹⁵⁹

Based on the preliminary statements of issues filed, the petitioners claim, among other things, that EPA exceeded its statutory authority; failed to make the required "endangerment finding" for methane from the oil and gas sector under CAA Section 111; and "unlawfully" expanded the listed oil and natural gas sector source category to additional types of emission sources not previously regulated.¹⁶⁰ The final litigated issues will be presented in the petitioners' briefs, which have not been filed yet.¹⁶¹ On April 7, 2017, the Department of Justice filed a motion, seeking to hold the cases in abeyance until 30 days after EPA completes its review of the rules and subsequent rulemakings resulting from its review.¹⁶²

In 2016, EPA sent an Information Collection Request (ICR) to oil and natural gas companies seeking information on their existing oil and gas sources as a first step to regulating their methane emissions.¹⁶³ Effective March 2, 2017, EPA withdrew the ICR to assess the need for this

R44615, *EPA's Recent Methane Regulations: Legal Overview*, by Linda Tsang.

¹⁵² Exec. Order, Promoting Energy Independence and Economic Growth §7 (Mar. 28, 2017).

¹⁵³ Petition for Review, *North Dakota v. EPA*, No. 16-1242 (D.C. Cir. July 15, 2016).

¹⁵⁴ Petition for Review, *Texas et al. v. EPA*, No. 16-1257 (D.C. Cir. July 28, 2016).

¹⁵⁵ Petition for Review, *West Virginia et al. v. EPA*, No. 16-1264 (D.C. Cir. Aug. 2, 2016). Besides West Virginia, the state coalition includes Alabama, Arizona, Kansas, Kentucky, Louisiana, Att'y Gen. Bill Schuette for the people of Michigan, Montana, Ohio, Oklahoma, South Carolina, Wisconsin, Kentucky Energy and Environment Cabinet, and the North Carolina Department of Environmental Quality. *Id.* On March 20, 2017, the court granted North Carolina Department of Environmental Quality's motion to withdraw as a petitioner. Clerk's Order, *West Virginia et al. v. EPA*, No. 16-1264 (D.C. Cir. Mar. 20, 2016).

¹⁵⁶ Petition for Review, *W. Energy Alliance v. EPA*, No. 16-1266 (D.C. Cir. Aug. 2, 2016); Petition for Review, *Indep. Petroleum Ass'n of Am. et al. v. EPA*, No. 16-1262 (D.C. Cir. Aug. 2, 2016); Petition for Review, *Interstate Nat. Gas Ass'n*, No. 16-1263 (D.C. Cir. Aug. 2, 2016); Petition for Review, *GPA Midstream Gas Ass'n*, No. 16-1267 (D.C. Cir. Aug. 2, 2016); Petition for Review, *Texas Oil & Gas Ass'n*, No. 16-1269 (D.C. Cir. Aug. 2, 2016); Petition for Review, *Am. Petroleum Inst.*, No. 16-1270 (D.C. Cir. Aug. 2, 2016).

¹⁵⁷ Unopposed Mot. California, Connecticut, Illinois, New Mexico, New York, Oregon, Rhode Island, Vermont, Massachusetts, and the City of Chicago for Leave to Intervene as Resp'ts, *North Dakota v. EPA*, No. 16-1242 (D.C. Cir. Aug. 15, 2016).

¹⁵⁸ Nat. Res. Def. Council, Env'tl. Def. Fund, Sierra Club, Clean Air Council, Earthworks, and Env'tl. Integrity Project Motion to Intervene as Resp'ts, *North Dakota v. EPA*, No. 16-1242 (D.C. Cir. Aug. 15, 2016).

¹⁵⁹ See Clerk's Order, *North Dakota v. EPA*, No. 16-1242 (D.C. Cir. Aug. 8, 2016).

¹⁶⁰ See Petitioner N.D.'s Statement of Issues to be Raised, *North Dakota v. EPA*, No. 16-1242 (D.C. Cir. Aug. 22, 2016); Petitioner W. Energy Alliance Non-Binding Statement of Issues to be Raised, *North Dakota v. EPA*, No. 16-1242 (D.C. Cir. Sept. 1, 2016).

¹⁶¹ D.C. CIR. R. 28(a)(5).

¹⁶² Notice of Exec. Order and Motion to Hold Cases in Abeyance, *Am. Petroleum Inst. v. EPA*, No. 13-1108 (D.C. Cir. Apr. 7, 2017).

¹⁶³ Proposed Information Collection Request; Comment Request; Information Collection Effort for Oil and Gas Facilities, 81 Fed. Reg. 35,763 (June 3, 2016).

information and to reduce the burden to businesses during this assessment.¹⁶⁴ The ICR withdrawal was issued shortly after nine state attorneys general and two governors submitted a letter to EPA, asking that the ICR be suspended and withdrawn.¹⁶⁵

Venting and Flaring of Methane Gas

On November 18, 2016, BLM promulgated new regulations to reduce the loss of natural gas (and methane which is a primary component of natural gas) from venting, flaring, and leaks during oil and natural gas production activities on onshore federal and Indian leases.¹⁶⁶ These regulations replace the existing provisions related to venting, flaring, and royalty-free use of gas issued 30 years prior under the Mineral Leasing Act of 1920.¹⁶⁷ The rule requires owners and operators of both new and existing federal and Indian oil and gas leases to implement comprehensive methane leak detection and repair (LDAR) programs throughout their extraction, storage and transmission infrastructures, and will also place new restrictions on the venting and flaring of methane during drilling and storage operations on those leases by establishing stringent new methane emissions reduction and capture targets.¹⁶⁸ By January 17, 2018, lessees will be required to recover or flare 85% of all methane produced on federal and Indian oil and gas leases.¹⁶⁹ That number increases to 95% in 2020, and to 98% beginning in 2026.¹⁷⁰

The rule was immediately challenged. On November 28, 2016, the Western Energy Alliance, Independent Petroleum Association of America, and the States of Wyoming, Montana, and North Dakota filed petitions for review with the U.S. District Court in the District of Wyoming.¹⁷¹ The petitioners claim, among other things, that BLM exceeded its statutory authority by attempting to regulate atmospheric emissions of methane—an authority the petitioners argue that Congress explicitly delegated to the states and the EPA.¹⁷² On March 21, 2017, Texas filed a motion to intervene as a petitioner in the lawsuit.¹⁷³ Since the court has denied the petitioners' motion for a preliminary injunction, the rule took effect on January 17, 2017.¹⁷⁴

Since the initial petition was filed, 15 environmental advocacy groups and NGOs, in addition to the States of California and New Mexico, have intervened on behalf of BLM in support of the new rule. Supporters of the rule and BLM argue that Congress delegated authority to BLM to

¹⁶⁴ Notice Regarding Withdrawal of Obligation To Submit Information, 82 Fed. Reg. 12,817 (Mar. 7, 2017).

¹⁶⁵ Letter from Ken Paxton, Att'y. Gen., Texas, to Scott Pruitt, Admin., EPA (Mar. 1, 2017), *available at* https://www.epa.gov/sites/production/files/2017-03/documents/letter_from_attorneys_general_and_governors.pdf.

¹⁶⁶ Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 83,008 (Nov. 18, 2016).

¹⁶⁷ 43 C.F.R. pt. 3160.

¹⁶⁸ 81 Fed. Reg. at 83,010.

¹⁶⁹ *Id.* at 83,011.

¹⁷⁰ *Id.*

¹⁷¹ Wyoming v. Dep't. of Interior, No. 2:16-cv-00285 (D. Wyo., filed Nov. 15, 2016) (lead case in the consolidated cases). The court denied petitioners' motion for a preliminary injunction to block the rule pending resolution of the litigation. Orders on Motions for Preliminary Injunction, Wyoming v. Dep't. of Interior, No. 2:16-cv-00280 (D. Wyo. Jan. 16, 2017). http://wordpress2.ei.columbia.edu/climate-change-litigation/files/case-documents/2017/20170116_docket-216-cv-00285_order.pdf?mc_cid=32fd774ef0&mc_eid=53146628a6.

¹⁷² Orders on Motions for Preliminary Injunction, Wyoming v. Dep't. of Interior, No. 2:16-cv-00280 (D. Wyo. Jan. 16, 2017).

¹⁷³ Unopposed Motion to Intervene as Petitioner for Review of Final Agency Action, No. 2:16-cv-00280 (D. Wyo. Mar. 21, 2017).

¹⁷⁴ Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. at 83,008.

consider environmental impacts in the promulgation of rules and regulations regarding the use of federal lands.¹⁷⁵

As the litigation continues, Congress is taking action to repeal the BLM venting and flaring rule. On February 3, 2017, the House voted 221-191 to approve H.J.Res. 36, a Congressional Review Act (CRA) resolution to disapprove the rule.¹⁷⁶ The resolution is now being considered in the Senate, where Environment and Public Works Chairman John Barrasso has introduced a separate CRA resolution of disapproval, S.J.Res. 11.¹⁷⁷ Supporters of the rule claim that it will reduce methane pollution, and put more natural gas into the energy market by capturing the gas.¹⁷⁸ Opponents of the rule argue that it restricts the industry, affects employment, and potentially raises natural gas prices.¹⁷⁹ Industry groups claim the rule will “further impede oil and natural gas production on federal land, which already has been declining” and is redundant of voluntary efforts and existing state regulations to reduce methane gas releases.¹⁸⁰

The March 28, 2017, executive order requires BLM to review this rule, and if inconsistent with the Administration’s policy to promote coal, oil, natural gas, and nuclear energy production and use, initiate a rulemaking to suspend, revise, or rescind the rule.¹⁸¹

Regulation of GHG Emissions from Stationary Sources through Permits

EPA interpreted the mobile source GHG regulations under CAA Section 202 as triggering regulations under the Prevention of Significant Deterioration (PSD) program¹⁸² and Title V permitting program.¹⁸³ The PSD program imposes requirements in addition to those in Section 111 for new or modified stationary emission sources in areas that have met or exceeded the national ambient air quality standards (NAAQSs).¹⁸⁴ This program requires preconstruction permits for new major emitting facilities and new major modifications.¹⁸⁵ PSD permits contain emission limits based on the best available control technology (BACT) for each regulated pollutant emitted from that source.¹⁸⁶

¹⁷⁵ See Federal Respondents’ Consolidated Opposition to Petitioners’ and Petitioner-Intervenor’s Motions for Preliminary Injunction & Citizen Groups’ Response to Motions for a Preliminary Injunction, No 2:16-cv-00280 (D. Wyo. Dec. 15, 2016).

¹⁷⁶ H.J.Res. 36, 115th Cong. (2017). For more information regarding the Congressional Review Act, see CRS Report R43992, *The Congressional Review Act (CRA): Frequently Asked Questions*, by Maeve P. Carey and Christopher M. Davis; CRS In Focus IF10023, *The Congressional Review Act (CRA)*, by Maeve P. Carey and Christopher M. Davis; and CRS Insight IN10660, *What Is the Effect of Enacting a Congressional Review Act Resolution of Disapproval?*, by Maeve P. Carey.

¹⁷⁷ S.J.Res. 11, 115th Cong. (2017).

¹⁷⁸ See Devin Henry, *House Votes to Overturn Obama Drilling Rule*, THE HILL, Feb. 3, 2017, <http://thehill.com/policy/energy-environment/317739-house-votes-to-overturn-obama-oil-and-gas-rule>; Pamela King, *Westerners Fear GOP’s ‘morally outrageous’ BLM Rule Rollback*, E&E NEWS, Feb. 3, 2017, <http://www.eenews.net/stories/1060049488>.

¹⁷⁹ See Rep. Kevin McCarthy, BLM Methane Venting and Flaring Rule, <https://www.majorityleader.gov/2017/02/02/blm-methane-venting-flaring-rule/>.

¹⁸⁰ Devin Henry, *House Votes to Overturn Obama Drilling Rule*, THE HILL, Feb. 3, 2017.

¹⁸¹ Exec. Order, Promoting Energy Independence and Economic Growth §7(b)(iv) (Mar. 28, 2017).

¹⁸² 42 U.S.C. §§7470-7479.

¹⁸³ See *id.* §§7661-7661f, 7602(j).

¹⁸⁴ *Id.* §§7475-7479.

¹⁸⁵ *Id.* §7475(a)(4).

¹⁸⁶ *Id.* §7475(a)(4).

The Title V program requires major sources of air pollutants and certain other sources to obtain and operate in compliance with an operating permit, commonly referred to as Title V operating permits.¹⁸⁷ These permits include pollution control requirements from federal or state regulations that apply to the source, as well as other applicable air permits such as a PSD permit.¹⁸⁸ Sources with these Title V permits are required by the act to certify compliance with the applicable requirements of their permits at least annually.¹⁸⁹

The Supreme Court's third major decision on GHG emissions, *Utility Air Regulatory Group v. EPA (UARG)*, rejected EPA's argument that its regulation of motor vehicle GHG emissions required it to regulate GHG emissions from stationary sources under the PSD and Title V programs.¹⁹⁰ The Court held that EPA's regulation of vehicle GHG emissions does *not* give EPA unqualified authority to require PSD and Title V permitting programs to stationary source GHG emissions.¹⁹¹

As the Court explained, just because the phrase "air pollutant" encompasses GHGs in some provisions of the CAA, which it had held in *Massachusetts v. EPA*, the phrase "air pollutants" does not necessarily include GHGs in all the CAA provisions, such as in the PSD and Title V sections.¹⁹² Reading "air pollutant" to include GHG emissions in these permit programs, the Court reasoned, creates a staggering administrative workload because of the low emission thresholds that trigger those programs, and the huge number of sources that satisfy those thresholds for CO₂, the primary GHG.¹⁹³ The administrative unwieldiness of demanding PSD and Title V permits for so many sources argued strongly, in the Court's view, against a GHG-inclusive reading of those programs.¹⁹⁴ Nor did the Court allow EPA, through its "Tailoring Rule,"¹⁹⁵ to raise the low statutory emission thresholds to 75,000 tons per year (tpy) CO₂-equivalents (CO₂-e) in an effort to ease the permit-issuing workload, since the CAA states the thresholds in absolute numerical terms.¹⁹⁶

The Court allowed, however, that EPA could impose one aspect of the PSD program with respect to GHGs. When PSD permitting is required because a new (or modified) source emits a

¹⁸⁷ *Id.* Detailed requirements of the Title V permitting program are set forth at 40 C.F.R. pt. 70 for state-issued Title V permits and pt. 71 for federally-issued permits. For more information about the Clean Air Act, see CRS Report RL30853, *Clean Air Act: A Summary of the Act and Its Major Requirements*, by James E. McCarthy and Claudia Copeland.

¹⁸⁸ *Id.* §7661c(f).

¹⁸⁹ 40 C.F.R. §70.5.

¹⁹⁰ *Util. Air Regulatory Group [UARG] v. EPA*,—U.S.—, 134 S. Ct. 2427, 2439-46 (2014).

¹⁹¹ *Id.*

¹⁹² *Id.* at 2439-32.

¹⁹³ *Id.*

¹⁹⁴ *Id.* at 2442-44. "[T]he PSD program and Title V are designed to apply to, and cannot be extended beyond, a relative handful of large sources capable of shouldering heavy substantive and procedural burdens." *Id.* at 2443.

¹⁹⁵ On May 13, 2010, EPA finalized its "tailoring" rule aimed to relieve the overwhelming permitting burdens that EPA asserted would, in the absence of the rule, fall on PSD and Title V permitting authorities beginning January 2, 2011—the effective date of the light-duty vehicle rule discussed above. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31,514 (June 3, 2010). Because current low emission thresholds in the act would trigger many smaller sources to become subject to the permitting programs for the first time, EPA issued the tailoring rule to raise those thresholds. In 2012, the D.C. Circuit upheld the tailoring rule. *Coalition for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102 (D.C. Cir. 2012). The Supreme Court granted certiorari, but limited review to one narrow question: "[w]hether EPA permissibly determined that its regulation of greenhouse gas emissions from new motor vehicles triggered permitting requirements under the [CAA] for stationary sources that emit greenhouse gases."

¹⁹⁶ *UARG v. EPA*, 134 S. Ct. at 2444-46.

“conventional” non-GHG pollutant at or above threshold quantities, the Court concluded that EPA also may impose the BACT requirement of the PSD program on these “anyway” sources that emitted more than a *de minimis* amount of GHG emissions.¹⁹⁷

The narrowness of the question that the Court answered in *UARG* is significant, since it leaves intact the D.C. Circuit’s approval of EPA’s endangerment finding for GHG emissions from new motor vehicles and the *Massachusetts v. EPA* holding. Nor did *UARG* directly touch on the validity of EPA’s current use of CAA Section 111 in its effort to control GHG emissions from new and existing fossil-fuel-fired power plants.¹⁹⁸

In response to the *UARG* decision, EPA proposed revisions to existing PSD and title V regulations to ensure that neither the PSD nor title V rules require a source to obtain a permit solely because the source emits or has the potential to emit GHGs above the applicable thresholds.¹⁹⁹ This proposal also set a significant emissions rate for GHGs under the PSD program that would establish a *de minimis* threshold level of 75,000 tpy CO₂-e (the same as the threshold in the Tailoring Rule) below which BACT is not required for a source’s GHG emissions.²⁰⁰

It is unclear whether the Trump Administration will finalize the rule. The comment period on the proposed rule closed on December 16, 2016.²⁰¹ In the interim, EPA will continue applying 75,000 tpy CO₂-e threshold that was originally finalized in the Tailoring Rule to determine if BACT is required for “anyway” sources.²⁰²

Considering Climate Change in Agency Determinations/Actions

In addition to reducing GHG emissions, various environmental statutes and regulations require federal agencies to consider climate change in their actions and decisions. Lawsuits have challenged the extent to which agencies consider climate change impacts and rely on predictive models, studies, and assumptions. This section will examine these issues in the context of the Endangered Species Act and the National Environmental Policy Act.

Endangered Species Act (ESA)

The ESA provides legal protection to identified species and their critical habitat.²⁰³ It is administered primarily by the Fish and Wildlife Service (FWS) for terrestrial and freshwater species,²⁰⁴ but also by the National Marine Fisheries Service (NMFS) for certain marine

¹⁹⁷ *Id.* at 2444-49.

¹⁹⁸ CAA Section 111(b) authorizes EPA to set “new source performance standards,” emission standards for new stationary sources. CAA Section 111(d) authorizes the agency to set emission standards for existing stationary sources that would be covered had they been new, among other preconditions.

¹⁹⁹ Revisions to the Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas (GHG) Permitting Regulations and Establishment of a Significant Emissions Rate (SER) for GHG Emissions Under the PSD Program, 81 Fed. Reg. 68,110 (Oct. 3, 2016).

²⁰⁰ 81 Fed. Reg. at 68,113.

²⁰¹ Revisions to the Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas (GHG) Permitting Regulations and Establishment of a Significant Emissions Rate (SER) for GHG Emissions Under the PSD Program; Proposed rule; extension of comment period, 81 Fed. Reg. 81,711 (Nov. 18, 2016).

²⁰² Memorandum from J. McCabe & C. Giles to EPA Regional Administrators (July 24, 2014), *available at* <https://www.epa.gov/sites/production/files/2015-07/documents/2014scotus.pdf>.

²⁰³ P.L. 93-205, 87 Stat. 884. 16 U.S.C. §§1531-1544. For more information on the ESA, see CRS Report RL31654, *The Endangered Species Act: A Primer*, by M. Lynne Corn and Alexandra M. Wyatt.

²⁰⁴ For detailed information on the Fish and Wildlife Service (FWS) program for endangered species, see the FWS

species.²⁰⁵ Under the ESA, FWS and NMFS can list individual species of plants and animals as either “endangered” or “threatened” based on risk assessments of their extinction.²⁰⁶

Lawsuits connecting the ESA to climate change typically are based on how an agency considered climate change when making determinations related to listing a species; designating critical habitat; or issuing a biological opinion on a federal agency action.²⁰⁷ The ESA requires that the agency consider the effects on habitat, at least in part, for all of those determinations.²⁰⁸

Accordingly, climate change evaluations long have been part of ESA decision making, but only to the extent that the climate’s effects on habitat are linked to a species.

Federal agencies have relied on climate change projections to list a species as endangered or threatened, or to designate critical habitat under the ESA. When listing a species, the agency must make its decision “solely on the basis of the best scientific and commercial data available.”²⁰⁹ A similar standard applies when an agency designates a critical habitat under the ESA.²¹⁰ The agency designates critical habitat “on the basis of the best scientific data available” after taking into consideration the probable economic, national security, and other relevant impacts.²¹¹

Various groups have challenged the listing of species and the designation of critical habitat in the Arctic region, questioning whether model-based climate predictions constitute the “best scientific and commercial data available” on which to base ESA listing decisions. Most often, the suits relate to the listing of a species as threatened or endangered based on long-term climate models when its present population is stable. When challenged in court, an agency’s ESA listing or and designation of its critical habitat is often upheld because the court’s review of the agency decision is narrow and highly deferential; the court will not set aside an agency ESA listing or designation decision so long as it is rational and reasonably based on supporting evidence.²¹² However, courts have faulted agencies for inadequately considering climate change.²¹³

Polar Bear Listing

The legal challenges to FWS’s listing of the polar bear and designation of its critical habitat illustrate how courts have applied this narrow and deferential standard of review and interpreted the ESA standards for the best available data in the climate change context. In 2013, in *Safari Club International v. Salazar (In re Polar Bear Endangered Species Act Listing and Section 4(d) Rule Litigation)* (hereinafter *In re Polar Bear*), the D.C. Circuit upheld FWS’s listing of polar

website at <http://www.fws.gov/endangered/>.

²⁰⁵ For detailed information on the National Marine Fisheries Service (NMFS) program for endangered species, see the NMFS website at <http://www.nmfs.noaa.gov/pr/laws/esa/>. NMFS, a part of the National Oceanic and Atmospheric Administration (NOAA), is also sometimes referred to as NOAA Fisheries.

²⁰⁶ 16 U.S.C. §1533(a).

²⁰⁷ See 16 U.S.C. §1533(a)(1)(A) (when making determination on whether to list a species, relevant wildlife agency must consider “the present or threatened destruction, modification, or curtailment of its habitat or range”); 16 U.S.C. §1533(b)(2) (requiring relevant wildlife agency to designate critical habitat); and 16 U.S.C. §1536(a)(2) (requiring all agencies to consult with relevant wildlife agency to determine whether their actions would “result in the destruction or adverse modification of habitat of such species which is determined ... to be critical”).

²⁰⁸ *Id.*

²⁰⁹ *Id.* §1533(b)(1)(A).

²¹⁰ *Id.* §1533(b)(2).

²¹¹ See *id.*

²¹² See *Alaska Oil & Gas Ass’n v. Jewell*, 815 F.3d 544, 554 (9th Cir. 2016).

²¹³ See *infra* “Considering Climate Change in Agency Determinations/Actions.”

bears as a threatened species under the ESA based in part on projected climate change impacts to the species and its habitat.²¹⁴ FWS's decision was based on three main conclusions: (1) that the polar bear is dependent on sea ice for its survival; (2) that sea ice is declining; and (3) that climate change will continue to reduce the extent and quality of arctic sea ice gravely enough to endanger the polar bear population.²¹⁵

The court held that the challenges to FWS's scientific assessment and conclusions "'amount to nothing more than competing views about policy and science,' on which we defer to the agency."²¹⁶ The court also rejected arguments that climate science was too uncertain to support listing the polar bear as a species that is likely to become endangered in the "foreseeable future."²¹⁷ The court concluded that FWS's reliance on climate projections was "justifiable[,] clearly articulated [,] ... sufficient to support their definition of foreseeability."²¹⁸ The Supreme Court declined to review the case.²¹⁹

Polar Bear Critical Habitat Designation

Once it listed the polar bear as a threatened species, FWS moved forward with designating its critical habitat.²²⁰ The ESA defines critical habitat as the specific areas "within the geographical area occupied by the species" that the species needs for recovery and that therefore should be protected.²²¹ Critical habitat includes areas containing the physical and biological features (1) essential for the species' success, such as space for growth and normal behavior, food, breeding sites, and habitats protected from disturbance, and (2) which may require special management or protection.²²²

In a 2016 decision, *Alaska Oil & Gas Association v. Jewell*, the U.S. Court of Appeals for the Ninth Circuit (Ninth Circuit) upheld FWS's designation of 187,000 square miles as critical habitat for the polar bear.²²³ FWS's critical habitat designation was based in part on long-term projections of habitat destruction from climate change.²²⁴ The FWS designated three areas on Alaska's coast and in its waters that contain "primary constituent elements" (PCEs) essential to

²¹⁴ 709 F.3d 1 (D.C. Cir. 2013). Note that the lower court had upheld FWS's listing against an array of consolidated legal challenges: from environmental and animal welfare groups and other plaintiffs that had argued that the polar bear should have been listed as "endangered" rather than "threatened," as well as from industry groups, sportsmen's groups, the State of Alaska, and other plaintiffs that had argued that the polar bear listing was unwarranted. See *In re Polar Bear Endangered Species Act Listing and §4(d) Rule Litigation*, 838 F. Supp. 2d 214, 218 (D.D.C. 2011). The lower court had, however, ordered FWS to conduct additional environmental review of the ESA Section 4(d) special rule for polar bears, *Id.* at 238, which FWS did in 2013. See 78 Fed. Reg. 11,766 (Feb. 20, 2013). The appellants in the D.C. Circuit appeal in *In re Polar Bear* were among those that had argued that the polar bear listing was unwarranted.

²¹⁵ *Id.* at 8.

²¹⁶ *Id.* at 9 (quoting *In re Polar Bear Endangered Species Act Listing and §4(d) Rule Litigation*, 794 F. Supp. 2d 65, 69 (D.D.C. 2011)).

²¹⁷ *Id.* at 15, quoting 16 U.S.C. §1532(20).

²¹⁸ *Id.* at 16.

²¹⁹ The Supreme Court denied the petition for certiorari. *Safari Club Int'l v. Jewell*, 2013 U.S. LEXIS 7036 (2013).

²²⁰ 16 U.S.C. §1533(a)(3)(A)(i). For additional information on critical habitat designations, see CRS Report RL31654, *The Endangered Species Act: A Primer*, by M. Lynne Corn and Alexandra M. Wyatt.

²²¹ 16 U.S.C. §1532(5)(A)(i).

²²² *Id.*; 50 C.F.R. §424.12(b).

²²³ *Alaska Oil & Gas Ass'n v. Jewell*, 815 F.3d 544, 558-59 (9th Cir. 2016).

²²⁴ *Id.* at 558-59.

the polar bear: a sea ice habitat, a terrestrial denning habitat, and a barrier island habitat.²²⁵ The court, in large part, grounded its decision to uphold the FWS's habitat designation on the D.C. Circuit decision in *In re Polar Bear*.²²⁶

The Ninth Circuit disagreed with the lower court's narrow interpretation of the ESA critical habitat requirements. The court rejected the lower court's finding that the ESA required FWS to limit the critical habitat designation to specific areas that are currently used by polar bears, explaining that "[n]o such limitation to existing use appears in the ESA, and such a narrow construction of critical habitat runs directly counter to the Act's conservation purposes. The Act is concerned with protecting the future of the species, not merely the preservation of existing bears. And it requires use of the best available technology, not perfection."²²⁷ The court concluded that the FWS properly relied on climate science and sea ice data in designating habitat that may become critical in the future because of climate change and other factors.²²⁸

The State of Alaska, oil and gas groups, regional organizations, and Alaska Native groups are seeking review by the Supreme Court, arguing that the Ninth Circuit's "lax" and "exceptionally overbroad" standards allow FWS to draw impermissibly expansive boundaries in designating critical habitat.²²⁹ Conservation groups have opposed the petition, arguing that the Ninth Circuit applied the appropriate statutory standards and that the facts support the need for a large area to be designated as critical for the polar bears.²³⁰ The Court has not issued a decision on whether it will review the case.

Other Ninth Circuit ESA Cases

The Ninth Circuit had another opportunity in 2016 to review the use of climate change projections in ESA listing decisions. On October 24, 2016, the Ninth Circuit upheld ESA protections for two populations of Arctic bearded seals in *Alaska Oil & Gas Association v. Pritzker*.²³¹ NMFS listed the seals as threatened in 2012 based on climate change models that predicted that sea ice the seals depend on for birthing and mating would mostly disappear by 2095.²³² Plaintiffs argued that the models used in the listing decision could not reliably predict

²²⁵ *Id.* at 555.

²²⁶ *See id.* at 558-59 (citing *In re Polar Bear*, 709 F.3d at 3).

²²⁷ *See id.* at 555-56 (concluding that the "ESA thus requires FWS, when designating critical habitat, to focus on the PCEs essential to protecting the polar bear.... Since the point of the ESA is to ensure the species' recovery, it makes little sense to limit its protections to the habitat that the existing, threatened population currently uses.... The Act contemplates the inclusion of areas that contain PCEs essential for occupation by the polar bear, even if there is no available evidence documenting current activity.... [T]he agency must look beyond evidence of actual presence to where the species is likely to be found.... The standard FWS followed, looking to areas that contained the constituent elements required for sustained preservation of polar bears, was in accordance with statutory purpose and hence could not have been arbitrary, capricious, or contrary to law.") (internal citations omitted).

²²⁸ *See id.* at 558-59 (listing the studies, reports, and climate models that predict sea ice loss and rescission as a result of climate change).

²²⁹ Petition for Writ of Certiorari, *Alaska Oil & Gas Ass'n, et. al., Alaska Oil & Gas Ass'n*, Nos. 16-596, 16-610 (U.S. Nov. 4, 2016).

²³⁰ Brief in Opposition to Petition for Writ of Certiorari, *Ctr. for Biological Diversity, Alaska Oil & Gas Ass'n*, No. 16-596 (Jan. 6, 2017).

²³¹ *Alaska Oil & Gas Ass'n v. Pritzker*, 840 F.3d 671 (9th Cir.2016).

²³² *Id.* at 681-82.

climate change effects on the seals beyond 2050.²³³ A district court ruling agreed and vacated the rule; NMFS and the Center for Biological Diversity then appealed the decision.²³⁴

In upholding the bearded seal listing, the Ninth Circuit concluded that NMFS may base its listing decision on climate change models and long-term projections, provided that the record includes a reasonable explanation for its decision and acknowledges any limitations.²³⁵ Similar to its reasoning set forth in *Alaska Oil & Gas Association v. Jewell*, the court explained that the

ESA does not require NMFS to base its decision on ironclad evidence when it determines that a species is likely to become endangered in the foreseeable future; it simply requires the agency to consider the best and most reliable scientific and commercial data and to identify the limits of that data when making a listing determination.²³⁶

The U.S. District Court of Alaska, however, appears to question listing decisions based on long-term climate projections. In the past two years, the Alaska district court rejected the listing determination for the Beringia seal discussed above and, most recently, the ringed seal, finding in both cases that the FWS's climate change predictions were too speculative to support a listing.²³⁷ The district court was not able to consider the Ninth Circuit's bearded seal decision because *Alaska Oil & Gas Association v. Jewell* was issued after the lower court issued its decision on the ringed seal.²³⁸ The FWS and environmental groups have appealed the ringed seal decision to the Ninth Circuit.²³⁹ The environmental groups are asking the Ninth Circuit to reverse the lower court's holding for the ringed seal based on the reasoning applied in the bearded seal appellate decision.²⁴⁰

Other Recent ESA Cases Involving Climate Change Projections

Other courts have concluded that climate change projections are sufficient to satisfy the statutory requirement that listings and biological opinions under the ESA be based on the best available data. Two federal districts courts have faulted federal agencies for failing to credit and account for the best data available on climate change impacts in their ESA decisions.

In *Defenders of Wildlife v. Jewell*, a federal district court in Montana held that the FWS's decision to withdraw the proposed listing of the wolverine as threatened was arbitrary and capricious.²⁴¹ In reversing its position on the proposed listing, the FWS attempted to discredit certain scientific studies on climate change effects that it had relied on previously to propose listing the wolverine as threatened, claiming that the FWS needed greater certainty and refinement in the climate change data before listing the wolverine.²⁴² The court concluded that the FWS "cannot demand a greater level of scientific certainty than has been achieved in the field to date—the 'best scientific

²³³ *Id.* at 681.

²³⁴ *Id.* at 674-75.

²³⁵ *Id.* at 681.

²³⁶ *Id.*

²³⁷ *Alaska Oil & Gas Ass'n v. NMFS*, No. 4:14-CV-00029-RRB, 2016 U.S. Dist. LEXIS 32002 (D. Alaska Mar. 17, 2016).

²³⁸ *Id.* at *34.

²³⁹ *Alaska Oil & Gas Ass'n v. Pritzker*, No. 16-35382 (9th Cir. docketed May 5, 2016).

²⁴⁰ Opening Brief for Intervenor-Defendants, *Alaska Oil & Gas Ass'n v. Pritzker*, No. 16-35382 (9th Cir. Nov. 2, 2016).

²⁴¹ *Def. of Wildlife v. Jewell*, 176 F.Supp.3d 975, 1011 (D. Montana, 2016). The North American wolverine, which relies on deep snow to den and reproduce, is expected to be affected over the coming decades by warming temperatures and declines in snow levels predicted by climate models. *Id.* at 978-80.

²⁴² *Id.* at 1002-03.

data available’ ... standard does not require that the [FWS] act only when it can justify its decision with absolute confidence,’ and ‘the ESA accepts agency decisions in the face of uncertainty.’”²⁴³ The court vacated the withdrawal of the proposed listing and remanded the proposal to the FWS for further consideration.

In another ESA case, NMFS issued a biological opinion that concluded that changes to the operation of the Leavenworth National Fish Hatchery were not likely to jeopardize the existence of critical habitat for Upper Columbia River spring Chinook salmon or steelhead.²⁴⁴ Section 7 of the ESA requires federal agencies to “insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [the critical] habitat of such species.”²⁴⁵ Any federal agency planning any action that may affect ESA-listed species must consult with NMFS or FWS.²⁴⁶ After the consultation, the consulting agency must issue a biological opinion based on “the best scientific and commercial data available” that determines whether the proposed action is likely to jeopardize the ESA-listed species or adversely modify critical habitat.²⁴⁷

Environmental groups challenged NMFS’s biological opinion on several grounds, and in November 2016, a federal district court in Washington ruled that NMFS’s biological opinion was arbitrary and capricious because NMFS failed to consider adequately climate change effects in the opinion’s analysis of hatchery’s modified operations and water use.²⁴⁸ The court explained that “[t]he best available science indicates that climate change will affect stream flow and water conditions throughout the Northwest” and that the lack of a model or study specifically addressing local climate change effects did not permit the NMFS to ignore this factor.²⁴⁹ The court found that NMFS had included “no discussion whatsoever” of the potential effects of climate change on the hatchery’s future operations and water use, and that it was not sufficient for NMFS to say that the local area at issue was less prone to climate change effects than other areas in the region.²⁵⁰ The judge remanded the matter for further consultation.²⁵¹

Potential Implications

It is uncertain whether these decisions upholding listing and critical habitat decisions will affect decisions related to species outside of the Arctic region. While relying on climate change projections may lead to the listing of some species with stable populations, for species outside of the Arctic region, there may be fewer studies and models that can reliably predict impacts of climate change on their habitats and their potential to adapt to justify an ESA listing.

The extent to which debate over climate change may determine the ESA’s application may be limited by judicial decisions that require agencies to consider climate change in their ESA

²⁴³ *Id.* at 1003.

²⁴⁴ *Wild Fish Conservancy v. Irving*, No. 2:14-CV-0306-SMJ, 2016 U.S. Dist. LEXIS 162056, *9 (E.D. Wash. Nov. 22, 2016).

²⁴⁵ 16 U.S.C. §1536(a)(2).

²⁴⁶ *Id.* §1536(a)(2); 50 C.F.R. §402.14(a).

²⁴⁷ 50 C.F.R. §402.14(g)(8), (h)(2)–(3).

²⁴⁸ *Wild Fish Conservancy*, at *17–*20.

²⁴⁹ *Id.* at *18.

²⁵⁰ *Id.* at *19.

²⁵¹ *Id.* at *29.

analyses, such as the biological opinions discussed above. Recently, on January 17, 2017, 13 state attorneys general sent a letter to the President Trump transition team requesting repeal of the critical habitat rules.²⁵² The March 28, 2017, executive order did not specifically address the ESA. However, the agencies may identify these regulations as burdening the “development or use” of energy resources and recommend to the President that they should be revised or rescinded.²⁵³ The agency would then have to initiate a rulemaking to do so.

Furthermore, the series of Ninth Circuit cases may prompt some Members of Congress to seek to amend the ESA. On February 15, 2017, the Senate Committee on Environment and Public Works held a hearing entitled “Oversight: Modernization of the Endangered Species Act” that explored the possibility of amending the ESA to raise the threshold standard to list a species under the ESA.²⁵⁴

National Environmental Policy Act

The National Environmental Policy Act (NEPA)²⁵⁵ requires federal agencies to consider, document, and disclose the potential effects of their actions and decisions on the environment.²⁵⁶ In general, courts have held that federal agencies are required to consider climate change impacts in their NEPA analyses where these impacts are sufficiently serious and causally connected to the project.²⁵⁷ While most federal agencies already have procedures in place to ensure that they identify GHG emissions associated with their proposed actions, as well as future impacts to those proposed projects that may relate to climate change, agencies have lacked clear direction on when and how to consider climate change impacts. This lack of guidance resulted in inconsistent environmental reviews across federal agencies, prompting stakeholders to file lawsuits challenging whether the agency NEPA reviews adequately considered potential effects from GHG emissions and climate change from their proposed actions.²⁵⁸

In order to provide guidance and improve consistency, the White House Council on Environmental Quality (CEQ) issued in August, 2016, its final guidance for federal agencies to assess the impact of their decisions on GHG emissions and also how such decisions may be

²⁵² The letter to the President Trump transition team was signed by the attorneys general from Alabama, Alaska, Arizona, Arkansas, Kansas, Louisiana, Michigan, Montana, Nebraska, Nevada, South Carolina, Texas, West Virginia, and Wyoming. Letter from Luther Strange, Ala. State Att’y Gen., to Ado Machida, Pol’y Implementation Team Lead (Jan. 17, 2017), <http://ago.alabama.gov/news/972.pdf>.

²⁵³ Exec. Order, Promoting Energy Independence and Economic Growth §2 (Mar. 28, 2017).

²⁵⁴ Juan Carlos Rodriguez, *Senate Gets Ball Rolling to Amend the ESA*, LAW360, Feb. 15, 2017, <https://www.law360.com/articles/891979/senate-gets-ball-rolling-to-amend-the-esa>.

²⁵⁵ 42 U.S.C. §§4321-4370f.

²⁵⁶ Id. §4332(2)(C). For additional information on NEPA, see CRS Report RL33152, *The National Environmental Policy Act (NEPA): Background and Implementation*, by Linda Luther.

²⁵⁷ See, e.g., *Ctr. for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1218 (9th Cir. 2008) (“The impact of greenhouse gas emissions is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.”).

²⁵⁸ See, e.g., *Mayo Found’n v. Surface Transp. Bd.*, 472 E3d 545 (8th Cir. 2006) (challenging the environmental impact statement for the approval construction of a 280-mile rail line from South Dakota to the Wyoming Powder River Basin for failing to fully analyze adverse effects of increased coal consumption on the environment); *Border Power Plant Working Grp. v. DOE*, 260 F. Supp. 997 (S.D. Cal. 2003) (challenging the agencies’ NEPA review for the construction of transmission lines to connect new power plants in Mexico to the California power grid as inadequate, in part because the environmental assessments failed to evaluate the impact of carbon emissions from the Mexican power plants); *Friends of the Earth v. Mosbacher*, 488 E Supp. 2d 889 (N.D. Cal. 2007) (seeking to compel the Overseas Private Investment Corporation and the Export-Import Bank of the United States, two quasi-governmental agencies to conduct environmental assessments to address the impacts to global warming from projects supported by the agencies outside the United States).

impacted by a changing climate when conducting NEPA reviews.²⁵⁹ In the Guidance, CEQ states that “when addressing climate change agencies should consider: (1) The potential effects of a proposed action on climate change as indicated by assessing [direct and indirect] GHG emissions...; and, (2) The effects of climate change on a proposed action and its environmental impacts.”²⁶⁰ The Guidance also recommends that “agencies review their NEPA procedures and propose any updates they deem necessary or appropriate to facilitate their consideration of GHG emissions and climate change.”²⁶¹

After the CEQ GHG Guidance was released, agencies began working to update and align their NEPA procedures with the CEQ recommendations. For example, in February 2017, the Federal Energy Regulatory Commission (FERC) issued two volumes of guidance for how its officials should consider direct GHG and climate change impacts in NEPA reviews of proposed gas infrastructure projects.²⁶² The court may consider the new guidance in pending NEPA GHG litigation over FERC’s approval of a proposed \$683 million natural gas pipeline.²⁶³ To date, the court has not issued a decision in the case.

For natural gas exports, the D.C. Circuit determined that DOE, and not FERC, is responsible for considering the broader upstream and downstream climate impacts related to allegedly higher domestic natural gas prices and increased use of coal in its NEPA review in approving the gas export.²⁶⁴ The court explained that FERC, in approving a terminal’s construction, is not responsible for a NEPA environmental review concerning the actual export of the gas. Environmental groups are currently challenging DOE’s NEPA review for its gas export approvals in the D.C. Circuit.²⁶⁵

President Trump’s March 28, 2017, executive order rescinds the CEQ’s NEPA GHG guidance. Federal agencies, however, appear to still be required to consider the GHG and climate change impacts of their proposed actions.²⁶⁶ Even prior to the issuance of CEQ’s GHG guidance, courts had faulted federal agencies for insufficiently taking into account climate change in NEPA reviews. For example, in *Center for Biological Diversity v. National Highway Traffic Safety Administration*, the U.S. Court of Appeals for the Ninth Circuit held that “the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis

²⁵⁹ Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 81 Fed. Reg. 51, 866 (Aug. 5, 2016). The CEQ guidance is available at https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf. For more information on the contents of the Guidance, see CRS Insight IN10554, *Overview of CEQ Guidance on Greenhouse Gases and Climate Change*, by Linda Luther.

²⁶⁰ *Id.* at 5.

²⁶¹ *Id.* at 3.

²⁶² See Notice of Availability of the Final Guidance Manual for Environmental Report Preparation, 82 Fed. Reg. 12,088 (Feb. 28, 2017). The guidance is available at <https://www.ferc.gov/industries/gas/enviro/guidelines.asp>.

²⁶³ See, e.g., *Catskill Mountainkeeper Inc. et al. v. FERC*, No.16-345 (2d Cir. filed Feb. 5, 2016); *Stop the Pipeline v. FERC*, No. 16-361 (2d Cir. filed Feb. 5, 2016) (challenging FERC’s approval of a proposed natural gas pipeline, arguing that FERC failed to adequately considered the project’s indirect impacts on increased gas drilling and its cumulative effects on GHG emissions and climate change).

²⁶⁴ See *Sierra Club v. FERC*, 827 F.3d 59 (D.C. Cir. 2016) (holding that the decision to allow liquid natural gas to be exported rests exclusively with DOE).

²⁶⁵ *Sierra Club v. DOE*, No. 16-1252 (D.C. Cir. filed July 26, 2016).

²⁶⁶ Exec. Order, Promoting Energy Independence and Economic Growth §3(c) (Mar. 28, 2017).

that NEPA requires agencies to conduct,” and remanded an agency action for further NEPA analysis.²⁶⁷

Social Cost of Carbon

The Social Cost of Carbon (SCC) is a monetary estimate of economic damages associated with an incremental increase in carbon dioxide (CO₂) emissions.²⁶⁸ The net present value of these damages is calculated by multiplying future costs by an appropriate discount factor and summing across all affected years.²⁶⁹ The estimate is intended to include (but is not limited to) changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services due to climate change.²⁷⁰ Federal agencies have used the SCC in numerous final rulemakings and environmental reviews.²⁷¹

There are a few court decisions that address the specific use of the SCC in federal agency rulemakings and environmental reviews. In general, courts have focused on an agency’s justification (or lack thereof) regarding the use of the SCC values in its rulemaking or environmental review. Most recently, in August 2016, a federal court for the first time in *Zero Zone, Inc. v. Department of Energy (DOE)* upheld the use of the (SCC) in a cost-benefit analysis by a federal agency with regard to energy efficiency standards.²⁷²

The Energy Policy and Conservation Act of 1975 (EPCA) directs DOE to develop mandatory energy conservation standards for specific types of equipment and appliances.²⁷³ EPCA requires, among other things, that these standards must be designed to “increase[] the maximum improvement in energy efficiency” and be “technologically feasible and economically justified.”²⁷⁴ In 2014, DOE established new energy efficiency standards for 49 classes of commercial refrigeration equipment (CRE) and clarified the testing procedures that DOE uses to implement those standards.²⁷⁵

In *Zero Zone, Inc.*, petitioners claimed that DOE abused its discretion by considering environmental factors when determining whether these new energy efficiency standards were “economically justified” and, in the alternative, that the use of the SCC was arbitrary and capricious.²⁷⁶ In rejecting the petitioners’ claims, the U.S. Court of Appeals for the Seventh Circuit held that “the expected reduction of environmental costs needs to be taken into account” in DOE’s cost-benefit analysis, and that it had “no doubt that Congress intended that DOE have the authority under the [EPCA] to consider the reduction in SCC.”²⁷⁷ In addition, the court

²⁶⁷ *Ctr. for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1218, 550 (9th Cir. 2008).

²⁶⁸ INTERAGENCY WORKING GROUP ON SOCIAL COST OF GREENHOUSE GASES, TECHNICAL SUPPORT DOCUMENT: TECHNICAL UPDATE OF THE SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12866 (2016), https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf.

²⁶⁹ *Id.* at 3.

²⁷⁰ *Id.*

²⁷¹ See CRS Report R44657, *Federal Citations to the Social Cost of Greenhouse Gases*, by Jane A. Leggett. Agencies began using the social cost of methane (SC-CH₄) in 2015, and the social cost of nitrous oxide (SC-N₂O) in 2016. Collectively, these are the social costs of greenhouse gases (SC-GHG). *Id.*

²⁷² *Zero Zone, Inc. v. DOE*, 832 F.3d 654, 664, 667 (7th Cir. 2016).

²⁷³ 42 U.S.C. §§6295(a); 6313.

²⁷⁴ *Id.* §6295(o)(2).

²⁷⁵ *Zero Zone, Inc.*, at 664, 667.

²⁷⁶ *Id.* at 677.

²⁷⁷ *Id.*

concluded that the use of the SCC was not arbitrary and capricious because DOE had addressed concerns regarding the SCC in the final rule by acknowledging the limitation of the SCC, referencing multiple entities that support that SCC values, and clarifying that despite those concerns, DOE could use the SCC in its cost-benefit analysis.²⁷⁸

Previous judicial decisions have faulted agencies for failing to use the SCC or other types of tools to account for costs related to carbon emissions in their cost-benefits analysis. For example, in 2008, the Ninth Circuit addressed the National Highway Traffic Safety Administration's (NHTSA's) refusal to include the SCC in setting average fuel economy standards for light trucks, model years 2008 through 2011.²⁷⁹ In *Center for Biological Diversity v. NHTSA*, the Ninth Circuit held that it was arbitrary and capricious for an agency to fail to assess the impacts of GHG emissions in its cost-benefit analysis, even when there is uncertainty about those impacts, stating that "while the record shows there is a range of values [for the SCC], the value of carbon emissions reduction is certainly not zero."²⁸⁰ The court concluded that the scientifically supported values presented by the petitioners show that "it is possible to monetize the benefit of carbon emission reduction."²⁸¹

A few courts have also reviewed the use of the SCC in environmental reviews of proposed agency actions under the NEPA.²⁸² Agencies have used the SCC to evaluate potential GHG impacts associated with federal actions in order to comply with NEPA's environmental review requirements. A 2014 district court decision, *High Country Conservation Advocates v. U.S. Forest Service*, vacated the BLM's approval of a coal exploration plan for failure to justify why the SCC was not used to quantify the costs associated with the mining exploration.²⁸³ The court held that it was arbitrary and capricious to quantify the *benefits* of the mining exploration but fail to quantify the *costs* when the SCC factor was available and used in the draft EIS; the agencies might have been able to offer "non-arbitrary reasons" why the protocol was not included in the final EIS, but did not.²⁸⁴ And as in *Center for Biological Diversity*, above, the court held that it was unacceptable to treat the cost of carbon as zero when the SCC estimates, though covering a wide range, did not include the possibility that the cost was zero.²⁸⁵

BLM's environmental reviews continue to be challenged in court. On August 25, 2016, WildEarth Guardians and Physicians for Social Responsibility filed a complaint asking the U.S. District Court for the District of Columbia to vacate authorizations for 397 oil and gas leases on public lands in three states on the grounds that the BLM violated NEPA by failing to use the SCC or any

²⁷⁸ *Id.*

²⁷⁹ *Ctr. for Biological Diversity v. NHTSA*, 538 F.3d 1172 (9th Cir. 2008).

²⁸⁰ *Id.*

²⁸¹ *Id.* As further support for ruling against NHTSA, the court noted that (1) NHTSA gave no reasons why it believed the range of values in the studies was "extremely wide," given that several commentators on the proposed rule recommended the *same* value—\$50 per ton of carbon; (2) NHTSA has monetized other uncertain benefits such as the reduction of other pollutants, crash, noise, and construction costs; (3) the evidence contradicted NHTSA's conclusion that commentators on the proposed rule did not reliably show that monetizing the value of carbon reduction would have affected the stringency of the CAFE standard; and (4) NHTSA failed to support its claim that had it accounted for the benefit of carbon reduction, it would have had to account for the adverse safety effects of manufacturers making lighter vehicles, and the two would have balanced out. *Id.* at 1200-03. As remedy for NHTSA's failure to monetize the value of carbon emissions in setting the CAFE standard, the court remanded the standard to NHTSA in order for it to promulgate a new CAFE standard as expeditiously as possible. *Id.* at 1203.

²⁸² See *supra* "National Environmental Policy Act" section.

²⁸³ *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 2d 1174 (D. Colo. 2014).

²⁸⁴ *Id.* at 1191-92.

²⁸⁵ *Id.*

other economic or scientific tools to assess the climate impacts of these leases.²⁸⁶ The plaintiffs contend that BLM did not use the SCC protocol, or any other economic or scientific tools, to assess the potential impacts of challenged BLM lease authorizations on the climate.²⁸⁷ The parties have not filed their briefs with the court yet.

In contrast, the D.C. Circuit upheld an agency’s environmental review under NEPA that did not use the SCC to quantify potential GHG impacts from a project in *EarthReports, Inc. v. Federal Energy Regulatory Commission (FERC)*.²⁸⁸ Unlike *High Country Conservation Advocates*, where BLM provided no explanation on why it did not use the SCC, FERC acknowledged the availability of the SCC tool but explained that it would not be “appropriate” or “informative” because of significant variation in output and lack of incremental impact measurement—criteria related to NEPA environmental reviews.²⁸⁹ The court concluded that FERC acted reasonably in finding that the SCC was “inadequately accurate” to use in its environmental review of a liquid natural gas facility conversion project.²⁹⁰

These judicial opinions illustrate how these courts focused on an agency’s justification (or lack thereof) to determine whether the agency acted reasonably in using or not using the SCC in its rulemaking or environmental review. Although each of the agencies was faced with the same uncertainties inherent in the SCC tool, the courts faulted those agencies that failed to articulate why the SCC was not an appropriate tool to quantify the potential impacts of GHG emissions associated with the agencies’ actions.

The D.C. Circuit may have another opportunity to address the use of the SCC in the CPP litigation, if it moves forward.²⁹¹ One of the issues raised in the petitions for review of the CPP is whether EPA’s regulatory impact analysis is flawed because it “assesses domestic costs against global benefits” and relies on the SCC.²⁹² In a letter to the court, EPA cites *Zero Zone, Inc. v. DOE*, arguing that similar to DOE in *Zero Zone, Inc.*, EPA reasonably explained why its monetized benefit-cost analysis accounted for global benefits.²⁹³ In response, petitioners distinguish *Zero Zone, Inc.*, claiming that the EPCA specifically allows DOE to consider other relevant factors, including international factors, unlike Section 111 of the CAA, which they argue does not contain an analogous provision and does not authorize EPA to consider foreign benefits.²⁹⁴

Similar to the CEQ NEPA GHG guidance discussed above, the Trump Administration has withdrawn “as no longer representative of governmental policy” all SCC guidance and documents and disbanded the Interagency Workgroup on Social Cost of Greenhouse Gases that developed

²⁸⁶ Compl. for Decl. J. & Inj. Relief at 1-2, *WildEarth Guardians v. Jewell*, No. 1:16-cv-01724 (D.D.C., filed Aug. 25, 2016).

²⁸⁷ *Id.* at 32.

²⁸⁸ *EarthReports, Inc. v. FERC*, 828 F.3d 949 (D.C. Cir. 2016).

²⁸⁹ *Id.* at 956. (internal quotations omitted).

²⁹⁰ *Id.*

²⁹¹ See *supra* “Power Plants” section.

²⁹² Opening Br. of Pet’rs on Procedural and Record-Based Issues at 69-70, *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. Feb. 19, 2016); Reply Br. of of Pet’rs on Procedural and Record-Based Issues at 31-32, *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. Apr. 15, 2016).

²⁹³ Letter from Brian Link, Counsel of Record, Dept. of Justice, to Mark Langer, Clerk of the Court, D.C. Cir. (Aug. 17, 2016).

²⁹⁴ Letter from Adam Gustafson, Counsel of Record, Boyden Gray & Assoc. PLLC, to Mark Langer, Clerk of the Court, D.C. Cir. (Aug. 25, 2016).

the SCC metric.²⁹⁵ Nevertheless, as the cases discussed above illustrate, it appears that federal agencies may potentially still be required to take into account costs of carbon in their rulemakings and environmental reviews.²⁹⁶ The executive order directs agencies to follow the guidance contained in OMB Circular A-4, dated September 17, 2003, when monetizing the value of changes in GHG emissions resulting from regulations.²⁹⁷ Although the OMB Circular A-4 provides guidance on how to conduct cost-benefit analysis, it mentions climate change costs only once, with respect to addressing “uncertain knowledge of how some economic activities might affect future climate change.”²⁹⁸

Threshold Barriers to Litigation

Federal courts often do not reach the merits of a climate change suit due to threshold procedural barriers, such as whether a plaintiff or petitioner has the right to bring a lawsuit in the first place or whether the court has jurisdiction over a type of claim.²⁹⁹ To proceed to the merits of a case, a plaintiff must establish standing, a procedural threshold that has, at times, posed a difficult hurdle to overcome.

Standing Doctrine

The standing doctrine is derived from Article III of the Constitution, which limits the jurisdiction of federal courts to “cases” or “controversies.”³⁰⁰ To satisfy the constitutional standing requirements in Article III, the Supreme Court imposes three requirements: (1) the plaintiff must allege a personal injury-in-fact, which is actual or imminent, concrete, and particularized; (2) injury must be “fairly traceable to the defendant’s allegedly unlawful conduct; and (3) the injury must be “likely to be redressed by the requested relief.”³⁰¹ A plaintiff or petitioner that fails to satisfy any of these elements lacks standing, and the court will dismiss the suit.

The issue of a state’s standing to bring a climate change suit was central to two landmark climate change decisions, *Massachusetts v. EPA* in the Supreme Court³⁰² and *American Electric Power Co. v. Connecticut* (AEP) in the U.S. Court of Appeals for the Second Circuit (Second Circuit).³⁰³

²⁹⁵ Exec. Order, Promoting Energy Independence and Economic Growth §5 (Mar. 28, 2017).

²⁹⁶ Doug Obey, *Advocates Warn Trump May Find It Challenging To Scrap Carbon ‘Cost’ Tool*, INSIDEEPA.COM, Nov. 28, 2016, <https://insideepa.com/daily-news/advocates-warn-trump-may-find-it-challenging-scrap-carbon-cost-tool>.

²⁹⁷ Exec. Order, Promoting Energy Independence and Economic Growth §5(c) (Mar. 28, 2017).

²⁹⁸ Off. of Management & Budget, Circular A-4, at 38 (Sept. 17, 2003).

²⁹⁹ As a threshold matter, a plaintiff challenging federal agency action in court must have a legal right to a judicial determination of the issues raised in its complaint. See *Flast v. Cohen*, 392 U.S. 83, 99 (1968). Whether a court has jurisdiction is often informed by constitutional, prudential, and statutory considerations. See *Lujan v. Wildlife*, 504 U.S. 555, 560 (1992); *Bennett v. Spear*, 520 U.S. 154, 162 (1997). A court may be called upon to determine, for example, whether the case presents a nonjusticiable political question. See *Baker v. Carr*, 369 U.S. 186, 217 (1962).

³⁰⁰ U.S. CONST. art iii, §2.

³⁰¹ See, e.g., *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992). When it is an organization that sues on behalf of its members, rather than an individual, the standing requirements are (1) the members (or some of them) must have standing to sue in their own right; (2) the interests the organization seeks to protect in the suit are germane to the organization’s purpose; and (3) neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit. *Hunt v. Washington State Apple Advertising Comm’n*, 432 U.S. 333, 343 (1977).

³⁰² 549 U.S. 497 (2007).

³⁰³ 582 F.3d 309 (2d Cir. 2009), *rev’d on other grounds*, 131 S. Ct. 2527 (2011) (affirming the Second Circuit’s finding of standing by equally divided vote). See generally Kirsten Engle, *State Standing in Climate Change Lawsuits*, 26 J. LAND USE & ENVTL. L. 217 (2011).

Both decisions noted that Article III standing is satisfied when a state brings suit as *parens patriae* (literally, father of the country) on behalf of its citizens.³⁰⁴ *Parens patriae* doctrine allows a state to sue in its sovereign capacity to protect its citizenry, rather than being limited, as Article III would normally require, to asserting traditional particularized injuries to state interests.³⁰⁵

Most of the Supreme Court's decision in *Massachusetts v. EPA* is devoted to whether plaintiffs had standing to sue.³⁰⁶ At the outset, the Court asserted that states are entitled to "special solicitude" when seeking to establish standing.³⁰⁷ The Court found that the state met all three factors to establish standing—*injury-in-fact*, causation, and redressability of the injury. For the first factor, the Court determined that the current and potential future loss of Massachusetts shore land from sea level rise was an *injury-in-fact*. That this injury may be widely shared with other coastal states does not disqualify this injury, said the Court; it is nonetheless particular and concrete.³⁰⁸

The second prong of the standing test is causation, requiring that the alleged injury be fairly traceable to the defendant.³⁰⁹ EPA did not dispute the existence of a causal relationship between GHG emissions and climate change. It did argue, however, that any reduction in GHG emissions achieved through the current litigation would be too tiny a fraction of worldwide GHG emissions to make a cognizable difference in climate change.³¹⁰ In an important ruling that may benefit environmental plaintiffs in other contexts, the Court held that even an agency's refusal to take a "small incremental step" that would result in only a modest reduction in worldwide GHG emissions, is enough for standing purposes.³¹¹

The third and final factor is whether the remedy sought by the plaintiff is likely to redress the injury. In this case, Massachusetts sought as a remedy a regulation of GHG emissions from new motor vehicles.³¹² The Court found that this remedy satisfied redressability because while it would not by itself reverse climate change, it would nonetheless slow or reduce it.³¹³

³⁰⁴ *Massachusetts*, 549 U.S. at 518-520; *Connecticut v. American Elec. Power Co.*, 582 F.3d 309, 338-339 (2d Cir. 2009), *rev'd on other grounds*, 131 S. Ct. 2527 (2011). That is, Article III is satisfied when a state brings suit as *parens patriae* on behalf of its citizens. *Massachusetts*, 549 U.S. at 519-521.

³⁰⁵ The modern origins of the *parens patriae* doctrine lie in two century-old nuisance cases brought by states in federal court alleging interstate pollution: *Missouri v. Illinois*, 180 U.S. 208 (1901), and *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907). In both cases, state standing was found. The current test for *parens patriae* standing is found in *Snapp & Son, Inc. v. Puerto Rico*, 458 U.S. 592 (1982), though there is some question whether traditional Article III standing requirements have to be met as well by the citizens of the state asserting *parens patriae* standing. *See generally*, Sara Zdeb, *From Georgia v. Tennessee Copper to Massachusetts v. EPA; Parens Patriae Standing for State Global Warming Plaintiffs*, 96 Geo. L. J. 1059 (2008).

³⁰⁶ *Massachusetts v. EPA*, 549 U.S. at 515-29.

³⁰⁷ 549 U.S. at 520. The petitioners had two factors in their favor. First, the CAA specifically authorizes challenges to agency action unlawfully withheld, such as in the *Massachusetts* suit. 42 U.S.C. §7607(b)(1). A litigant to whom Congress has accorded such a procedural right, said the Court, can assert that right without meeting the normal standards for standing. 549 U.S. at 517-518. Second, the Court found it "of considerable relevance" that the petitioner's injury—Massachusetts's loss of shore land from global-warming-induced sea level rise—was that of a sovereign state rather than a private entity. *Id.* at 518. States are "not normal litigants for the purposes of invoking federal jurisdiction," said the Court, noting their quasi-sovereign duty to preserve their territory. *Id.*

³⁰⁸ *Id.* at 522.

³⁰⁹ *Id.* at 517, 523.

³¹⁰ *Id.* at 523.

³¹¹ *Id.* at 524.

³¹² *Id.* at 517, 525-26.

³¹³ *See id.* at 525 (explaining that given the "enormity" of the potential effects of climate change, it was not relevant to

After its *Massachusetts v. EPA* decision, the Supreme Court considered the question of the standing of state and non-state parties in climate change suits in *American Electric Power Co. v. Connecticut* (AEP).³¹⁴ As discussed above, the Second Circuit held that both state and non-state plaintiffs had standing in a tort suit seeking GHG reductions from five large electric utilities. The Court, by an equally divided vote of four-to-four, affirmed a Second Circuit standing decision but avoided directly addressing the standing of non-state parties in climate change suits.³¹⁵ The Court stated that “[f]our members of the Court would hold that at least some plaintiffs have Article III standing under *Massachusetts*, which permitted a State to challenge EPA’s refusal to regulate [GHG] emissions ... and, further, that no other threshold obstacle bars review.”³¹⁶ Without further explanation, the AEP decision leaves the question of whether non-state petitioners have standing under Article III in climate change suits unresolved.

A related issue to state standing is whether Indian tribes, by virtue of their inherent sovereignty, may establish standing through *parens patriae* status.³¹⁷ The argument for tribal *parens patriae* standing was rejected by the district court in *Native Village of Kivalina v. ExxonMobil Corp.* In this case, an Alaskan native village sought damages from energy companies and electric utilities for coastal erosion, alleging that GHG emissions from their operations contribute to climate change, and thus to the village’s erosion problem.³¹⁸ The court explained that unlike *Massachusetts v. EPA*, the village was not entitled to “special solicitude” because they were seeking damages directed against private entities and not enforcing any procedural rights concerning an agency’s rulemaking authority.³¹⁹ In dismissing the suit, the court held that the village lacked standing because it had not satisfied the “causation” component of standing doctrine—that is, the village had not connected their coastal erosion problem to the specific GHG emissions of the defendants.³²⁰ In addition, the court concluded that the claim was nonjusticiable under the political question doctrine, under which lawsuits based on policy questions must be left to the political branches of government.³²¹

Standing for Non-State Plaintiffs

In general, non-state plaintiffs have encountered difficulties in establishing standing in climate change-related litigation.³²² The finding of standing in *Massachusetts* generally did not extend to non-state plaintiffs seeking to establish standing in nonstatutory causes of action (such as common law nuisance), and the split decision in AEP failed to provide any further guidance.³²³ Courts have largely rejected extending the “special solicitude” standard for standing set forth in

the Court that the full effectiveness of the remedy would be delayed until existing cars and trucks on the road were largely replaced by new ones).

³¹⁴ *American Electric Power Co. v. Connecticut*, 564 U.S. 410 (2011) [hereinafter AEP].

³¹⁵ *Id.* at 420.

³¹⁶ *Id.*

³¹⁷ See generally Elizabeth Ann Kronk, *Effective Access to Justice: Applying the Parens Patriae Standing Doctrine to Climate Change-Related Claims Brought by Native Nations*, 32 PUB. LAND & RES. L. REV. 1 (2011).

³¹⁸ *Native Vill. of Kivalina v. ExxonMobil Corp.*, 663 F. Supp. 2d 863, 882 (N.D. Cal. 2009).

³¹⁹ *Id.*

³²⁰ *Id.* at 877-80.

³²¹ *Id.* at 871-77.

³²² See, e.g., Bradford C. Mank, *Article III Standing for Private Plaintiffs Challenging Greenhouse Gas Regulations*, 53 SAN DIEGO L. REV. 287 (2016) (analyzing standing in *Massachusetts*, AEP, and other cases).

³²³ See *supra* “Common Law Nuisance and Political Question Doctrine” section.

Massachusetts v. EPA to any non-state.³²⁴ Non-state plaintiffs have had some success in establishing standing in cases challenging an agency's failure to consider climate change impacts in their regulatory actions.³²⁵

Barriers to Common Law Claims

Other threshold barriers to litigation often involve whether federal courts have jurisdiction over the claim brought to the court. While most of the climate change litigation discussed above has focused on government regulation of GHG emissions, private plaintiffs also have tried to force emitting sources to reduce GHG emissions or to claim damages from emitters for their alleged contributions to climate change.³²⁶ These efforts, however, have been largely unsuccessful.³²⁷

The few cases that have brought common law nuisance claims seeking injunction or damages have failed based on the court's lack of jurisdiction to hear the claims.³²⁸ This section will review jurisdictional barriers involved in these common law nuisance suits.

Common Law Nuisance and Political Question Doctrine

Several common law nuisance claims have been dismissed at the trial court level because they raised nonjusticiable questions according to the political question doctrine. While standing asks whether there is a proper *plaintiff* before the court, the political question doctrine asks whether there is a justiciable *claim*. The doctrine is rooted in the separation of powers principles, and acts to restrain courts from interfering in policy questions and decisions made by the political branches of government.³²⁹ The Supreme Court in *Baker v. Carr* in 1962 held that some cases are nonjusticiable because they are constitutionally committed to other branches of the government, impossible to decide without an initial policy determination, or otherwise imprudent for judicial review.³³⁰

The doctrine has been the focal point in several nuisance-based climate change litigation matters, with courts rejecting such claims on that ground. For example, in *Comer v. Murphy Oil USA*, property owners sought money damages, claiming that GHG emissions from oil and energy companies were a "nuisance" that added to the severity of Hurricane Katrina, which damaged

³²⁴ See, e.g., *Comer v. Murphy Oil USA, Inc.*, 839 F. Supp. 2d 849 (S.D. Miss. 2012) (finding of Article III standing for state sovereign in *Massachusetts v. EPA* does not support standing for private plaintiffs here), *aff'd on other grounds*, 718 F.3d 460 (5th Cir. 2013); *Native Vill. of Kivalina v. ExxonMobil Corp.*, 663 F. Supp. 2d 863, 882 (N.D. Cal. 2009) (same), *aff'd on other grounds*, 696 F.3d 849 (9th Cir. 2012), *cert. denied*, 133 S. Ct. 2390 (2013); *Washington Envtl. Council v. Bellon*, 732 F.3d 1131, 1145 (9th Cir. 2013) (same).

³²⁵ See, e.g., *WildEarth Guardians v. Jewell*, 738 F.3d 298 (D.C. Cir. 2013) (holding that harm to group's members from local pollution caused by federal leasing of coal lands was sufficient injury in fact to allow challenge to *all* of alleged deficiencies in environmental impact statement on proposed lease, including those related to climate change); *Ctr. for Biological Diversity v. EPA*, 90 F. Supp. 3d 1177, 1187-88 (W.D. Wash. 2015) (holding that members of the plaintiff environmental organization suffered concrete standing injuries from the EPA's approval of Washington's and Oregon's decisions not to identify any waters experiencing ocean acidification as impaired under the Clean Water Act).

³²⁶ See e.g., *Comer v. Murphy Oil USA*, 839 F. Supp. 2d 849, 862-865 (S.D. Miss. 2012), *aff'd* 718 F. 3d 460 (5th Cir. 2013).

³²⁷ See *infra* "Common Law Nuisance and Political Question Doctrine" and "Displacement of Federal Common Law" sections.

³²⁸ See *infra* "Displacement of Federal Common Law" section.

³²⁹ JONATHAN MARTEL ET. AL., *GLOBAL CLIMATE CHANGE AND U.S. LAW* 249-50 (Jody Freeman & Michael B Gerrard, eds., 2d ed. 2014).

³³⁰ 369 U.S. 186, 216 (1962).

their property.³³¹ The court held, among other things that “the claims presented by the plaintiffs constitute nonjusticiable political questions, because there are no judicially discoverable and manageable standards for resolving the issues presented, and because the case would require the Court to make initial policy determinations that have been entrusted to the EPA by Congress.”³³² Similarly, in *California v. General Motors Corp.*, the State of California brought a nuisance suit against automakers for money damages for their alleged contribution to climate change that was dismissed as a nonjusticiable political question.³³³ In *Native Village of Kivalina v. ExxonMobil Corp.*, in addition to dismissing the case for lack of standing, the district court also held, among other things, that “the allocation of fault—and cost—of global warming is a matter appropriately left for determination by the executive or legislative branch in the first instance.”³³⁴ Some of these cases were also dismissed because the claims were displaced by the CAA.³³⁵

Displacement of Federal Common Law

Federal common law may be displaced where “Congress addresses a question previously governed by a decision rested on federal common law.”³³⁶ The test of displacement is whether the federal statute speaks directly to the question raised in the lawsuit.³³⁷ In 2011, the Supreme Court’s decision in *AEP* (discussed above) barred federal common law claims (such as nuisance) against entities for alleged injuries from GHG emissions.³³⁸ In a unanimous decision, the Court held that under Section 111 of the CAA, EPA’s authority to regulate GHG emissions displaces federal common law rights to seek abatement of GHG emissions from power plants.³³⁹

Though the 2011 *AEP* ruling involved plaintiffs seeking injunctive relief (requiring the GHG-emitting defendants to cap and reduce their CO₂ emissions over time), a court has held the ruling to mean the CAA displaces federal common law actions seeking monetary damages as well.³⁴⁰ The availability of *state* common law claims for reducing GHG emissions remains an open question although one court has held that state law nuisance claims may also be displaced.

If Congress amends the CAA to remove EPA’s authority to regulate GHG emissions under the CAA, which would effectively overturn the Supreme Court’s decisions in *AEP* and *Massachusetts v. EPA*, it would appear that common law nuisance claims would possibly no longer be displaced by federal actions, which would potentially open the door to a resurgence of these claims. Currently, the House is considering H.R. 637, the Stopping EPA Overreach Act of 2017, which would exclude GHGs from regulation under the Clean Air Act.³⁴¹

³³¹ *Comer v. Murphy Oil USA*, 839 F. Supp. 2d 849, 862-865 (S.D. Miss. 2012), *aff’d* 718 F. 3d 460 (5th Cir. 2013).

³³² *Id.* at 865.

³³³ See *California v. General Motors Corp.*, No. C06-05755-MJJ, 2007 U.S. Dist. LEXIS 68547 (N.D. Cal. Sept. 17, 2007) (holding that the “complaint raises non-justiciable political questions, it need not and does not reach the issue of whether the federal common law recognizes Plaintiffs global warming nuisance claim or whether congressional action has otherwise displaced Plaintiff’s claim”).

³³⁴ *Native Vill. of Kivalina v. Exxon Mobil Corp.*, 663 F. Supp. 2d 863, 877 (N.D. Cal. 2009), *aff’d by* 696 F.3d 849 (9th Cir. 2012). See *supra* “Standing Doctrine” section discussing the standing issues in this case.

³³⁵ See *infra* “Displacement of Federal Common Law” section.

³³⁶ *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 423 (2011).

³³⁷ *Id.* at 424.

³³⁸ *Id.*

³³⁹ *Id.*

³⁴⁰ *Comer v. Murphy Oil USA*, 839 F. Supp. 2d 849 (S.D. Miss. 2012), *aff’d* 718 F. 3d 460 (5th Cir. 2013).

³⁴¹ H.R. 637, 115th Cong. (2017).

Barring any congressional action removing EPA's authority, the *AEP* decision will continue to displace common-law-based climate change claims, making it unnecessary for courts to reach the standing and political question issues in such cases.³⁴² However, a recent case in the context of the public trust doctrine is raising those jurisdictional issues anew.

The Public Trust Doctrine

In November 2016, an Oregon federal district court judge denied the U.S. government's motion to dismiss a lawsuit brought by a group of 21 individuals, all age 20 or younger, and other plaintiffs seeking to compel the federal government to reduce CO₂ emissions.³⁴³ The case, *Juliana v. United States*, is part of a campaign of state and federal lawsuits and rulemaking petitions related to climate change coordinated by an Oregon nonprofit, Our Children's Trust.³⁴⁴ While only a preliminary ruling, the opinion has prompted some media outlets to speculate whether the "kids'" lawsuit may potentially force actions to address climate change further through litigation.³⁴⁵

The plaintiffs allege that federal officials promoted policies that contribute to climate change, while knowing of the alleged dangers of those policies.³⁴⁶ The plaintiffs ask the court to order the federal government to "implement an enforceable national remedial plan to phase out fossil fuel emission" and "stabilize the climate system," among other requests for relief.³⁴⁷ There are multiple causes of action in the complaint, which the district court organized into two categories: (i) alleged violations of plaintiffs' substantive due process rights to life, and liberty, and property in the Constitution and (ii) common law violations of the public trust doctrine.³⁴⁸ The district court did not rule on the merits of these claims, nor did it issue a finding that the government bears legal or factual responsibility for increased carbon dioxide emissions. But the court did conclude that it has subject matter jurisdiction over the case and that the plaintiffs' alleged facts that, if proven to be true, could entitle them to relief.³⁴⁹

In addition to raising standing and political question issues similar to those discussed above,³⁵⁰ the court's treatment of the plaintiffs' public trust claim may also represent a unique ruling in the context of climate change litigation. The public trust doctrine is a common law principle with ancient origins whereby the government has a duty to safeguard certain natural resources for the benefit of the public.³⁵¹ The public trust doctrine is traditionally associated with tidelands and the beds of navigable waterways, and the government argued that the doctrine should not be

³⁴² See e.g., *Native Vill. of Kivalina v. ExxonMobil Corp.*, 696 F.3d 849 (9th Cir. 2012) (rejecting the federal common law nuisance claim solely on the basis of the CAA displacement argument announced by the Supreme Court in *AEP*).

³⁴³ *Juliana v. United States*, No. 6:15-cv-01517-TC, 2016 U.S. Dist. LEXIS 156014 (D. Or. Nov. 10, 2016) [hereinafter *Juliana*]. For more information, see CRS Legal Sidebar WSLG1715, *UPDATE: Climate Change Litigation Update: "Children's Crusade" Case Against the United States Goes Forward*, by Stephen P. Mulligan.

³⁴⁴ For further information about Our Children's Trust, see <https://www.ourchildrenstrust.org/>.

³⁴⁵ <http://www.cnn.com/2016/11/10/opinions/sutter-trump-climate-kids/>; https://www.washingtonpost.com/news/energy-environment/wp/2016/12/01/trump-could-face-the-biggest-trial-of-the-century-over-climate-change/?utm_term=.7049b9b37913; <http://www.businessinsider.com/kids-suing-government-for-climate-change-2016-11>.

³⁴⁶ *Juliana*, at *7-*8.

³⁴⁷ *Id.* at *42-*44.

³⁴⁸ *Id.* at *46-*58.

³⁴⁹ *Id.* at *87.

³⁵⁰ *Id.* at *11-*58.

³⁵¹ See *id.* at *58-*68 (discussing the origins of the public trust doctrine).

extended to create a duty to preserve the earth's atmosphere.³⁵² While the *Juliana* court stopped short of deciding that the atmosphere is part of the public trust, instead focusing on alleged rising sea levels and harm to the territorial sea, it left open the possibility of a future ruling that the public trust doctrine creates a federal government duty to protect the atmosphere.³⁵³ Thus far, no court has ruled on the merits of an "atmospheric public trust" claim against the federal government, and state courts have taken divergent views on the viability such a claim against state governments under their respective state constitutions and laws.³⁵⁴

The litigation is now moving forward starting with discovery over the coming months. On January 31, 2017, the court denied the plaintiffs' efforts to depose Secretary of State Rex Tillerson regarding his work related to climate change while at ExxonMobil and the American Petroleum Institute, among other issues.³⁵⁵ The Trump Administration is seeking a late appeal of the denial of the motion to dismiss and to delay trial with the Ninth Circuit.³⁵⁶ Industry groups, including the American Fuel & Petrochemical Manufacturers and the American Petroleum Institute, joined the Trump Administration and filed a similar motion for appeal on March 10, 2017.³⁵⁷

Conclusion

Congress faces a number of questions regarding climate change regulation, policy, and litigation. Some early actions by the Administration indicate it may seek additional time during the litigation process to consider how best to move forward in court.³⁵⁸ Agency actions resulting from compliance with the March 28, 2017, executive order, including delaying the effective date of rules or withdrawing previous determinations, will directly affect ongoing litigation.³⁵⁹ Resolution of the climate change lawsuits and legislation from Congress have the potential to reshape GHG regulation in the United States and, with it, American environmental law.

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³⁵² *Id.*

³⁵³ *Id.*

³⁵⁴ For more information related state claims and other similar suits, see CRS Legal Sidebar WSLG1715, *UPDATE: Climate Change Litigation Update: "Children's Crusade" Case Against the United States Goes Forward*, by Stephen P. Mulligan.

³⁵⁵ Keith Goldberg, *Tillerson Won't Have To Testify In Kids' Climate Suit*, LAW360, Jan. 30, 2017, <https://www.law360.com/articles/886115>.

³⁵⁶ Motion for Leave to Appeal, *Juliana*, *supra* note 343 (D. Or. Mar. 7, 2017).

³⁵⁷ Intervenor-Defendants' Motion for Certification of Order for Interlocutory Appeal, *Juliana*, *supra* note 343 (D. Or. Mar. 10, 2017).

³⁵⁸ See, e.g., Respondents' Motion for Extension of Time to Respond to Motion to Sever and Consolidate, *West Virginia, et al. v. EPA*, No. 15-1363 (D.C. Cir. Mar. 1, 2017) (seeking additional time to respond to petitioners' motion to consolidate petitions for review of EPA's denial of petitions for reconsideration).

³⁵⁹ For example, EPA's withdrawal and reconsideration of the Mid-Term Evaluation determination prompted Auto Alliance to dismiss their lawsuit challenging the determination. See *supra* "Light-Duty Motor Vehicles" section.

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