2011

United States of America

Michael B. Gerrard
Columbia Law School, michael.gerrard@law.columbia.edu

Gregory E. Wannier
Columbia Law School, Sabin Center for Climate Change Law

20

United States of America

MICHAEL B. GERRARD AND GREGORY E. WANNIER

(A) Introduction

20.01 The prospect of carbon liability in the United States is a relatively recent phenomenon. It is only in the last decade that US environmental lawyers and policy-makers have begun to turn their attention to climate change, as climate-related litigation has surged, government action on several fronts has begun, and climate change has generally been recognised as a factor to consider in decision-making across the economy. This chapter lays out existing options to establish liability for greenhouse gas ('GHG') emissions along legislative, regulatory and judicial channels.

The United States legal system

20.02 The United States of America ('USA') was founded as a constitutional democracy. Its primary document is the US Constitution, which establishes the absolute rules for how the federal government functions. It has a three-part system: the bicameral legislature (House of Representatives and the Senate, which together form the Congress) passes legislation; the President signs and implements such laws; and the federal court system, guided by the Supreme Court, determines the legality of federal (and some other) activities. In order to execute the law, the President relies heavily on a federal bureaucracy of administrative agencies, which utilise their technical expertise to implement congressional mandates through regulations and thereby create a set of legal rules subsidiary to statutes (laws). In addition to this, federal courts work in a common law system, and so are able to set laws through judicial decision-making.

20.03 The Constitution also lays out the USA's strong federalist structure, whereby power is apportioned between the national government and its several states. States are given broad power, via the 10th Amendment, over all policy areas not explicitly granted to the federal government or prohibited. The federal government has power via the Constitution's Commerce Clause to legislate on any policy issue that affects interstate commerce, effectively giving it power over GHG emissions (which have effects beyond a single state). In the absence of comprehensive federal activity, however, some states have begun to adopt climate-related laws.

Constitutional and major statutory rights

20.04 The Constitution does not explicitly grant a right to environmental protection. However, it is famously concise, and so this should not be read as showing hostility to environmental protection. The major environmental statutes in effect today also do not include explicit language on substantive rights: instead, they speak of 'primary goals'. The Constitution confers the right to 'due process', and numerous federal and state statutes confer procedural rights.

Federal stance on climate change

Major international treaties

20.05 The USA has ratified the United Nations Framework on Climate Change. On the eve of the 1997 Conference of the Parties in Kyoto, the US Senate, by a vote of 95–0, adopted a resolution opposing ratification of any climate treaty that did not impose binding obligations on the rapidly developing economies comparable to those to be imposed on the USA.[1] Though President William Clinton and Vice President Albert Gore supported the Kyoto Protocol and the USA became a signatory before the Clinton Administration left office, they did not submit it to Senate for ratification, knowing that it would be defeated. When George W. Bush became President in January 2001, he explicitly repudiated the Kyoto Protocol. His successor, Barack Obama, who was inaugurated in January 2009, supports US participation

[1] S. Res. 98, 105th Cong. (1997).

in international climate negotiations, but he has presented no climate treaty to the Senate for ratification. By way of context, it is useful to bear in mind that the USA is also not a signatory to the UN Conference on Law of the Sea,[2] which also would have binding effect; however, it often adopts domestic legislation that carries out the substantive terms of multinational environmental agreements.

20.06 The USA is among the States that have associated themselves with the Copenhagen Accord, and also endorsed the agreements reached at Cancun. As such, it has taken on commitments to contribute to a potential $100-billion-per-year climate action fund to be given by developed countries to developing countries.[3] It has also been involved with much of the institutional structuring that has occurred at both meetings, including agreeing in principle: to contribute to a $100-billion-per-year climate fund that the developed world has collectively pledged to establish by 2020; to help accelerate transfers of relevant green technologies;[4] and individually to reduce emissions around 17 per cent below 2005 levels by 2020, 'in conformity with anticipated US energy and climate legislation, recognising that the final target will be reported to the Secretariat in light of enacted legislation' (and with further reductions thereafter).[5] However, neither of these agreements includes any binding limits on emissions or other legally binding international commitments, and the legislation that was then anticipated was never enacted.

Negotiating position

20.07 The current national Administration under President Obama recognises the severity of climate change and has committed to reducing the country's GHG emissions. Obama has pledged to battle GHG emissions, and has said that the USA is 'determined' to take action.[6] The President has also taken steps to

[2] United Nations Convention on the Law of the Sea, 10 December 1982.

[3] Copenhagen Accord, paragraph 8, 18 December 2009, FCCC/CP/2009/L.7 18.

[4] *Ibid*.

[5] Letter from Todd Stern, United States Special Envoy for Climate Change, to Yvo de Boer, Executive Secretary, United Nations Framework Convention on Climate Change (28 January 2010), available at http://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/unitedstatescphaccord_app.1.pdf.

[6] Barack Obama, 'Remarks by the President at United Nations General Secretary Ban Ki-Moon's Climate Change Summit' (22 September 2009); available at www.un.org/wcm/

begin regulating GHG emissions in the executive branch based on existing authorities, especially the Clean Air Act of 1970.

20.08 A strongly partisan atmosphere currently prevails in Washington. President Obama is a Democrat, as is a majority of the Senate. The House of Representatives was controlled by the Democrats until January 2011. The House passed a comprehensive climate Bill in June 2009 based on an economy-wide cap-and-trade system, but the Bill died in the Senate, whose current rules require affirmative votes of sixty of its one hundred members to enact legislation. The Republicans took control of the House in January 2011, and their leadership is strongly opposed to climate regulation and is attempting to block President Obama's efforts. The next national election will be in November 2012; whether President Obama is re-elected, and the composition of the House and the Senate, will be determined then. Meanwhile, this political situation has hampered the President's ability to make climate-related commitments in the international arena.

Industrial and natural resources (emissions sources and energy mix)

20.09 The USA has been the largest energy consumer in the world according to the Energy Information Administration ('EIA'), using 94.6 quadrillion British Thermal Units (qBTUs) of energy in 2009.[7] However, its use is almost identical to China's use over the past few years,[8] and the International Energy Agency ('IEA') has calculated that China overtook the USA in total consumption in 2008.[9] Over a third of this energy usage is from petroleum (35.3 qBTUs), largely in the transportation and industrial sectors. Another 20 to 25 per cent each comes from natural gas and coal, with coal primarily going to satisfy electricity needs and natural gas fairly split among industrial and residential heating, and

webdav/site/climatechange/shared/Documents/USA.pdf ('We understand the gravity of the climate threat. We are determined to act. And we will meet our responsibility to future generations.').

[7] Energy Info. Admin., U.S. Dept. of Energy, DOE/EIA-0384(2009), 2009 Annual Energy Review 37 (2010) ('EIA 2009 Energy Report').

[8] Energy Information Administration, China Energy Data, Statistics and Analysis – Oil, Gas, Electricity, Coal, available at www.eia.doe.gov/cabs/China/Profile.html.

[9] Jing Yang, 'China's Energy Consumption Rises', *Wall St. J.*, 28 February 2011.

electricity generation. Under 10 per cent of energy needs are met each by nuclear power (which exclusively creates electricity), and by renewable sources (used mostly for electricity but also across other sectors). See Figure 20.1 for a graphical summary of energy sources and end-uses in the US economy.

20.10 The electricity market itself is dominated by coal, which provides about half of the national market. Natural gas and nuclear power also comprise about 20 per cent each. Natural gas is surging in importance, however, and will account for over half of all installed capacity from 2011–14.[10] This leaves renewable sources as constituting 11 per cent of the market.[11] Traditional hydropower provides over three-quarters of renewable electricity, largely in the northwest and northeast but also scattered across the south.[12] Biomass is mostly used for non-electric heating, but is also a reasonably important source of electricity, while the remaining resources constitute less than 10 per cent of the renewable market each. Among these, wind power is the fastest-growing source of electricity, and is on track to outpace all power sources except natural gas in new installed capacity in 2011.[13] However, this number is forecast to drop off from 2012–14 in the face of regulatory uncertainty.[14]

20.11 Although transportation and electricity together use about two-thirds of the USA's energy, industrial activities and residential/commercial uses are also important, and are fuelled largely by petroleum and natural gas resources. Heavy manufacturing is an important part of the US economy, particularly in the midwest and parts of the south,[15] while the northeast and

[10] Energy Info. Admin., U.S. Dept. of Energy, 2009 Electric Power Annual 18, tbl. 1.4 (2010) ('EIA 2009 Power Report').

[11] *Ibid*.

[12] Energy Info. Admin., U.S. Dept. of Energy, 2009 Renewable Energy Consumption and Electricity Preliminary Statistics, tbl. 3 (2010).

[13] EIA 2009 Power Report, above n. 10, at 18 tbl. 1.4.

[14] *Ibid*.

[15] U.S. Dept. of Com., Manufacturing in America: A Comprehensive Strategy to Address the Challenges to U.S. Manufacturers (2004); Econ Post, State economies where manufacturing is number 1 industry, at http://econpost.com/industry/state-economies-where-manufacturing-number-1-industry; see generally National Association of Manufacturers, Manufacturing By State, at www.nam.org/Resource-Center/State-Manufacturing-Data/Manufacturing-by-State.aspx.

midwest use large amounts of natural gas for space-heating requirements.[16]

National climate change risks

20.12 The USA faces several threats from a changing global climate. These dangers can be categorised into temperature disturbances, rising sea levels, water-supply shifts, and more extreme storm fronts. Most of the USA has seen a constant increase in heat-wave incidence since 1950 (although still below 1930s surges).[17] Rising sea levels affect much of the US eastern seaboard and Gulf Coast region, including large swathes of Florida, and the major cities of New York, Boston and New Orleans.[18] Water supplies have tended in the past fifty years to tighten in the south and southwest, while increasing in the north and northeast.[19] This will be particularly problematic in the southwest, where water supplies will be further strained as winter snow packs melt earlier and thereby provide less water runoff.[20] Meanwhile, more precipitation has led to more numerous and extreme precipitation events in the northeast,[21] and could contribute to increased flooding.[22] This precipitation in the northeast will help contribute to more severe snowstorms in the winter, while the Gulf Coast region could see a higher incidence of tropical storms and hurricanes.[23] Meanwhile, more intense wave activity has already begun to erode coastlines along the Pacific northwest, and in the South Atlantic.[24]

[16] Energy Info. Admin., U.S. Dept. of Energy, A Look at Residential Energy Consumption in 1997 (1997); Energy Info. Admin., U.S. Dept. of Energy, 2001 Residential Energy Consumption Survey: Household Energy Consumption and Expenditures Tables, tbl. 1 (2002).

[17] U.S. Climate Change Sci. Prog. & Subcomm. Global Change Research, Weather and Climate Extremes in a Changing Climate: Regions of Focus: North America, Hawaii, Caribbean, and U.S. Pacific Islands 37–42 (2008) ('CCSP Report').

[18] U.S. Global Change Research Prog., Nat'l Oceanic & Atmospheric Admin., Global Climate change Impacts in the United States 149–50 (2009) ('GCRP Report').

[19] CCSP report, above n. 17, at 43. [20] GCRP Report, above n. 18, at 139.

[21] CCSP Report, above n. 17, at 46–8. [22] GCRP Report, above n. 18, at 135.

[23] CCSP Report, above n. 17, at 53–62, 73–5; GCRP Report, above n. 18.

[24] *Ibid*., at 68–73.

20.13 These impacts have already affected communities in the Gulf region, and in Alaska, which has led to climate litigation (see para. 20.63 below). In addition, crop and livestock production is particularly at risk from water stresses,[25] the health industry could be strained by new tropical and waterborne diseases and increased heat stress,[26] and numerous ecosystems, which provide valuable services to society, are severely threatened.[27]

(B) Public law

Overview

20.14 Judicial activity on climate-related issues is a relatively recent phenomenon: the USA has seen a large surge in recent litigation activity, from only one climate-related case brought in 2003, to over a hundred cases in 2010.[28] During the presidency of George W. Bush (January 2001 to January 2009), most climate-related litigation was brought by environmental groups seeking to force GHG regulation, and challenging specific projects on GHG-related grounds. Since Barack Obama took office in January 2009, there has been a surge of litigation brought by industry and by states that oppose regulation, seeking to stop the federal regulatory activity instituted by the Obama Administration.

Types of judicial review

Statutory challenges

20.15 One way to attempt to block federal action is to challenge an underlying statute that grants certain powers. In such a challenge, a plaintiff alleges that a given law violates the provisions of the Constitution (i.e. it is unconstitutional). Constitutional challenges to the text of environmental statutes (as opposed to their enforcement) have rarely succeeded. States are also subject to challenges based on lack of constitutional authority. In particular, the Dormant Commerce Clause prohibits states from interfering purposefully or excessively in interstate commerce. Plaintiffs seldom succeed in such challenges.

[25] GCRP Report, above n. 18, at 71–8.
[26] *Ibid*., at 89. [27] *Ibid*., at 79–88. [28] See Fig. 20.2 below.

20.16 This type of constitutional challenge is not relevant today at the federal level with respect to climate, largely because there is no national climate change law to challenge. Most federal activity on climate change has occurred under the auspices of the Clean Air Act, a statute that is generally accepted as constitutional today. At the state level, there has been more activity, most notably in California under Assembly Bill 32 ('AB 32'), which established a comprehensive climate regulatory regime for that state. However, challenges to AB 32 have thus far been limited to its implementation, and not to the authority of the statute itself.

Regulatory challenges

20.17 Many of the statutes enacted by Congress authorise federal agencies to adopt regulations implementing them. If the underlying statute is deemed constitutional, parties may also challenge those regulations which have been passed pursuant to those statutes. The agencies must follow the Administrative Procedure Act, which requires the agencies to publish draft regulations, provide explanatory background information, invite public comment, and then publish the final regulations. At that point, the regulations may be challenged in federal court by anyone who will be adversely affected by them. Interested parties may also petition agencies to adopt regulations, and sue the agencies if they fail to do so.

20.18 These challenges will generally allege that the regulation goes against the text or intent of its underlying statute, or that proper procedures were not followed, or (less commonly) that applying the statute in a particular way is unconstitutional. Within the set of federal administrative challenges, they can be national in scale, based on statutory interpretation; or more local and project-based, based on both statutory and regulatory interpretation.

Grounds for judicial review

Clean Air Act

Statutory basis

20.19 The Clean Air Act of 1970 ('CAA') is by far the most important basis for climate regulation, and by extension carbon emissions liability. The main section, for regulation of stationary

sources, was designed to achieve certain standards of air pollution necessary to protect the public health and welfare. The basic design for most pollutants is that the Environmental Protection Agency ('EPA') is entrusted to set National Ambient Air Quality Standards ('NAAQS'), which represent the safe concentration of a variety of pollutants.[29] States are then required to establish State Implementation Programs ('SIPs'), subject to EPA approval, to achieve these NAAQS. If the SIP does not satisfy the EPA, it may instead impose a Federal Implementation Plan ('FIP') on that state. All major emission sources must get Title V permits that delineate emissions allowances for individual facilities based on state or applicable federal requirements. In addition, major new emissions sources are subject to New Source Review ('NSR'), under which technology standards are set depending on whether the area is in attainment with NAAQS.[30] These standards are also determined by states, subject to EPA approval. The EPA may also set nationwide technology standards under the New Source Performance Standard program.

20.20 The CAA has an entirely different section for the regulation of motor vehicles. The EPA may directly regulate motor vehicle emissions. These rules supersede state motor vehicle standards, except that the State of California may promulgate its own standards, subject to EPA approval, and other states may adopt the California standards.[31]

20.21 For a pollutant to be subject to CAA requirements, it must first be deemed by the EPA to endanger the public health and welfare. Once so listed, a pollutant will become subject to various CAA provisions, depending on the EPA's subsequent regulations.

[29] 42 U.S.C. § 7409 (2006). The original goal was for such standards to be met by 1975, although later amendments (in 1977 and 1990) pushed back this date.

[30] If the area where a new facility is being built is not in attainment, then the facility is subject to Non-Attainment ('NA') standards, which require that the technology used result in the Lowest Achievable Emissions Rate ('LAER'). If the area is in attainment, or if a NAAQS has not yet been set, then the facility need only reach the Prevention of Significant Deterioration ('PSD') standards, which are the Best Available Control Technology ('BACT'); a less stringent requirement than LAER. 42 U.S.C. §§ 7470–509 (2006).

[31] 42 U.S.C. § 7543 (2006).

20.22 Finally, the ability to sue under the CAA is given both to the EPA to enforce compliance with its regulations, and to members of the public, either to enforce compliance with the statute, or to challenge the EPA's failure to undertake any non-discretionary duty.[32] This is the so-called 'citizen-suit' provision of the Act, and allows private individuals to sue the Government or private actors (facility managers) who may violate the Act.

Regulatory activity

20.23 In 2007 the US Supreme Court issued a seminal decision, *Massachusetts* v. *EPA*, finding that the EPA could not decline to regulate GHGs purely for reasons of policy or expedience; it had to make a real determination of whether these gases contribute to global climate change, which is a threat to public health and welfare. This led to some limited EPA activity where the EPA began researching ways it could regulate GHGs; but no major regulation occurred until President Obama took office and appointed Lisa Jackson as the new EPA Administrator in 2009.

20.24 Under Administrator Jackson, the EPA has issued four major and interrelated climate regulations, which together impose a national system of carbon liability on regulated sectors. In order to justify any regulatory activity, the EPA first had to issue an Endangerment Finding, which determined that GHG emissions from moving vehicles are 'reasonably likely' to threaten public health and welfare, and thus certified six GHGs as pollutants subject to the CAA. Next, the Vehicle Tailpipe Rule sets GHG emission standards for Light Duty Vehicles under the moving source regulatory provisions in the CAA.

20.25 The final two rules work in conjunction to regulate stationary sources. First, the Timing Rule, or Reconsideration Decision, interprets the Clean Air Act's language to conclude that the Vehicle Tailpipe Rule will also mandate that stationary sources be subject to technology standards. The Tailoring Rule then

[32] 42 U.S.C. § 7604 (2006); see 42 U.S.C. § 307 (2006) for a summary of which courts will hear different cases; generally, national regulations must be challenged in the District of Columbia Circuit Court of Appeals, while other actions will be heard in regional federal courts.

limits these regulatory requirements to emitters of 100,000 tons of CO_2 equivalent (CO_2e) per year. This limitation was deemed to be necessary because the CAA normally applies to facilities emitting 250 or more tons per year, but given the volume of GHG emissions emitted compared to other pollutants, this is an unreasonable number.[33] These national rules went into effect on 2 January 2011 (except the Endangerment Finding, which was already in effect).

Current and recent litigation

20.26 The largest set of climate litigation currently underway relates to the EPA's recent national climate regulations under the CAA. Over ninety individual cases have been filed against the four rules listed above, from more than thirty-five distinct parties. Just two of these parties have called for more stringent regulation (those from the Sierra Club and the Center for Biological Diversity).[34] The cases split roughly evenly among challenges to the four major EPA regulations (listed above). Because these challenges are to the EPA's national implementation of the CAA, they are in the District of Columbia Circuit Court of Appeals (the 'DC Circuit'). The Court will hear these challenges in 2011 or 2012. The Court has denied a motion to stay implementation of the EPA's regulations pending decisions on these challenges.

20.27 The DC Circuit tends to be deferential to administrative actions that are well-documented and well-explained in the record, but it also tends to strike down rules that are contrary to the plain words of a statute. Under this light, the Endangerment Finding and the Tailpipe Rule may be in good shape, especially since the motor vehicle industry, the industry that is directly affected by the Tailpipe Rule, has accepted it. But the Tailoring Rule is on shakier ground because on its face its numerical thresholds differ

[33] Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66, 496 (15 December 2009); Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 25,324 (7 May 2010); Reconsideration of Interpretation of Regulations That Determine Pollutants Covered by Clean Air Act Permitting Programs, 75 Fed. Reg. 17,004 (2 April 2010); Prevention of Significant Deterioration and Title VI Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31, 514 (3 June 2010).

[34] Much of the information compiled here and below can be accessed from the CCCL Climate Litigation Chart, available at www.climatecasechart.com.

from those in the statute, and the fate of the Timing Rule seems to be linked to that of the Tailoring Rule.

Clean Water Act

Statutory basis

20.28 Although the CAA is the main source of regulatory activity (and by extension, litigation), several other statutes provide possible angles to address climate change and establish carbon liability. The Clean Water Act ('CWA'), passed in 1972, provides for the regulation of pollutants into waterways. One portion of the statute functions by requiring states to set Water Quality Standards subject to EPA approval under §303(c). Once established, states must promulgate lists (under §303(d) of the CWA) of waterways that fail to meet these standards.[35] These lists form the basis for eventual development of Total Maximum Daily Loads ('TMDLs'), which set acceptable pollutant levels for certain waterways and open the door for water quality-based effluent limitations designed to preserve these TMDLs, under the National Pollutant Discharge Elimination System ('NPDES').[36] All of these actions must be approved by the EPA.

20.29 The CWA has a citizen suit provision similar to that in the CAA; any adversely affected party may sue a private actor for violating statutory or regulatory mandates, or the EPA itself for failing in its duties to administer the statute.[37]

Regulatory activity

20.30 Although water regulation does not generally relate to climate, the EPA issued a memorandum on 15 November 2010, asking twenty-three coastal states and five coastal territories to seriously consider ocean acidification problems (which have been directly linked to GHG levels in the atmosphere[38]) in their future monitoring activities under the CWA.[39] The EPA noted that all coastal

[35] 33 U.S.C. § 1313 (2006). [36] *Ibid*., § 1311, 1342 (2006).
[37] *Ibid*., § 1365 (2006).
[38] European Project on Ocean Acidification, Ocean Acidification and Its Impact on Marine Life, at http://oceanacidification.wordpress.com/2009/01/19/ocean-acidification-and-its-impact-on-marine-life.
[39] Envtl. Prot. Agency, Memorandum on Integrated Reporting and Listing Decisions Related to Ocean Acidification (2010); Clean Water Act, s. 303(d): Notice of Call for Public Comment on 303(d) Program and Ocean Acidification, 75 Fed.

states already have established appropriate pH ranges of 6.5 to 8.5 for their ocean areas, and that states 'should' list waters that do not meet these criteria on their §303(d) lists. The EPA has not pushed hard here, and its actions thus far focus on data collection, suggest rather than mandate, and are self-consciously subsidiary to efforts under the CAA.[40] However, recognition of ocean acidification may open the door for future action under the CWA. Much of the states' administration of the CWA is subject to federal approval, so the EPA could enforce its views. Further, EPA guidance under the CWA sets a maximum of eight to thirteen years before TMDLs should be developed for all bodies of water placed on a §303(d) list. The EPA's efforts to gather data on the federal level, and help individual states in this regard, could give a boost to these activities; the more states know about this issue the sooner they may find themselves compelled to address it. As such, the EPA 'recognizes that the §303(d) program under the CWA has the potential to complement and aid in [CAA climate regulation efforts]'.[41]

NEPA

Statutory basis

20.31 The National Environmental Policy Act, enacted in 1970, aims to influence federal agencies' decision-making process by requiring that they consider the environmental ramifications of their actions. Agencies must issue Environmental Impact Statements ('EISs') for major federal actions significantly affecting the environment.[42] This is a procedural requirement without substantive bite. The NEPA applies to almost all discretionary actions of federal agencies, including permit approvals of private facilities. Several courts have ruled that

Reg. 13, 537 (22 March 2010). The action stems at least in part from a settlement reached earlier in the year with the Center for Biological Diversity (CBD), which had challenged the EPA's earlier refusal to require that Washington State consider ocean acidity as a threat to its coastal water systems. Press Release, Center for Biological Diversity, 'Legal Settlement Will Require EPA to Evaluate How to Regulate Ocean Acidification under Clean Water Act' (11 March 2010), available at www.biologicaldiversity.org/news/press_releases/2010/ocean-acidification-03–11–2010.html.

[40] Envtl. Prot. Agency, Questions and Answers on Ocean Acidification and the Clean Water Act 303(d) Program (2010).

[41] *Ibid*., at 3.

[42] 42 USC § 4332(2) (2006).

GHG emissions are appropriate topics for consideration under the NEPA.[43]

20.32 To help implement the NEPA, Congress also established the Council on Environmental Quality ('CEQ') within the Executive Office of the President (not within the EPA).[44] Under the NEPA, the CEQ is charged with adopting regulations to guide agency actions and to help determine what must be done to satisfy NEPA standards.

20.33 Several states have also passed their own statutes similar to the NEPA designed to accomplish the same goals for state agencies. Among the more notable such statutes are the California Environmental Quality Act ('CEQA') and New York's State Environmental Quality Review Act ('SEQRA').[45] The CEQA in particular has more substantive bite than the NEPA.

Regulatory activity

20.34 On 18 February 2010, the CEQ issued a draft guidance document requiring that agencies consider the direct and indirect GHG emissions resulting from their contemplated actions, as well as the effect of climate change itself on their projects.[46] The guidance sets a threshold for when GHG emissions should be considered, noting emissions of 25,000 metric tons or more might be 'an indicator that a quantitative or qualitative assessment may be meaningful to decision makers and the public'.[47] Although it has received public comments on the draft, the CEQ has so far yet to issue a final guidance.[48]

[43] See, e.g., *Center for Biological Diversity* v. *National Highway Traffic Safety Administration*, 538 F.3d 1172 (9th Cir. 2008); *Mid States Coalition for Progress* v. *Surface Transportation Board*, 345 F.3d 520 (8th Cir. 2003).

[44] 42 USC § 4342 (2006).

[45] Cal Pub. Res. Code §21,000 *et seq*. (West, 1970); N.Y. Envtl. Conserv. Law §§ 3–0301(1)(b), 3–0301(2)(m) and 8–0113 (McKinney, 1995).

[46] Counc. Envtl. Quality, Memorandum for Heads of Federal Departments and Agencies: Draft NEPA Guidance on Consideration of the Effects of climate Change and Greenhouse Gas Emissions (2010).

[47] *Ibid*.

[48] Council on Environmental Quality, 'New Proposed NEPA Guidance and Steps to Modernise and Reinvigorate NEPA', available at www.whitehouse.gov/administration/eop/ceq/initiatives/nepa.

Current and recent litigation

20.35 Unlike other major environmental statutes, the NEPA has no citizen suit provision: instead, challengers can bring claims as outlined by the Administrative Procedure Act ('APA').[49] Numerous NEPA cases have concerned climate change impacts; a total of forty-four such cases had been brought as of March 2011 under the NEPA.[50] As above, several leading decisions have invalidated environmental impact reviews for failing to consider climate change.[51] States have been a heavy area of litigation activity as well: another thirty-five challenges were filed to state NEPA equivalents, with the large majority of these challenges (about 80 per cent) filed in California under the CEQA.[52]

20.36 This litigation has also targeted international activity. In particular, one NEPA lawsuit was brought against two federal corporations, the Overseas Private Investment Corporation ('OPIC') and the Export-Import Bank ('Ex-Im'), based on their failure to consider the impact of GHG emissions of over $32 billion in financing and political risk insurance they had provided to several fossil fuel projects around the world. In settling the case, both entities pledged to consider GHG emissions and release more information in the future. They also each established $250 million funds to finance clean technology projects.[53]

ESA

Statutory basis

20.37 The Endangered Species Act of 1973 ('ESA') was passed to ensure preservation of biodiversity. Under the ESA, two federal bureaux [54] are responsible for listing plant and animal species as endangered (facing possible extinction), or threatened

[49] 5 U.S.C. § 706 (2006). [50] See Fig. 20.2 below.

[51] See, e.g., *Center for Biological Diversity* v. *National Highway Traffic Safety Administration*, 538 F.3d at 1172; *Mid States Coalition for Progress* v. *Surface Transportation Board*, 345 F.3d at 520.

[52] See below, Fig. 2.

[53] *Friends of the Earth* v. *Mosbacher* (N.D. Cal. 2007), Interlocutory appeal denied (September 2007) (settled February 2009), available at www.foe.org/pdf/Ex-Im_Settlement.pdf, www.foe.org/pdf/OPIC_Settlement.pdf; see also Press Release, Friends of the Earth, 'Landmark Global Warming Lawsuit Settled' (6 February 2009).

[54] The Fish and Wildlife Service ('FWS') and National Marine Fisheries Service ('NMFS').

('likely to become an endangered species within the foreseeable future'),[55] without taking economic considerations into account.[56] Once a species is listed, the Secretary of the Interior or Commerce must determine its critical habitats, as well as a recovery plan for the species as a whole (including setting certain restrictions on activities within the habitat).[57] Endangered species are additionally protected from any projects that would constitute a 'taking' (harming individuals in the population).[58] However, there are a number of exceptions, most commonly for projects where developers take steps to 'minimize or mitigate' their detrimental impact on a given listed species; a comprehensive permitting programme exists for projects impacting critical habitat.[59]

20.38 The ESA has a citizen suit provision under which adversely affected parties may sue private actors or the Government for violating statutory or regulatory mandates.[60]

Regulatory activity

20.39 The past few years have seen a large debate about the role of the Polar Bear, which may face extinction primarily due to climate change, in the ESA's structural protections. This debate has revolved around three key agency decisions. First, during the Administration of President George W. Bush, the Department of Interior listed the Polar Bear as a 'threatened species' on 14 May 2008.[61] Six months later, it issued a 'special rule' stating that this listing could not be used to impose permitting requirements based on GHG emissions outside Alaska.[62] Importantly, this 'special rule' only applies to the Polar Bear so long as it is listed as a 'threatened' (and not 'endangered') species. Under the Obama Administration, the Department of the Interior continues to

[55] 16 U.S.C. §§ 1532(6), (19) (2006). [56] *Ibid*., §§ 1533(a)–(b) (2006).
[57] *Ibid*., §§ 1533(c), (f) (2006). [58] *Ibid*., § 1538(a) (2006).
[59] *Ibid*., §§ 1539(a) (2006). [60] *Ibid*., §§ 1540(g) (2006).
[61] Determination of Threatened Status for the Polar Bear (Ursus Maritimus) Throughout Its Range, 72 Fed. Reg. 28, 212 (15 May 2008) (the 'Listing Rule'); see also Press Release, 'Secretary Kempthorne Announces Decision to Protect Polar Bears under Endangered Species Act' (14 May 2008), available at www.fws.gov/home/feature/2008/polarbear012308/pdf/DOI_polar_bears_news_release.pdf.
[62] Endangered and Threatened Wildlife and Plants; Special Rule for the Polar Bear, 50 CFR pt. 17 (2008), available at http://alaska.fws.gov/pdf/pb4d.pdf.

stand by its original rulings,[63] but it has also designated critical habitat for the Polar Bear.

Current and recent litigation

20.40 Both of the above 2008 rules were immediately challenged in federal court on two fronts: by environmentalists who argue that the Polar Bear should be listed as endangered and that the 'special rule' is invalid; and by industry groups who challenged that the Polar Bear should not be listed at all and that the special rule arbitrarily excludes Alaska.[64] These challenges are currently pending.[65]

20.41 Some have argued that the ESA might be used to combat GHG emissions. However, the structure of the ESA is generally seen as ill-suited for this purpose.[66] The ESA focuses on harm to individuals and populations in limited regions, and can stop development within or affecting critical habitats, but the greatest damage to the habitat of the Polar Bears, for example (that of shrinking sea ice), comes from projects originating outside the Arctic, over which it would be much more difficult, both administratively and politically, to impose ESA permitting requirements.

SEC

20.42 On 8 February 2010 the Securities and Exchange Commission ('SEC') issued a Guidance that clarified climate disclosure obligations for US public companies. It noted that companies should report effects on their business from four sources: (i) the impact of legislation and regulation; (ii) the impact of international accords; (iii) indirect consequences of regulation or business trends; and

[63] Allison Winter, 'Interior will Keep Bush's Polar Bear Rule', Greenwire, *Envt. & Energy Rep.*, 8 May 2009.

[64] Lawrence Hurley, *Obama Admin Explains 'Threatened' Listing for Polar Bears*, Greenwire, *Envt. & Energy Rep.*, 23 December 2010.

[65] A federal court recently asked EPA to clarify its listing decision to help the judicial review process, holding that EPA's previous stated reasons were insufficient. *In re: Polar Bear Endangered Species Act Listing and 4(d) Rule Litigation*, 2010 WL 4363872 (D.D.C. 2010). Arguments over the 'special rule' will be heard after the listing decision is resolved.

[66] Bryan Walsh, 'Polar Bears: Protected, but Not Safe', *Time*, 14 May 2008; Holly Doremus, 'Polar Bear Politics: Listing Polar Bears Won't Do Much, But We Should Do It Anyway', *Slate*, 17 January 2008; see also J. B. Ruhl, 'Climate Change and the Endangered Species Act – Building Bridges to the No-Analog Future', *B.U.L. REV.*, 88 (2008), 1.

(iv) physical impacts of climate change.[67] This guidance has had some effect: only 17 of the 151 companies examined in the study that filed a 2009 10-K failed to mention climate change at all.[68] Most disclosures focused on the impact of legislation and regulation; only a third to half of companies discussed the other three topics, with climate impacts being the least-discussed factor that businesses considered in their operations.[69] In 2008 the Attorney General of New York launched an investigation of the securities disclosures of several coal-burning electric utilities, but there has been no other litigation against companies concerning GHG disclosures in securities filing.[70]

Barriers to judicial review

20.43 Although multiple avenues exist to potentially challenge government and other activities for violating statutory provisions, there are also several barriers to such review. The principal barriers are laid out below.

Constitutional standing

20.43A One of the principal restrictions on litigation is termed 'standing'. The United States Constitution confers jurisdiction over 'cases' and 'controversies', and this has been interpreted to mean that a plaintiff must show a 'concrete and particularized' injury-in-fact, which must be 'actual or imminent, not conjectural or hypothetical'.[71] This injury must be to the litigants directly, and not merely to the environment at large.[72] In addition, the injury must be shown to result fairly directly from the challenged activity ('causation'), and court action here must be able to remedy litigants' injuries in some palpable way ('redressability').[73]

[67] Sec. & Exch. Comm'n, *Commission Guidance Regarding Disclosure Related to Climate Change*, 75 Fed. Reg. 6, 290 (8 February 2010).

[68] For more information on corporate SEC disclosures, see Columbia Law School, Climate Change Securities Disclosures Resource Center, at www.law.columbia.edu/centers/climatechange/resources/securities#catalog.

[69] *Ibid*.

[70] Felicity Barringer and Danny Hakim, 'New York Subpoenas 5 Energy Companies', *N.Y. Times*, 16 September 2007.

[71] *Lujan* v. *Defenders of Wildlife*, 504 U.S. 555 (1992).

[72] *Friends of the Earth, Inc*. v. *Laidlaw*, 528 U.S. 167, 181 (2000).

[73] *Lujan*, above n. 71; *Steel Co*. v. *Citizens for Better Environment*, 523 U.S. 83 (1998).

20.44 Injury-in-fact may present a difficult barrier for parties seeking to address widespread rather than localised conditions. Environmental groups often base challenges on injuries suffered by particular members and their property. Companies and industry groups opposed to environmental regulations have less difficulty because they typically can show specific economic injury.

20.45 The global and cumulative nature of anthropogenic climate change pose challenges for plaintiffs attempting to link particular emissions (such as those from a set of power plants or even an entire industrial sector) to a particular weather event (such as a hurricane). When emissions abatement is sought, it can also be difficult to show redressability – i.e. that abating specific emissions will itself have a discernible effect on the climate.[74]

20.46 The case for environmental standing was helped by the 2007 *Massachusetts* v. *EPA* decision in the Supreme Court, where the Court held by a 5–4 decision that the Commonwealth of Massachusetts had standing to challenge the EPA's failure to regulate GHG emissions from vehicles. In this decision, the Court acknowledged that 'The harms associated with climate change are serious and well recognized'.[75] It also noted that contribution to an injury may be sufficient to ground standing: the defendant need not be the sole contributor to the petitioner's harm to be held responsible for its activities ('small incremental steps' also justify judicial review).[76] In that case, Massachusetts alleged that its coastline was being harmed as a result of climate change. Additionally, redressability is satisfied so long as a judicially mandated change would 'slow or reduce' the stated injury (the injury does not have to disappear entirely).[77] However, the longer-term impact of this ruling remains uncertain: the Court noted specifically that states are 'entitled to special solicitude in [the Court's] standing analysis'.[78]

Prudential standing

20.47 After establishing constitutional standing, litigants must also demonstrate prudential standing within the particular statute at

[74] CCSP Report, above n. 17, at 53–68.
[75] *Massachusetts* v. *E.P.A.*, 549 U.S. 497, 521 (2007).
[76] *Ibid.*, at 523–4. [77] *Ibid.*, at 525. [78] *Ibid.*, at 520.

issue. This test examines whether or not the interest alleged is 'arguably within the zone of interests to be protected or regulated by the [statutory provision] or constitutional guarantee in question'.[79] Importantly, the test is 'not meant to be especially demanding', excluding only those whose interests are 'marginally related to or inconsistent with the purposes implicit in the statute'.[80]

20.48 Prudential standing requirements should not present a barrier to most existing challenges, which are primarily brought either by environmental interests or by regulated parties (states and industry). Instead, where this test has been applied in the environmental context it has eliminated tangential interests that indirectly benefit or lose from market changes caused by the regulation.[81]

Ripeness and finality

20.49 In addition to showing that they are the right parties to sue, litigants must also show that they are not suing too early. The ripeness doctrine seeks to 'prevent the courts, through avoidance of premature adjudication, from entangling themselves in abstract disagreements over administrative policies … [until their] effects [are] felt in a concrete way'.[82] In such an inquiry, courts consider (i) 'the fitness of the issues for judicial decision' and (ii) 'the hardship to the parties of withholding court consideration'.[83] A case may be considered 'fit' for a court when the issue presented is purely legal, and there is relatively little utility from observing practical applications of the challenged activity.[84] This is less likely to be true when the agency retains considerable discretion in how to apply

[79] *Assoc. of Data Processing Service Orgs. (ADPSO)* v. *Camp*, 397 U.S. 150, 153–4 (1970); *Bennett* v. *Spear*, 520 U.S. 154, 175–6 (1997); *National Credit Union Admin*. v. *First Nat. Bank & Trust Co*., 522 U.S. 479 (1998).

[80] *Honeywell Intern. Inc*. v. *E.P.A*., 374 F.3d 1363 (D.C. Cir. 2004) (quoting *Clarke* v. *Securities Industry Ass'n*, 479 U.S. 388, 399 (1987)).

[81] *Hazardous Waste Treatment Council* v. *Thomas*, 885 F.2d 918 (D.C. Cir. 1989).

[82] *Nat'l Park Hospitality* v. *Dep't of the Interior*, 538 U.S. 803 (2003).

[83] *Abbott Laboratories* v. *Gardner*, 387 U.S. 136, 149 (1967).

[84] For applications of this test, see *Cement Kiln Recycling* v. *E.P.A*., 493 F.3d 207, 216 (D.C. Cir. 2007) ('When a challenge to an agency document … turns only on whether the document on its face … purports to bind both applicants and the Agency with the force of law-[sic]the claim is fit for review.'); *Miller* v. *Brown*, 462 F.3d 312 (4th Cir. 2006); *Texas* v. *U.S*., 497 F.3d 491 (5th Cir. 2007).

a new rule. When examining 'hardship', the emphasis is often on whether the petitioners face an imminent choice of expensive compliance or penalised non-compliance with a regulation.[85]

20.50 The finality requirement is related to ripeness, and limits judicial review to final agency actions, where the decision-maker has reached a definitive conclusion to take the harm-causing action ('an agency rule, order, license, sanction, relief' or equivalent).[86] To be final, an action must mark 'the consummation of the agency's decision-making process'; and it must determine 'rights or obligations' from which 'legal consequences' will flow.[87]

Exhaustion

20.51 Litigants must exhaust administrative channels before they can seek judicial review. If there is an opportunity to submit comments on a proposed rule, for example, they must do so. This requirement helps ensure that agencies are aware of objections before they take final action, and protects them against ambush.

Mootness

20.52 Finally, a challenge may become moot, and therefore no longer be appropriate for judicial resolution, where the alleged injury is no longer felt. However, the Supreme Court has held that a lawsuit does not become moot simply because a polluter has ceased polluting, if it could thereafter resume its original activities.[88] Mootness may also bar actions that seek to prevent an irreparable injury (such as the destruction of a forest), and the injury takes place before a final decision is rendered (at least if plaintiffs did not seek a preliminary injunction to block the action).

Remedies

Injunctive relief

20.53 The available remedies for a lawsuit depend on the nature of the challenge and the identity of the defendant. As discussed below,

[85] *Nat'l Park Hospitality Ass'n* v. *Dept. of Interior*, 538 U.S. 803 (U.S. 2003); *Lujan* v. *Nat'l Wildlife Fed.*, 497 U.S. 871, 892 (1990); see also *Abbott Labs*, 387 U.S. at 136, for application of this test.

[86] 5 U.S.C. § 704 (2006).

[87] *Bennett* v. *Spear*, 520 U.S. 154, 177–8 (1997).

[88] *Friends of the Earth, Inc.* v. *Laidlaw Environmental Services, Inc.*, 528 U.S. 167 (2000).

the United States Supreme Court rejected a claim for injunctive relief in a case, *American Electric Power* v. *Connecticut*, that concerned the power of the federal courts to direct electric utilities to reduce their GHG emissions. The decision was a narrow one, however, based entirely on the conclusion that the Clean Air Act has directed the EPA to regulate GHGs, leaving no remaining role for injunctive actions under the common law.

20.54 If a statute is declared to be unconstitutional on its face, it is not automatically stricken from the code but it may become ineffective. If a court declares an agency regulation to be invalid, it may vacate the rule, or it may instead choose to allow the rule to remain in effect while the agency corrects the defects. Some courts have run a two-part test to determine whether to vacate the EPA's rules: 'the seriousness of the order's deficiencies … and the disruptive consequences of an interim change'.[89] Particularly, where a 'rule has become so intertwined with the regulatory scheme that its vacatur would sacrifice clear benefits to public health and the environment', courts may choose merely to remand regulations.[90]

20.55 If a litigant successfully demonstrates that an agency has improperly failed to undertake some mandatory activity, as occurred in *Massachusetts* v. *EPA* in 2007,[91] the court will ordinarily direct the agency to take that action. Specific time limits are usually not imposed, but the litigants may return to court to seek redress for unreasonable delays.

Litigation costs

20.56 In the USA, each party to litigation typically bears its own fees and costs; there is no general 'loser pays' rule. However, several statutes provide that prevailing plaintiffs may receive attorney's fees. The CAA, CWA, and ESA explicitly allow fees to be granted to successful petitioners in citizen suits where 'appropriate'.[92] Such fee awards have been a significant source of financing for some environmental litigation. The NEPA does not have a similar

[89] *Allied-Signal, Inc.* v. *Nuclear Regulatory Comm'n*, 998 F.2d 146, 150–1 (D.C. Cir. 1993); see also *North Carolina* v. *EPA*, 550 F.3d 1176 (D.C. Cir. 2008) (reducing to a remand an earlier vacatur issued in *North Carolina* v. *EPA*, 531 F.3d 896 (D.C. Cir. 2008)).

[90] *North Carolina*, 550 F.3d at 1178–9.

[91] *Mass.* v. *EPA*, 549 U.S. at 497.

[92] 42 U.S.C. § 7607 (2006); 33 USC § 1365 (2006); 16 U.S.C. § 1540 (2006).

provision, but successful plaintiffs can claim these fees under the Equal Access to Justice Act.[93] Except under extraordinary circumstances, unsuccessful plaintiffs are not liable for defendants' legal fees.

Energy litigation activity

20.57 As the largest source of US GHG emissions, energy projects, and particularly electricity power plants, have become a large source of litigation. In particular, the Sierra Club, a US environmental NGO, is leading a coordinated litigation campaign by environmental groups to challenge all new coal-fired power plants.[94] These campaigns utilise administrative procedures and litigation to challenge several aspects of these facilities under a wide array of legal theories: GHG emissions, conventional air pollutant emissions, cooling water discharges, ash disposal, land acquisition, railway lines to carry fuel, public utility commission approvals, and others. Similarly, the environmental community is litigating against coal mining activities, especially focusing on mountaintop removal. Many of these challenges have been successful.[95] The litigation costs and judicial uncertainty, coupled with possible GHG regulations, have created a major cloud of uncertainty over all proposed coal-fired power plants.

20.58 There are also a significant number of legal challenges to renewable energy projects. These lawsuits are not coordinated, however, and not based on any unifying principle. Instead they arise from local parties protesting aesthetic harms (wind farms have been particularly challenged as being unsightly),[96] or from

[93] 5 U.S.C. § 504 (2006).

[94] Sierra Club, 'Stopping the Coal Rush', at www.sierraclub.org/environmentallaw/coal.

[95] Sierra Club, 'Stopping the Coal Rush', Plant List, at www.sierraclub.org/environmentallaw/coal/plantlist.aspx.

[96] The most prominent of these controversies concerned the proposed 'Cape Wind' project off the coast of Massachusetts, which has been a target of litigation. Kim Geiger, 'First U.S. Offshore Wind Project Faces Lawsuit', *L.A. Times*, 26 June 2010; Beth Daley, '6 Groups File First Suit to Halt Wind Farm', *Bos. Globe*, 26 June 2010. However, this project was issued its permit to begin construction on 7 January 2011. Dept. of Army, Permit No. NAE-2004–388, Cape Wind Associates, available at www.nae.usace.army.mil/projects/ma/CapeWind/permit.pdf; Dept of Army Record of Decision, Application No. NAE-2004–388, Cape Wind Associates, available at www.nae.usace.army.mil/projects/ma/CapeWind/ROD.pdf.

environmentalists concerned with other environmental harms (certain large solar projects may pose a threat to desert ecology, and some wind projects have been alleged to threaten a species of endangered bats, for example).[97] Although this local litigation does not target the industry as such, it can be a significant problem for specific projects. As such, some have argued that a federal statute should be passed to pre-empt such litigation (along the lines of the federal law that inhibits local laws against telecommunications towers).[98] There has been no recent legislative action to enact this statute, however.

(C) Private law

Overview

20.59 In addition to challenging specific governmental actions, interested parties may also attempt to utilise the US's private law system as a springboard to provide a basis for climate-relevant complaints. There are relatively few legal mechanisms available here, largely because the USA does not constitutionally or statutorily recognise a right to a non-polluted environment. However, several lawsuits have been brought that explore the use of these theories.

20.60 Attempts to base carbon liability in private causes of action could be displaced by climate legislation, or possibly by regulation or perhaps even the possibility of regulation under existing law (principally the CAA). However, even without such displacement, such lawsuits face multiple challenges, as described below.

Bases for liability

20.61 These claims sound in tort, which is defined as 'a civil wrong … for which a remedy may be obtained'.[99] Two kinds of tort theories have been advanced in the climate change context – public

[97] See, e.g., *Animal Welfare Institute* v. *Beech Ridge Energy LLC*, 675 F. Supp.2d 540 (D. Md. 2009).

[98] Federal Telecommunications Act of 1996, 47 U.S.C. § 253 (2006).

[99] *Black's Law Dictionary*, 9th edn. (2009) at 1626.

nuisance and fraudulent misrepresentation (the latter, linked with conspiracy).

Public nuisance

20.62 Public nuisance on the national level is a common law injury, defined not by any national statute, but by the courts. On the state level, it can be either court-defined or legislated. The basic test for this (applicable in federal law, although it may vary slightly from state to state) is an 'unreasonable interference with a right common to the general public'.[100] This definition includes significant interference with the public health, safety, morals, peace, or comfort, as well as conduct 'of a continuing nature' that is detrimental to a public right.[101] However, this test is infamously malleable, and so courts often decide what constitutes a nuisance on a case-by-case level.[102] The right interfered with must be common to the public as a class, and not merely a right held by one person or even a group of citizens;[103] although the harm must remain individualised.[104] Under the common law, public nuisance is a no-fault tort, meaning that no maliciousness or negligence need be shown to establish liability.

20.63 In the USA, state courts have a long history of applying common law public nuisance doctrine to compensate pollution victims in the absence of sufficient environmental protections.[105] The federal court system has also done so under federal common law since before the turn of the twentieth century.[106] This doctrine has

[100] Restatement (Second) Of Torts § 821A (1979).

[101] *Ibid*., § 821B.

[102] *Lucas* v. *South Carolina Coastal Council*, 505 U.S. 1003, 1055 (1992) (J. Blackmun, dissenting) ('one searches in vain … for anything resembling a principle in the common law of nuisance').

[103] Restatement (Second) Of Torts § 821C(2)(c) (1979) (allowing a citizen to sue 'as a representative of the general public').

[104] *Ibid*., § 821C(1).

[105] Bruce Yandle, *Common Sense and Common Law for the Environment: Creating Wealth in Humming Bird Economies* (Rowman and Littlefield, 1997), pp. 88–89; Tom Kuhnle, 'The Rebirth of Common Law Actions for Addressing Hazardous Waste Contamination', *Stan. Envtl. L.J*., 15 (1996), 187, 193. For a modern example, see *United States* v. *Hooker Chems. & Plastics Corp*., 722 F. Supp. 960, 963–70 (W.D.N.Y. 1989) (this case is better known as the 'Love Canal Case', which involved toxic dumping by a chemicals company leading to major health concerns in a neighbouring community).

[106] *Baltimore & P. R. Co. v Fifth Baptist Church*, 108 U.S. 317 (1883) (applying equitable common law norms to impose liability for private nuisance); *Missouri* v. *Illinois*, 180 U.S.

been used by private and governmental parties (particularly state governments[107]) to control pollution that is beyond their legislative control. However, federal common law nuisance actions are designed only to address gaps where neither state law, nor federal legislation or regulations, apply.[108] In particular, 'separation-of-powers concerns create a presumption in favor of pre-emption of federal common law whenever it can be said that Congress has legislated on the subject'.[109] Courts have also tended to limit liability to the direct owners of properties that cause harm, even if the original toxic pollutants arrived from elsewhere.[110]

Public nuisance has become the largest source of climate-relevant private litigation today. In total, four major cases have been filed claiming that various parties have caused a public nuisance through their GHG emissions.[111] *California* v. *General Motors Corp.*, involving the State of California suing a group of car companies for money damages resulting from GHG emissions, was dismissed and is concluded.[112] *Comer* v. *Murphy Oil*

208, 241 (1901) (compelling one state to restrict activities that imposed a 'public nuisance' on another).

107 See, e.g., *State of Ga.* v. *Tennessee Copper Co.*, 206 U.S. 230 (1907) (granting the state of Georgia an injunction preventing emissions from plants located across the border in the state of Tennessee).

108 *City of Milwaukee* v. *Illinois*, 451 U.S. 304, 314 n. 7, 315 (1981) (noting that 'if state law can be applied, there is no need for federal common law' and that '[w]here Congress has so exercised its constitutional power … courts have no power to substitute their own [judgment]'); see also *Diamond* v. *Gen. Motors Corp.*, 97 Cal. Rptr. 639, 642–6 (Ct. App. 1971) (denying a public nuisance claim because 'plaintiff is simply asking the court to do what the elected representatives of the people have not done: adopt stricter standards … and enforce them').

109 *Matter of Oswego Barge Corp.*, 664 F.2d 327, 335 (C.A.N.Y. 1981).

110 *City of Bloomington* v. *Westinghouse Electric Corporation*, 891 F.2d 611, 614 (7th Cir. 1989).

111 *Connecticut* v. *Am. Elec. Power Co., Inc.*, 582 F.3d 309 (2nd Cir. 2009) rev'd No. 10-174, 2011 WL 2437011 (U.S. 2011); *Comer* v. *Murphy Oil USA*, 585 F.3d 855, 860 (5th Cir. 2009) (discussing the relevant threshold issues), *vacated*, *reh'g granted en banc*, 598 F.3d 208 (5th Cir. 2010), *appeal dismissed*, 607 F.3d 1049 (5th Cir. 2010) (dismissing the case due to lack of quorum); *Native Vill. of Kivalina* v. *ExxonMobil Corp.*, 663 F. Supp. 2d 863 (N.D. Cal. 2009); *People of State of California* v. *Gen. Motors Corp.*, 2007 WL 2726871 (N.D. Cal. 2007). Another case, where a private citizen sued state and federal government environmental agencies for allowing GHG emissions, was quickly dismissed: *Korsinsky* v. *U.S. E.P.A.*, 2005 WL 2414744 (S.D.N.Y. 2005).

112 *Cal.* v. *GM*, 2007 WL at 15–49. California subsequently withdrew its appeal to the 9th Circuit, citing advancements made by the Obama Administration as having satisfied its concerns. Motion for Appellee, No. 07–16908 (9th Cir. 2009) (motion to withdraw appeal).

seeks damages from a large group of GHG emitters for injury caused by Hurricane Katrina, which was allegedly intensified by global warming. This case was dismissed after a rather convoluted appellate history, in which the court granted en banc review and vacated the panel decision, and then lost a quorum for en banc review but left the panel decision vacated.[113] *Native Village of Kivalina* v. *ExxonMobil Corp.* is a suit by an Alaskan village against a group of GHG emitters for the cost of relocating; it was dismissed by the trial court and is now under appeal before the Ninth Circuit.[114] Most importantly by far, on 20 June 2011 the Supreme Court ruled in *American Electric Power* v. *Connecticut*. That decision is discussed in detail below.

American Electric Power *v.* Connecticut

20.64 By way of background, in 2004, at a time when environmentalists were frustrated at the refusal of Congress and President George W. Bush to regulate greenhouse gases (GHGs), two suits were brought against six electric power companies that run fossil fuel plants in a total of twenty states. One suit was brought by eight states and New York City; the other suit was brought by three land trusts. The plaintiffs in both cases claimed that the GHGs from the power plants constitute a common law nuisance, and they asked the court to issue an injunction requiring the plants to reduce their emissions.

20.65 In 2005, Judge Preska of the US District Court for the Southern District of New York dismissed the cases on the grounds that they raise non-justiciable political questions.[115] The Second Circuit heard oral argument in June 2006. As the third anniversary of that argument passed, the Second Circuit's long delay in deciding became one of the great mysteries in climate change law. Meanwhile, the Supreme Court issued the landmark decision in *Massachusetts* v. *Environmental Protection Agency*, and later one of the three members of the panel that heard the arguments in the *Connecticut* case was elevated to the Supreme Court – Judge Sotomayor. Finally in September 2009 the two remaining

[113] *Comer*, 585 F.3d at 860. This appeal to the Supreme Court was dismissed on 10 January, 2011. *Comer*, 607 F.3d, *cert. denied* (U.S. Jan. 10, 2011) (No. 10–8168).

[114] *Kivalina*, 663 F. Supp. at 869.

[115] *Connecticut* v. *Am. Elec. Power Co.*, 406 F.Supp.2d 265 (S.D.N.Y. 2005).

members of the panel issued the decision – Judge McLaughlin, an appointee of the first President Bush, and Judge Hall, appointed by the second President Bush.[116]

20.66 The Second Circuit decision was a major win for the plaintiffs. First, the panel found that the case was perfectly justiciable and did not raise political questions as that concept has been interpreted by the Supreme Court.[117] Second, though it did not need to, the panel found not only that the states had standing to sue – which was already known from the *Massachusetts* decision – but also that the private land trusts had standing because they alleged that their property was being harmed by climate change.[118] This would potentially open the courthouse doors to broad classes of people and entities beyond states. Third, the panel found that the federal common law of nuisance applied, and that it had not been displaced by the Clean Air Act and EPA actions under that statute.[119] Thus the Second Circuit remanded the case to the district court for further proceedings.

Supreme Court decision

20.67 Eight justices participated in the deliberations of *AEP*; Justice Sotomayor was recused. The decision was unanimous, 8–0, and was written by Justice Ginsburg. The decision reversed the Second Circuit and found that the federal common law nuisance claims could not proceed.[120] The sole reason was that the Clean Air Act, as interpreted in *Massachusetts*, gave the EPA the authority to regulate greenhouse gases, and the EPA was exercising that authority. This displaced the federal common law of nuisance. The Court declared, 'Congress delegated to EPA the decision whether and how to regulate carbon-dioxide emissions from power plants; the delegation is what displaces federal common law.'[121] Thus it is not for the federal courts to issue their own rules.

20.68 This may be the most intriguing paragraph in the opinion: 'The petitioners contend that the federal courts lack authority to adjudicate this case. Four members of the Court would hold that at least

[116] *Connecticut*, 582 F.3d at 309.
[117] *Ibid*. at 321. [118] *Ibid*. at 332. [119] *Ibid*. at 371.
[120] *Connecticut*, 2011 WL 2437011 at 4.
[121] *Ibid*. at 10.

some plaintiffs have Article III standing under *Massachusetts*, which permitted a State to challenge EPA's refusal to regulate greenhouse gas emissions; and further, that no other threshold obstacle bars review. Four members of the Court, adhering to a dissenting opinion in *Massachusetts*, or regarding that decision as distinguishable, would hold that none of the plaintiffs have Article III standing. We therefore affirm, by an equally divided Court, the Second Circuit's exercise of jurisdiction and proceed to the merits.'[122]

20.69 Though unnamed in the opinion, clearly the four justices who find standing, and no other obstacles to review, are Justices Ginsburg, Breyer, Kagan and Kennedy. The four who disagree are Chief Justice Roberts and Justices Scalia, Thomas and Alito. The Ginsburg group thus apparently rejects the political question defense as well as the standing argument. Should another case come up on which Justice Sotomayor was not recused, there might be a 5–4 majority to allow climate change nuisance litigation, but for the Clean Air Act displacement. So this aspect of the Supreme Court decision did not set precedent in the technical sense, but it may give an indication of how the Supreme Court as presently constituted would rule in another case where states sued on public nuisance grounds about GHGs, but where displacement was not operating.

20.70 On the other hand, the paragraph quoted above (when considered in conjunction with *Massachusetts*) may hint that Justice Kennedy believes that only states would have standing. Thus there might be a 5–4 majority against any kinds of GHG nuisance claims (and maybe other kinds of GHG claims) by non-states.

State claims left unresolved

20.71 The Court explicitly did not decide whether the Clean Air Act pre-empts state public nuisance litigation over GHGs. Thus some plaintiff group will probably press state common law claims, perhaps on the remand in *AEP* v. *Connecticut*. The defendants would certainly argue that the Clean Air Act displaced state common law nuisance claims as well. The plaintiffs would no doubt counter that the Clean Air Act has provisions that explicitly say that

[122] *Ibid*. at 7.

common law claims are not pre-empted, at least by certain parts of the Clean Air Act.[123] In the next volley, the defendants would quote Justice Ginsburg's statement in *AEP* that 'judges lack the scientific, economic, and technological resources an agency can utilize in coping with issues of this order … Judges may not commission scientific studies or convene groups of experts for advice, or issue rules under notice-and-comment procedures'.[124] Where this ball stops, only time can tell.

20.72 It is also possible that plaintiffs will forum shop – they will look for the district or the circuit where they are most likely to prevail in their non-pre-emption argument.

20.73 Pressing state common law nuisance claims will raise several additional complications. One of them is which state's law will apply. If relief is sought against a particular facility, it might well be the law of the state where the facility is located. The Fourth Circuit recently considered common law nuisance claims against facilities in several states in a case concerning conventional air pollutants, not GHGs. The court found that the laws of the states where the plants were located specifically allowed the activities – in other words, the facilities were operating pursuant to and in compliance with state permits – and therefore nuisance actions were precluded.[125] If the same doctrine applied to the defendants' facilities in a new case about GHG, the plaintiffs would face a tough burden in proving that the plants were not operating in accordance with state law.

20.74 Another complication with state common law nuisance claims is that some states would act to bar such claims. On 17 June 2011, Governor Rick Perry of Texas signed a Bill providing that companies sued for nuisance or trespass for GHG emissions would have an affirmative defense if those companies were in substantial compliance with their environmental permits.[126]

20.75 Since the *AEP* opinion was based entirely on displacement by congressional designation of EPA as the decision-maker on GHG

[123] 42 U.S.C.A § 7604(e).
[124] *Connecticut*, 2011 WL 2437011 at 11.
[125] *N. Carolina, ex rel. Cooper* v. *Tennessee Valley Auth*., 615 F.3d 291 (4th Cir. 2010).
[126] SB 875 (to be codified at Tex. Water Code Ann. § 7.257).

regulation, if Congress takes away EPA's authority to regulate GHGs but does not explicitly bar federal common law nuisance claims, these cases will come back. Thus this interestingly changes the political dynamic a bit – success by opponents of GHG regulation in their efforts to take away EPA's authority could swiftly bring back the common law claims, unless they are also able to muster enough votes to go further and explicitly pre-empt the federal and state common law claims.

Damages vs injunctive relief

20.76 Another question left open is whether the Supreme Court's decision bars all federal common law nuisance claims, or only those like *AEP* that sought injunctive relief. This particular question may be litigated very soon, perhaps in the two other public nuisance cases for GHGs that are currently pending. *Village of Kivalina* v. *Exxon Mobil* was put on hold pending the decision in *AEP*, but now that the case is off hold the plaintiffs are arguing that *AEP* affects only suits for injunctive relief, not their own suit for money damages. Meanwhile, *Comer* v. *Murphy Oil* was refiled on 27 May 2011 after its procedurally convoluted dismissal (see para. 20.63 above); it, too, is seeking money damages, not an injunction.

20.77 None of these cases has come close to the merits. There has been no discovery in any of them, or litigation of such difficult issues as how a district court would determine what is a reasonable level of GHG emissions from a myriad of industrial facilities, or (in the cases seeking money damages) what defendants would be liable, what plaintiffs would be entitled to awards, what defendants would have to pay what share of the award, and what plaintiffs would enjoy what share of the award. Among the other issues that would have to be addressed are extraterritorial jurisdiction over foreign entities; the impossibility of attributing particular injuries to particular defendants; and the effect of the fact that most of the relevant emitting facilities were presumably operating in accordance with their governmentally issued emissions permits.

20.78 Everything else aside, *AEP* appears to be a reaffirmation of EPA authority. That is shown by two things. First, the language of the decision itself is quite strong on EPA's power under the Clean Air

Act. For example, the Court stated: 'It is altogether fitting that Congress designated an expert agency, here, EPA, as best suited to serve as primary regulator of greenhouse gas emissions.'[127] Second, Justices Alito and Thomas wrote a concurring decision saying the opinion assumed that *Massachusetts* governed and could not be distinguished; they did not necessarily agree with it, but no party had raised that issue.[128] But, perhaps significantly, Chief Justice Roberts and Justice Scalia did not join in that concurrence. Therefore its seems that there may now be a 7–2 majority in favour of keeping *Massachusetts* and its finding that the EPA has strong authority to regulate GHGs under the Clean Air Act. This, in turn, may have somewhat strengthened the EPA's hand in the multiple litigations now pending in the US Court of Appeals for the District of Columbia Circuit challenging the EPA regulations.

Fraudulent misrepresentation and conspiracy

20.79 Attempts have also been made to hold GHG emitters liable by accusing them of fraudulent misrepresentation to the government and public for private gain. There is no federal cause of action for this, but most states have their own causes of action, and utilise some version of the following test: 'One who: 1) fraudulently makes a misrepresentation of fact, opinion, intention, or law; 2) for the purpose of inducing another to act or to refrain from action in reliance upon it; 3) is subject to liability to the other in deceit for pecuniary loss caused to him; 4) by his justifiable reliance upon the misrepresentation.'[129] Most states add that if the statement is 'material', or if the party making the representation has reason to know that the plaintiff is likely to regard it as important in making a decision, then the reliance need not be justifiable.[130] To be actionable, a fraudulent misrepresentation generally must concern fact rather than mere opinion, judgement, expectation, or probability.[131]

20.80 An attempt could be made to utilise the conspiracy claim as an alternative basis for liability for climate misinformation

[127] *Connecticut*, 2011 WL 2437011 at 11. [128] *Ibid*. at 13.
[129] Restatement (Second) Of Torts § 525 (1979) (element demarcation added).
[130] *Ibid*. (case citations). [131] *Ibid*. (Comment d).

campaigns. There is a federal conspiracy statute that addresses attempts to defraud the US government, but it only applies to federal offences.[132] However, conspiracy has also been defined in the federal common law, as 'a combination "of two or more persons who, by some concerted action, intend to accomplish some unlawful objective for the purpose of harming another which results in damage"'.[133] Generally, conspiring parties must have 'reached a unity of purpose or a common design and understanding, or a meeting of the minds in an unlawful arrangement'.[134] Several states also have their own (similar) conspiracy rules.

20.81 Plaintiffs have used fraudulent misrepresentation and conspiracy claims in the past as part of an effort to hold industries accountable for alleged attempts to misdirect scientific research on an important issue for financial gain. The most famous example comes from a series of lawsuits against the tobacco industry.[135] Although none of these cases ever reached a decision on the merits, the industry eventually agreed to a $206 billion settlement with all plaintiffs.[136] In addition, the federal government filed a suit under the Racketeer Influenced and Corrupt Organizations Act ('RICO').[137] The Government successfully established legal fault in that case, but the remedies were limited to injunctive relief (no damages were awarded).[138]

20.82 Attempts to impose similar liability for funding bad climate science face significant hurdles. The plaintiffs in the tobacco case

[132] 18 U.S.C. § 371 (2006).

[133] *Vieux* v. *E. Bay Reg'l Park Dist*., 906 F.2d 1330, 1343 (9th Cir. 1990).

[134] *Gilbrook* v. *City of Westminster*, 177 F.3d 839, 856 (9th Cir. 1999) (*en banc*) (quotation omitted).

[135] *Cipollone* v. *Liggett Group, Inc*., 505 U.S. 504 (1992) (protesting efforts to prevent releases of data); see generally Douglas N. Jacobson, 'After *Cipollone v. Liggett Group, Inc*: How Wide Will the Floodgates of Cigarette Litigation Open?', *Am. U.L. Rev*., 38 (1989), 1021, 1023; Hanoch Dagana and James J. White, 'Governments, Citizens, and Injurious Industries', *N.Y.U. L. Rev*., 75 (2000), 354, 363.

[136] Tucker S. Player, 'After the Fall: The Cigarette Papers, the Global Settlement, and the Future of Tobacco Litigation', *S.C. L. Rev*., 49 (1998), 311; Arthur B. LaFrance, 'Tobacco Litigation: Smoke, Mirrors and Public Policy', *Am. J. L. & Med*., 26 (2000), 187.

[137] 18 U.S.C. § 1962 (2006).

[138] *United States* v. *Philip Morris USA, Inc*., 449 F. Supp. 2d 1 (D.D.C. 2006), order clarified, 477 F. Supp. 2d 191 (D.D.C. 2007); see generally Civil Division, United States Department of Justice, Tobacco Litigation, at www.justice.gov/civil/cases/tobacco2/index.htm ('DOJ Tobacco Litigation Listing'). Appeals on both sides were unsuccessful.

had very strong facts using (by then) uncontroversial science, and still only succeeded after certain insider revelations.[139] Climate science is much more complicated, and in the USA particularly it is much more controversial; scientists still exist, though overwhelmingly outnumbered, who question fundamental aspects of the scientific basis for climate change, which could undermine attempts to label any one party as 'hiding the truth'. To establish liability in climate cases, litigants might have to prove that these companies believed climate change presented dangers, and nonetheless began a coordinated industry effort to obfuscate the facts. They then might have to show that this obfuscation actually hurt them; or that the Government's climate regulation efforts were significantly affected by reliance on corporate-funded climate research.[140] Finally, given that the nature, sources and impacts of climate change are subjects of vigorous political debates in the USA, attempts to impose liability for advocacy in one direction or the other raise important issues under the free speech and free press clauses of the First Amendment to the US Constitution.

20.83 Two GHG lawsuits have raised such conspiracy claims: *Comer* and *Kivalina*. *Comer* additionally made a fraudulent misrepresentation claim under Mississippi state law. As with the public nuisance cases, none of these claims have been heard on the merits: in *Kivalina*, this claim was dismissed with the public nuisance claim without discussion; and *Comer*'s two claims were separated out from public nuisance early on and dismissed as a 'generalised grievance'.[141]

Barriers to judicial review

20.84 Before even reaching the merits of these tort theories, plaintiffs would have to overcome several barriers to judicial review, as summarised below.

[139] Insiders gave accounts of industry meetings developing strategies to mislead the public and active manipulation of datasets. Richard Ausness, 'Conspiracy Theories: Is There a Place for Civil Conspiracy in Products Liability Litigation?', *Tenn. L. Rev.*, 74 (2007), 383, 384–5. See also 'DOJ Tobacco Litigation Listing', above n. 138.

[140] These findings are context-specific elements of fraud, which is defined legally as '[a] knowing misrepresentation of the truth or concealment of a material fact to induce another to act to his or her detriment'. *Black's Law Dictionary*, 9th edn (2009), 731.

[141] *Comer*, 585 F.3d at 868 (quoting *Allen* v. *Wright*, 468 U.S. 737 (1984)).

Constitutional standing

20.85 Standing here is similar to the standing question discussed above under the statutory claims; the test is essentially the same. Unsurprisingly then, many of the concerns with establishing standing (particularly looking at causation of climate change and redressability if emissions are reduced) are similar. As with public litigation, plaintiffs will need to demonstrate a real, tangible harm being protected. This makes property owners, and particularly states (in light of *Massachusetts* v. *EPA* and its 'special solicitude' for states), best suited to bring a case for private nuisance.

20.86 Particular issues arise with causation associated with fraudulent misrepresentation. The chain of causation is even more attenuated, as plaintiffs may not only have to show that GHG emissions led to their particularised injuries, but also that alleged conspiracies to misinform the Government and public actually affected policy.

Political question doctrine

20.87 The political question doctrine is a court-created doctrine that prevents courts from hearing cases that may interfere with the proper functioning of the other two federal branches. The classical form of the political question doctrine has its origins in *Marbury* v. *Madison*, a foundational court decision that in 1803 introduced the idea that the court system should limit itself to resolving cases involving individual rights and injuries: '[q]uestions, in their nature political, or which are, by the constitution and laws, submitted to the executive, can never be made in this court'.[142] Courts have applied this doctrine not just in the face of clear jurisdictional conflict, but also where needed to preserve the legitimacy of the judiciary, or to avoid conflict with other branches of government.[143] In either case, the goal is generally to 'restrain the Judiciary from inappropriate interference' with the other branches' affairs.[144] Where applied, the political

[142] *Marbury* v. *Madison*, 5 U.S. 137, 170 (1803).

[143] Rachel Barkow, 'More Supreme than Court? The Fall of the Political Question Doctrine and the Rise of Judicial Supremacy', *Col. L. Rev.*, 102 (2002), 237, 253–5.

[144] *United States* v. *Munoz-Flores*, 495 U.S. 385, 394 (1990).

question doctrine generally follows a multi-factor test laid out in *Baker* v. *Carr*.[145]

20.88 Public nuisance claims for GHGs are particularly vulnerable to allegations that insufficient judicial tools exist to resolve many important questions, including what level of emissions qualifies something as a public nuisance; how to deal with the fact that the challenged actions (such as extracting oil and coal, and building automobiles) were not only lawful but were encouraged by the Government over a period of many years; how to apportion damages that resulted from the activities of millions of companies all over the world for a period of more than a century; and how to distribute money damages, when the victims number in the billions, are all over the world, and include many who are deceased and many more who are unborn. However, as noted above, the Supreme Court in *American Electric Power* split 4–4 on whether the political question doctrine impedes common law nuisance claims for GHGs, and most observers believe that if Justice Sotomayor had not been recused from that case, she would have sided with the plaintiffs, leading to a 5–4 majority rejecting the political question doctrine in this context.

Causation

20.89 All common law tort claims, whether federal or state, require a showing that the alleged wrong actions in fact caused plaintiffs' harm (cause-in-fact), and that the wrong actions are sufficiently related to the injury to be legally recognised as responsible (proximate cause). As with the foundational torts, causation inquiries vary from state to state, and so there is no unified standard. However, most states utilise some variation of this bifurcation,

[145] *Baker* v. *Carr*, 369 U.S. 186, 217 (1962) (laying out a test of six factors, any one of which is sufficient to justify avoiding judicial resolution: '[1] [A] textually demonstrable constitutional commitment of the issue to a coordinate political department; [2] a lack of judicially discoverable and manageable standards for resolving it; [3] the impossibility of deciding without an initial policy determination of a kind clearly for non-judicial discretion; [4] the impossibility of a court's undertaking independent resolution without expressing the lack of the respect due coordinate branches of government; [5] an unusual need for unquestioning adherence to a political decision already made; or [6] the potentiality of embarrassment from multifarious pronouncements by various departments on one question'.).

explained below. For both of these inquiries, the plaintiff will generally bear the burden of proving causation.[146]

20.90 Factual causation is established when 'the harm would not have occurred absent the conduct'.[147] However, the defendant need not be the sole cause: if multiple actors, acting independently, each could have caused this harm, then any of them can be considered the factual cause.[148] The courts have yet to decide whether these black letter doctrines apply in the climate change situation, with its millions of potential defendants, dispersed over time and space.

20.91 Legal causation limits liability to 'harms that result from the risks that made the actor's conduct tortious'.[149] Put another way, a party is only liable for expected harms from their bad conduct. Where the action is intentional or reckless, this liability extends even to harms that were unlikely.[150] Conversely, if the action is merely negligent, then trivial contribution to a larger event that actually caused the injury will not establish liability. The standard of care to be applied retroactively to historic GHG emitters is very much an open question.

(D) Other law

State laws

20.92 As stated above, the USA is a federalist system; individual states have the power to set their own laws and policies in many areas. Many states have done so, with commitments to reduce their GHG emissions into the future.

20.93 California in particular has led the way in climate policy, most notably with its passage of Assembly Bill 32 ('AB32') in 2006, which commits California to achieving 1990 levels of emissions by 2020. To implement this programme, the California Air Resources Board ('CARB') is empowered to take a wide variety of measures, most notably a cap-and-trade programme, but also including new building codes, clean energy financing measures,

[146] Restatement (Third) of Torts: Physical & Emotional Harm § 28 (2010).
[147] *Ibid*., § 26. [148] *Ibid*., § 27.
[149] *Ibid*., § 29. [150] *Ibid*., § 33.

grid restructuring, clean vehicle rules, and other measures that would inevitably impose liability across the economy.[151] California's cap-and-trade programme is scheduled to take effect in 2013.

20.94 Other than California, no states have active plans to implement cap-and-trade programmes. The State of New Mexico's Environmental Improvement Board approved a cap-and-trade system on 2 November 2010, but the incoming governor fired the entire Board on 5 January 2011, and attempted to prevent the cap-and-trade rule from being published.[152] This action was in turn overturned by the New Mexico Supreme Court, but the situation there remains in flux.[153]

Regional laws

20.95 In addition to individual state activities, three groups of states have also joined forces to establish cap-and-trade systems that have the potential to impose emission limitations within their boundaries. In the northeast, the Regional Greenhouse Gas Initiative ('RGGI') comprises nine states,[154] caps power sector emissions at 10 per cent below 2005 levels by 2018, and has a functioning market in place to accomplish this.[155] RGGI has the only mandatory cap-and-trade system for GHGs now operating in the USA. In the west, the Western Climate Initiative ('WCI') has brought together eleven US states and Canadian provinces[156] and has a goal of reducing 2005 emissions by

[151] For more information on specific plans, see California Air Resources Board, 'Climate Change Program', at www.arb.ca.gov/cc/cc.htm.

[152] Margot Roosevelt, 'New Mexico Threatens a U-Turn on Environmental Regulations', *L.A. Times*, 5 January 2011.

[153] Press Release, N.M. Envtl. Law Ctr., 'NMELC Wins Supreme Court Victory' (26 January 2011), available at http://nmenvirolaw.org/index.php/site/pressreleases-more/nm_supreme_court_orders_records_administrator_to_print_rules.

[154] Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont. Additionally, Pennsylvania and the Canadian Provinces of Québec, New Brunswick and Ontario are observers. New Jersey was a full member, but the governor recently withdrew from the programme; however, New Jersey's implementing legislation has yet to be repealed.

[155] See Regional Greenhouse Gas Initiative, CO_2 Budget Trading Program, at www.rggi.org/home.

[156] WCI includes seven US states (Arizona, California, Montana, New Mexico, Oregon, Utah and Washington) and four Canadian provinces (British Columbia, Manitoba,

15 per cent by 2020, though it is not scheduled to go into effect until 2012 (with full implementation in 2015)[157] and, except for California, state action remains uncertain. Finally, the midwest established the Midwestern Greenhouse Gas Reduction Accord ('MGGRA') with seven states and provinces,[158] which has set an 18 to 20 per cent reduction goal below 2005 levels by 2020,[159] though very little activity has occurred to date. All three regions also include several observers. However, the November 2010 election brought Republican opponents of climate regulation to power in certain states, which is leading several of these states to consider dropping out.[160]

20.96 If the federal government were to adopt comprehensive climate legislation, these regional agreements would likely be folded into the national programme. Otherwise, any federal laws or regulations could either ignore the regional programmes (leaving them relatively intact), or they could pre-empt these programmes via the Supremacy Clause, which holds that the United States Constitution and federal statutes are 'the supreme law of the land'.[161]

Criminal law

20.97 Criminal liability in the USA is founded on violations of federal or state statutes. No existing or foreseeable statute makes it a crime to emit GHGs. Criminal liability could attach for the filing of false reports with the Government, but no such charges have been brought related to GHGs.

Public trust

20.98 Some scholars have suggested that public trust principles present an opportunity for judges to hold governments accountable for

Ontario and Québec). Additionally, six Mexican states, six additional US states, and four additional Canadian provinces, are observers. Arizona's membership does not include participation in WCI's cap-and-trade programme.

157 See Western Climate Initiative, at www.westernclimateinitiative.org.

158 Six US states (Illinois, Iowa, Kansas, Michigan, Minnesota and Wisconsin) and one Canadian province (Manitoba). Observers include Indiana, Ohio, South Dakota and the Province of Ontario.

159 See Midwest Greenhouse Gas Reduction Accord, at www.midwesternaccord.org.

160 See Fig. 3 for a graphical depiction of the states involved in each of these three initiatives.

161 U.S. Const. art. VI, cl. 2.

their emissions. Public trust doctrine in the environmental context holds that governments necessarily hold all of their natural resources in trust for their citizens, and as such carry a fiduciary duty to preserve these resources for present and future use.[162] Under such a hypothetical 'atmospheric trust' theory, the atmosphere could be characterised as a national asset, which would then impose upon the Government an obligation to prevent waste to that asset.[163] Citizens could bring a suit either as a beneficiary of that trust, based on harms (health impacts etc.) felt from the Government's failure to preserve the property; or as co-tenants of the trust, for failure by the Government to pay to preserve the property.[164]

20.99 In May 2011 several lawsuits were filed simultaneously in states around the country based on the public trust doctrine and GHGs. These cases raise some of the same issues of separation of powers and judicial competence as are present in *American Electric Power*, but these issues will presumably be litigated under the new lawsuits.

International law

Treaty liabilities

20.100 The USA has been and continues to be reluctant to subject itself to international laws in the environmental field. As stated above, it has not ratified the Kyoto Protocol or UNCLOS. It also withdrew recognition of the International Court of Justice's ('ICJ') general jurisdiction in 1985, following a decision with which it disagreed.[165] The USA continues to grant specific jurisdiction to the ICJ in certain circumstances, and under certain treaties. Also, US courts often follow treaty mandates even when such treaties

[162] See Jan S. Stevens, 'The Public Trust: A Sovereign's Ancient Prerogative Becomes the People's Environmental Right', *U.C. Davis L. Rev.*, 14 (1980), 195.

[163] Mary Wood, 'Atmospheric Trust Litigation' in William C. G. Burns and Hari M. Osofsky (eds.), *Adjudicating Climate Change: Sub-National, National and Supra-National Approaches* (New York: Cambridge University Press, 2009), p. 99.

[164] *Ibid.*

[165] Letter from George P. Schultz, Secretary of State, United States, to Javier Perez de Cuellar, Secretary General, United Nations (7 October 1985) (referring to Department Statement, Dept. of State, 'U.S. terminates acceptance of ICJ compulsory jurisdiction' (7 October 1985)), reprinted in *I.L.M.*, 24 (1985), 1742.

lack binding effect.[166] However, a treaty can impose mandatory treaty authority over the US court system, meaning that judges must abide by the provisions of the treaty in interpreting the law, only '[i]f the treaty contains stipulations which are self-executing, that is, require no legislation to make them operative'.[167] The USA is not currently a Party to any environmental treaties that would impose such a binding obligation with respect to GHG emissions.

20.101 The country is a Party to the FCCC and, as noted above, has endorsed the Copenhagen and Cancun agreements. No FCCC-specific claims have been brought forward in any US tribunal to date.

Foreign judgments

20.102 The USA is relatively friendly to recognising and enforcing foreign judgments.[168] However, it does not do so on the basis of any treaties; instead recognition is governed by state law, on three separate bases. First, the Uniform Foreign Money Judgment Recognition Act of 1962 grants enforceability to judgments 'granting or denying recovery of a sum of money' other than taxes, penalty, or familial support, unless the foreign court used faulty procedure.[169] It is recognised by thirty states.[170] Second, the Uniform Foreign-Country Money Judgments Recognition Act of 2005 updates the 1962 law by clarifying certain points, and adding a statute of limitations.[171] This update has been recognised by thirteen states.[172] Importantly, several of the forty-three states above have included reciprocity requirements on foreign states to take advantage of these Acts.[173] Nineteen states do not recognise

[166] Janet Koven Levit, 'Does Medellin Matter?', *Fordham L. Rev.*, 77 (2008), 617, 624–5.

[167] *Medellin* v. *Texas*, 552 U.S. 491, 505–6 (2008) (quoting *Whitney* v. *Robertson*, 124 U.S. 190, 194 (1888)).

[168] Lucien Dhooge, '*J. Aguinda v. ChevronTexaco*: mandatory grounds for the non-recognition of foreign judgments for environmental injury in the United States', *J. Transnat'l L. & Pol'y*, 19(2) (2009).

[169] Unif. Foreign Money-Judgments Recognition Act (1962) 13 U.L.A. 261, §§ 1(2), 3, 4 (West, 1986).

[170] Dhooge, above n. 168, at 3.

[171] National Conference of Commissioners on Uniform State Laws, Summary of the Uniform Foreign-Country Money Judgments Recognition Act, at www.uniformlaws.org/ActSummary.aspx?title=Foreign-Country, Money Judgments Recognition Act.

[172] Dhooge, above n. 168, at 3.

[173] *Ibid*., at 27.

either Act, but rely on the comity doctrine. This doctrine holds that '[n]o sovereign is bound … to execute within his dominions a judgment rendered by the tribunals of another state; [but rather is free] to give effect to it or not, as may be found just and equitable'.[174] The result of these three different types of recognition is that the law of recognition of foreign judgments remains uncertain.[175]

20.103 As this is written, Ecuador is pursuing civil litigation against Chevron for oil contamination. The case was originally brought in the US courts but then dismissed on *forum non conveniens* grounds.[176] Proceedings then took place in Ecuador, and that country's courts awarded a judgment for the plaintiffs of $9 billion in damages against Chevron.[177] However, Chevron had alleged various improprieties in the conduct of that litigation, including successfully subpoenaing documents related to potential tampering with judicial independence;[178] and at its request a US federal court on 7 March 2011 issued a preliminary injunction against the enforcement in the US courts of any judgment rendered by the courts of Ecuador in this litigation.[179]

OECD

20.104 The USA is a member of the OECD and it is thus possible to bring a complaint if a business fails to comply with the OECD Guidelines calling for 'responsible business conduct consistent with applicable law'. Such a complaint might look similar to one brought in Germany, as described in Chapter 17 at para. 17.99.[180]

[174] *Hilton* v. *Guyot*, 159 U.S. 113, 166 (1895); see also *Dhooge*, above n. 168, at 24, n. 143.

[175] Ronald A. Brand, 'Enforcement of Foreign Money-Judgments in the United States: In Search of Uniformity and International Acceptance', *Notre Dame L. Rev.*, 67 (1991), 253, 255 (referring to this area of law as being in an 'unreduced and uncertain condition').

[176] *Aguinda* v. *Texaco, Inc.*, 142 F. Supp. 2d 534 (S.D.N.Y. 2001), aff'd, 303 F.3d 470 (2d Cir. 2002).

[177] Simon Romero and Clifford Krauss, 'Ecuador Judge Orders Chevron to Pay $9 Billion', *N.Y. Times* (14 February 2011).

[178] *In re Application of Chevron Corp.*, 709 F. Supp. 2d 283 (S.D.N.Y. 2010), aff'd sub nom. *Chevron Corp.* v. *Berlinger*, 629 F.3d 297 (2d Cir. 2011).

[179] *Chevron Corp.* v. *Donziger*, 2011 WL 778052 (S.D.N.Y. 2011).

[180] Germanwatch, 'Complaint against Volkswagen AG under the OECD Guidelines for Multinational Enterprises (2000) – Request to the German National Contact Point (Federal Ministry of Economics and Technology) to initiate the procedures for the

(E) Practicalities

Jurisdiction

Domestic activities

20.105 In order to hear a case, a federal court must have both personal jurisdiction (over the parties to the suit) and subject-matter jurisdiction (over the subject of the suit). Personal jurisdiction ensures that the party being sued has significant ties with the USA that justify bringing them to US courts. This has historically protected some foreign-run companies, although having business within the USA would be enough to ground jurisdiction. Subject-matter jurisdiction can come either if the question presented is primarily based on federal laws (federal-question jurisdiction), or if the litigants come from multiple states and have put over $75,000 at issue (diversity jurisdiction).[181] Most of the litigations detailed above have federal-question jurisdiction, because they are based on federal statutes or federal common law. *Comer* v. *Murphy Oil* relied instead on diversity jurisdiction.

20.106 If the federal court does not have jurisdiction, then claims must be brought under state courts; and indeed, many cases of national significance are litigated in state courts. Also, even if a federal court has jurisdiction, parties may still bring their claims in state courts unless federal law provides exclusive jurisdiction to federal courts. This exclusive jurisdiction is provided for in most of the main environmental statute citizen provisions, including the CAA, CWA and ESA.

Foreign activities

20.107 Jurisdiction over foreign activities by US entities is primarily established by the Alien Tort Claims Act ('ATCA'), passed with the first Judiciary Act in 1789. This act says quite simply that '[t]he [federal] district courts shall have original jurisdiction of any civil action by an alien for a tort only, committed in violation of the law of nations or a treaty of the United States'.[182]

solution of conflicts and problems in the implementation of the Guidelines' (7 May 2007), available at www.germanwatch.org/corp/vw-besch-e.pdf.

[181] See 28 U.S.C. §§ 1330–69, 1441–52 (2006).

[182] 28 U.S.C. § 1350 (2006).

20.108 The ATCA was used heavily in the mid-1990s to hold corporations liable for contributing to human rights violations by foreign governments.[183] These lawsuits never resulted in an actual monetary judgment, but did yield several large settlement payments.[184] However, in 2010 an appellate court ruled in *Kiobel* v. *Royal Dutch Petroleum* that corporations cannot be held liable under the ATCA.[185] This case has garnered widespread attention, and will likely be appealed to the Supreme Court.[186] However, the decision also explicitly leaves room for officers of corporations to be sued in their individual capacities if they 'purposefully aid and abet' a violation of international law.[187]

20.109 Looking at climate litigation, this Act is limited in at least two ways. First, it only applies to treaties and customary law that the USA recognises, which explicitly excludes, for example, any climate liability established by the Kyoto Protocol. Second, the Supreme Court has expressed 'great caution' in allowing cases to be brought under the ATCA,[188] and specifically has limited its applicability to violations recognised in 1789, and some reasonable number of new claims of similar character and specificity as that original list.[189] These limitations would make it very difficult to use the ATCA as a jurisdictional hook to impose carbon liability.

Enforcement

20.110 The USA has a strong history of enforcing domestic judicial decisions, giving its judicial system a particularly large amount of power in the overall government structure. There is also a strong culture of enforcing existing statutory obligations; most relevant federal statutes (including all but one listed above) have citizen suit provisions that allow individuals to sue for enforcement of these laws.

[183] John B. Bellinger III, 'Will Federal Court's *Kiobel* Ruling End Second Wave of Alien Tort Statute Suits?', *Wash. L. Found. L. Backgrounder*, 25(34) (2010), 1, 2.
[184] *Ibid*., at 2.
[185] *Kiobel* v. *Royal Dutch Petroleum Co*., 621 F.3d 111 (2nd Cir. 2010).
[186] Bellinger, above n. 183, at 3.
[187] *Kiobel*, 621 F.3d at 122.
[188] *Sosa* v. *Alvarez-Machain*, 542 U.S. 692, 728 (2004).
[189] *Ibid*., at 725.

Obtaining information

20.111 The Freedom of Information Act ('FOIA'), passed in 1966, is the most effective source of information on government activities. This Act requires federal agencies to make available to the public any agency rules, orders, records and opinions, with limited exceptions (mostly pertaining to national security, staff issues and ongoing litigation).[190] To accomplish this, they must set in place procedures for any party to petition for such information, and must respond to all requests within twenty business days (though this deadline is often missed).[191] In addition, each state has its own version of the FOIA, which can be used for those agencies. Although delays are not uncommon in this process, it has been a key source of information in environmental litigation efforts.

20.112 In addition, discovery rules during litigation mandate access to all relevant non-privileged documents by both parties. The USA has a strong discovery process, which will prove useful if any private law claims (particularly conspiracy claims) are allowed to move forward (discovery is normally unavailable during the pendency of a motion to dismiss.) However, administrative litigation rarely gets to discovery beyond the FOIA because those cases are almost all based on record review, and administrative records are automatically disclosed.

Government immunity from litigation

20.113 The national government is technically immune from litigation unless it consents to the lawsuit.[192] However it has waived this sovereignty for most tort claims,[193] and this immunity does not extend to challenges to legislative or regulatory actions. State governments are immune from suits by citizens of other states and foreigners under the 11th Amendment. In addition, the Supreme Court has read the 'structure of the original Constitution' as providing sovereign immunity against lawsuits brought by citizens

[190] 5 U.S.C. § 552(b) (2006).
[191] 5 U.S.C. § 552(a)(6) (2006).
[192] *Gray* v. *Bell*, 712 F.2d 490, 507 (D.C. Cir. 1983).
[193] 28 U.S.C. § 1346(b) (2006).

of their own state.[194] However, several exceptions exist; most notably, state officers can be sued for unconstitutional acts,[195] although only injunctive relief is available.[196] Also, states can be sued by other states, the federal government, or for other specific charges. The main effect of these rules is that (absent certain contractual waivers) states cannot be sued for damages in federal courts, though injunctive relief remains available. States may be sued for damages in state courts.

(F) Conclusion

20.114 Carbon liability in the USA is characterised by the absence of comprehensive climate legislation on the federal level. Given this absence, the primary relevant federal activity will be the EPA's continuing efforts to apply the CAA to problems of climate change and GHG emissions. Meanwhile, several states and groups of states have also stepped into this gap to make emission reduction commitments in various policy forums, and establish regional cap-and-trade markets. The recent group of private lawsuits claiming damages based in public nuisance and/or conspiracy to misinform the public are similarly enabled by this lack of legislative activity, although they face serious challenges in a court system that has largely been reluctant to step into this policy gap. (See para. 20.64 above for The United States Supreme Court's decision in *American Electric Power* v. *Connecticut*.)

20.115 The Congress that was elected in November 2010 will clearly not enact a programme of climate regulation, and many of its members are attempting to block the EPA's efforts to utilise its existing statutory authority over GHGs. The congressional and presidential elections of November 2012 will determine the course of US climate regulation in the years to follow. Whatever the outcome of these elections, it is likely that the courts will continue to play a central role.

[194] *Alden* v. *Maine*, 527 U.S. 706 (1999).
[195] *Ex parte Young*, 209 U.S. 123 (1908).
[196] *Edelman* v. *Jordan*, 415 U.S. 651 (1974).

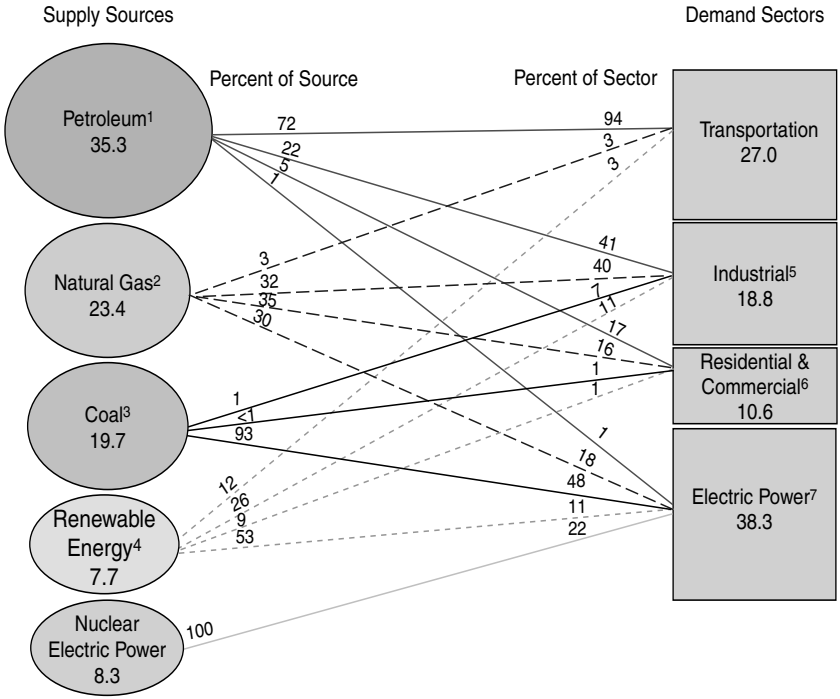

Figure 20.1[197] Graphical summary of energy sources and end-uses in the US economy

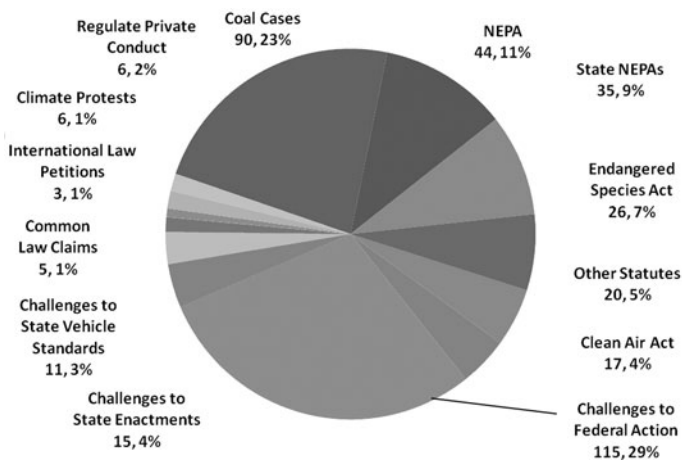

Figure 20.2a[198] Types of climate cases filed (393 total cases as of 11 March 2011)

[197] EIA 2009 Energy Report, above n. 7, at 37.

[198] Figs. 20.2a and 20.2b courtesy of Arnold & Porter LLP; more detail available at www.ClimateCaseChart.com.

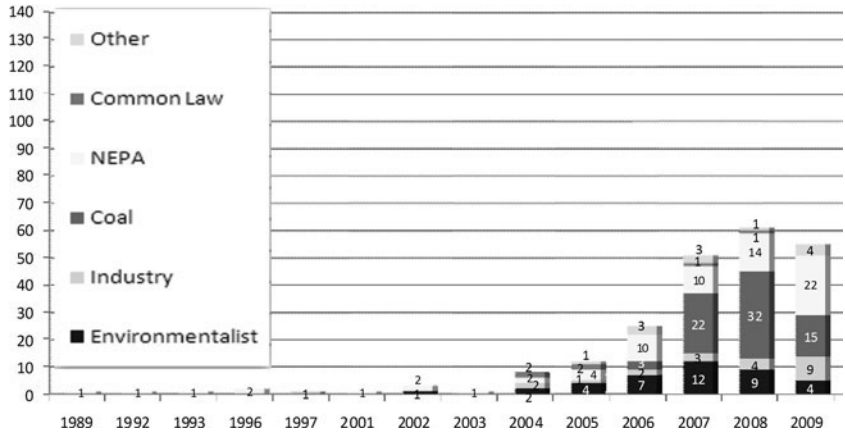

Figure 20.2b Climate litigation: filings (X axis: year; Y axis: number of cases)

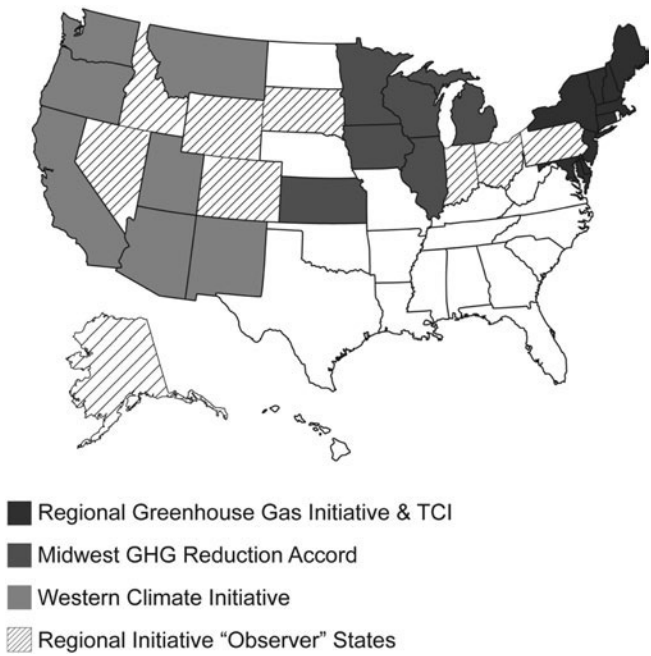

Figure 20.3[199] Regional initiatives

[199] Ivan Gold and Nidhi Thakar, 'A Survey of State Renewable Portfolio Standards: Square Pegs for Round Climate Change Holes?', *William & Mary Envtl. L. & Pol'y Rev.*, 35(1) (2010), 183, 229. Map reprinted courtesy of Ivan Gold, Perkins & Coie, LLP.