Environment & Climate Regulation 2021

Contributing editors
James M Auslander and Brook J Detterman

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Beveridge & Diamond

Lexology Getting The Deal Through is delighted to publish the sixth edition of Environment & Climate Regulation, which is available in print and online at www.lexology.com/gtdt.

Lexology Getting The Deal Through provides international expert analysis in key areas of law, practice and regulation for corporate counsel, cross-border legal practitioners, and company directors and officers.

Throughout this edition, and following the unique Lexology Getting The Deal Through format, the same key questions are answered by leading practitioners in each of the jurisdictions featured. Our coverage this year includes new chapters on Australia.

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Every effort has been made to cover all matters of concern to readers. However, specific legal advice should always be sought from experienced local advisers.

Lexology Getting The Deal Through gratefully acknowledges the efforts of all the contributors to this volume, who were chosen for their recognised expertise. We also extend special thanks to the contributing editors, James M Auslander and Brook J Detterman of Beveridge & Diamond, for their assistance with this volume.
# Contents

## Introduction
James M Auslander and Brook J Detterman  
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### ENVIRONMENT

<table>
<thead>
<tr>
<th>Country</th>
<th>Page</th>
<th>Authors/Entities</th>
</tr>
</thead>
</table>
| Australia      | 6    | William Oxby  
Oxby Legal  

| Belgium        | 13   | Bernard Delcourt, Valérie Vandegaart, Zoë Thiéry and Claire Thollembeck  
Industrious Law  

| China          | 20   | Shen Jinzhong  
Winners Law Firm  

| Dominican Republic | 25    | Fabio J Guzmán Saladín and Giselle Pérez-Reyes  
Guzmán Ariza  

| Germany        | 32   | Bettina Enderle and Julia Neutzner  
Enderle Environmental Law  

| Malta          | 40   | Ron Galea Cavallazzi and Rya Gatt  
Camilleri Preziosi  

| Mexico         | 47   | Mariana Herrero, Carlos A Escoto, Lucía Manzo Flores, Erika J Alarcón García and Lourdes Lozano  
Galicia Abogados SC  

| Portugal       | 56   | João Louro e Costa and Gonçalo Andrade e Sousa  
Uría Menéndez  

| South Korea    | 65   | Tong Keun Seol, Sangmin Kim and Jay Lee  
Lee & Ko  

| Spain          | 72   | Carlos de Miguel and Jesús Andrés Sedano Lorenzo  
Uría Menéndez  

| United Kingdom | 79   | Tallat Hussain and Sarah Voulaz  
White & Case LLP  

| United States  | 89   | James M Auslander, Andrew C Silton, Ryan J Carra and Nicole B Weinstein  
Beveridge & Diamond PC  

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## Climate Regulation

<table>
<thead>
<tr>
<th>Country</th>
<th>Page</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>97</td>
<td>William Oxby, Oxby Legal</td>
</tr>
<tr>
<td>China</td>
<td>103</td>
<td>Shen Jinzhong, Winners Law Firm</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>108</td>
<td>Fabio J Guzmán Saladin and Giselle Pérez-Reyes, Guzmán Ariza</td>
</tr>
<tr>
<td>Germany</td>
<td>113</td>
<td>Bettina Enderle and Victoria Müller-Gschlößl, Enderle Environmental Law</td>
</tr>
<tr>
<td>Malta</td>
<td>122</td>
<td>Ron Galea Cavallazzi and Rya Gatt, Camilleri Preziosi</td>
</tr>
<tr>
<td>Mexico</td>
<td>128</td>
<td>Mariana Herrero, Carlos A Escoto, Lucía Manzo Flores, Erika J Alarcón García, Lourdes Lozano and Luís Rosendo Reneda, Galicia Abogados SC</td>
</tr>
<tr>
<td>South Korea</td>
<td>137</td>
<td>Tong Keun Seol, Sangmin Kim and Jay Lee, Lee &amp; Ko</td>
</tr>
<tr>
<td>Spain</td>
<td>142</td>
<td>Carlos de Miguel and Jesús Andrés Sedano Lorenzo, Uriá Menéndez</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>148</td>
<td>Tallat Hussain and Sarah Voulaz, White &amp; Case LLP</td>
</tr>
<tr>
<td>United States</td>
<td>158</td>
<td>Brook J Detterman, Stacey J Halliday, Casey T Clausen, Jacob P Duginski and Aron H Schnur, Beveridge &amp; Diamond PC</td>
</tr>
</tbody>
</table>
United States

Brook J Detterman, Stacey J Halliday, Casey T Clausen, Jacob P Duginski and Aron H Schnur
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MAIN CLIMATE REGULATIONS, POLICIES AND AUTHORITIES

International agreements

1. Do any international agreements or regulations on climate matters apply in your country?

On 31 March 2015, the United States announced its commitment to reduce greenhouse gas (GHG) emissions to 26 per cent to 28 per cent below 2005 levels by 2025 as the basis for its ‘Intended Nationally Determined Contribution’ at the United Nations (UN) Climate Change Conference. In April 2016, the US signed the Paris Agreement under the United Nations Framework Convention on Climate Change, and later ratified it, committing, alongside nearly 200 other countries, to limit global warming to 1.5°C above pre-industrial levels. However, in June 2017, President Trump announced that the US would pull out of the Agreement. Following that announcement, several US states formed a group called the US Climate Alliance, now with 24 member states and Puerto Rico, committed to upholding the objectives of the Paris Agreement despite federal withdrawal. State, municipal, academic, and corporate actors have also committed to meeting the Agreement’s goals regardless of federal involvement, through organisations such as America’s Pledge and We Are Still In. Withdrawal from the Agreement is a four-year process, with the US’s expected withdrawal date to be 4 November 2020 – the day after the US presidential election. Should President Trump win the election on 3 November, he has announced his intent to either renegotiate the US commitment in the Agreement or propose a new accord entirely. Should President Trump lose the election, his successor could re-enter the agreement using executive authority immediately upon taking office in January 2021, to take effect 30 days later.

On 11 November 2014, the US struck a bilateral agreement with China under which both nations will seek to significantly reduce GHG emissions. Under the agreement, the US pledged to reduce emissions to 26 per cent to 28 per cent below 2005 levels by 2025. Similarly, in June 2016, the US, Mexico, and Canada announced a joint goal of achieving 50 per cent ‘clean power’ generation across all three countries and reducing methane emissions from the oil and gas sector by 40 per cent to 45 per cent by 2025. While both of these agreements remain in effect, the Trump administration has not taken significant action to implement the renewable energy goal and has recently proposed to roll back rules governing methane emissions from the oil and gas sector, making it less likely that the US will attain its commitments.

The US also is a party to the Vienna Convention for the Protection of the Ozone Layer and a protocol to that treaty, the Montreal Protocol on Substances that Deplete the Ozone Layer, since its finalisation in 1987. Under the Montreal Protocol and Title VI of the US Clean Air Act (CAA), some ozone-depleting substances (ODS) like chlorofluorocarbons have now been phased out except for a small quantity for uses agreed upon as ‘essential’. Hydrochlorofluorocarbons are currently being phased down through incremental decreases in consumption and production, with a complete phase-out by 2030. On 15 October 2016, at the 28th Meeting of the Parties in Kigali, the parties agreed to amend the Montreal Protocol to expand its scope to include certain hydrofluorocarbons (HFCs), though the US has not yet ratified the agreement.

In recent years, the Environmental Protection Agency (EPA) began to regulate HFCs through two CAA Title VI programmes: the refrigerant management programme under section 608 of the CAA and the Significant New Alternatives Policy (SNAP) programme under section 612 of the CAA. The refrigerant management programme was extended to HFCs pursuant to a 2016 rule by EPA. However, the agency finalised a rule in February 2020 rolling back the applicability of certain leak repair requirements to HFCs, while keeping in place other requirements for HFCs related to appliance disposal and technician certification requirements. That rule was challenged by environmental groups in May 2020.

Regarding the SNAP programme, EPA issued SNAP Rule 20 in 2015 prohibiting certain HFCs and HFC-blends in various end-uses in four industrial sectors. That rule was challenged, and the DC Circuit issued an opinion in August 2017 vacating part of the rule to the extent it required manufacturers to replace HFCs with a different substance. EPA announced in April 2018 that it was suspending application of the HFC-related portion of SNAP Rule 20 in its entirety pending a rulemaking process to address the remand of the rule. However, that EPA action was challenged by environmental groups and several states, and was struck down by the DC Circuit in April 2020. Consequently, the HFC restrictions under the SNAP rule apply only to entities that had not yet replaced ODS with HFCs in 2015, but are not applicable to entities that had already replaced ODS with HFCs by that time – a result that presents significant challenges for agency enforcement. The DC Circuit also struck down a second SNAP rule regulating HFCs in April 2019 after determining it was bound by its previous decision, resulting in the same outcome for those restrictions. Several states have promulgated replacement regulations in light of this, with California leading the charge to replace the SNAP rules and impose even more stringent requirements. Because of the problems posed by this patchwork of state regulation, legislation was introduced in both houses of Congress in late 2019 and early 2020 with bipartisan support to address this issue at the federal level. However, these bills eventually stalled owing to, among other things, the failure of the proposed legislation to pre-empt state regulation.

International regulations and national regulatory policies

2. How are the regulatory policies of your country affected by international regulations on climate matters?

The US lacks a comprehensive policy to regulate GHG emissions at the national level. Individual US states and federal regulatory agencies have taken numerous sector-based actions and often look to international standards when designing domestic programmes. For example, EPA
GHG emissions in the NEPA process. In July 2020, CEQ amended the

tion of GHG emission impacts, including downstream effects further

electricity, transportation, industrial, residential and commercial sectors. GHG

emissions standards apply to private commercial entities to the extent

that the entity is subject to regulation by the relevant national or state

authority.

National GHG emission projects

7 Describe any major GHG emission reduction projects

implemented or to be implemented in your country. Describe

any similar projects in other countries involving the

participation of government authorities or private parties

from your country.

At the federal level, GHG emission reductions are primarily driven by US

Clean Air Act regulation, which does not currently contemplate emis-
sions reduction projects or carbon offsets as compliance mechanisms.

DOMESTIC CLIMATE SECTOR

Domestic climate sector

8 Describe the main commercial aspects of the climate sector

in your country, including any related government policies.

Commercial climate business in the US is fragmented, largely owing to

the lack of comprehensive national climate change regulation. Carbon

offset project development is accelerating, and the generation of offset

credits has increased significantly as entities seek offsets for use in

compliance with California's cap-and-trade programme and to fulfill

voluntary GHG reduction commitments.

GENERAL GHG EMISSIONS REGULATION

Regulation of emissions

9 Do any obligations for GHG emission limitation, reduction or

removal apply to your country and private parties in your

country? If so, describe the main obligations.

Various national, regional and state programmes exist in the US to

regulate GHG emissions. The main programmes are regulations issued

under the US Clean Air Act (CAA), federal motor vehicle fuel economy

standards, California's cap-and-trade programme and the Regional

Greenhouse Gas Initiative.
GHG emission permits or approvals

10 | Are there any requirements for obtaining GHG emission permits or approvals? If so, describe the main requirements.

Certain stationary sources are required to obtain CAA Title V operating permits and prevention of significant deterioration (PSD) permits for GHG emissions. Under the CAA’s ‘cooperative federalism’ approach, most states manage GHG permitting in conjunction with any applicable state laws or programmes. Typically, any applicable New Source Performance Standards GHG emissions limits will be incorporated into a facility’s Title V operating permit. When obtaining permits under the PSD programme, sources must evaluate available emissions reductions options to determine the ‘best available control technology’ for that facility, which are made on a case-by-case basis considering energy, environmental and economic impacts, and other costs. Over time, technological advancements increase the degree of attainable emissions reductions.

Oversight of GHG emissions

11 | How are GHG emissions monitored, reported and verified?

EPA’s mandatory GHG Reporting Rule requires reporting of GHG data and other relevant information for facilities in 41 source categories. EPA compiles reported GHG emissions to create its annual GHG inventory for the US. Compliance for covered sources is mandatory and administrative, civil or criminal penalties may apply for violations. Several states also have implemented GHG reporting rules, and the reporting thresholds differ by state. Entities must comply with both federal and state GHG reporting requirements, if applicable.

In 2010, the Securities and Exchange Commission (SEC) issued interpretative guidance regarding required disclosures by companies of their climate change related risks. Although the ‘materiality’ standard still provides the threshold for required disclosures in the US, the SEC issued a general request for comments regarding whether changes are needed to its disclosure rules. The SEC is reviewing comments and although major changes to the reporting requirements are not likely in the near term, many believe those changes will eventually come. In the absence of federal action on climate change risk reporting, states, environmental groups, investors and shareholders are increasingly driving changes to climate risk reporting by companies. Companies are increasingly facing dozens or even hundreds of requests for data and information on how they assess and disclose climate-related risks. Although voluntary, some predict that such standards are likely to become mandatory, albeit this is not likely to occur in the US in the current administration.

GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Regime

12 | Is there a GHG emission allowance regime (or similar regime) in your country? How does it operate?

There is no GHG allowance regime at the federal level. The Regional GHG Initiative (RGGI) and California operate cap-and-trade programmes with associated emissions allowance regimes.

RGGI, the first market-based GHG reduction scheme in the US, currently encompasses the eastern states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont and Virginia. RGGI lowered its GHG emissions cap beginning in 2014 to 91 million short tons, with annual follow-on decreases of 2.5 per cent from 2015 to 2020. In August 2017, RGGI members approved measures to extend RGGI to 2030, with a further 30 per cent reduction in GHG emissions during that time. Membership in RGGI is voluntary and subject to change; New Jersey withdrew from RGGI in 2011 but rejoined in 2019. Virginia joined RGGI in 2020, and Pennsylvania is considering joining the programme.

RGGI is limited to the power sector and uses an allowance system for compliance; electric power generators subject to RGGI are required to hold CO₂ allowances equal to the amount of CO₂ they emit in a given compliance year. Each RGGI state issues allowances in an amount defined by each state’s applicable law or regulation implementing RGGI. Collectively, these allowances comprise the annual RGGI cap, which are distributed through quarterly auctions. RGGI also utilises a cost containment reserve system to allocate and auction additional allowances when needed to limit price volatility that, combined with periodic over-supply, has kept prices low but also has frustrated efforts to create a market for carbon offsets in RGGI states. A new an Emissions Containment Reserve, which allows states to withhold allowances from auction if reduction costs are lower than projected, will allow more dynamic response to market conditions and may have the effect of stabilising or raising slightly the cost of RGGI allowances.

California’s Global Warming Solutions Act (AB 32), signed into law on 27 September 2006, established a mandate to reduce GHG emissions to 1990 levels by 2020 and granted broad authority to the California Air Resources Board (CARB) to develop and implement a broad strategy to achieve that goal. In September 2016, a new bill (SB 32) extended and expanded the state’s commitment to reducing GHG emissions, establishing a new reduction target of 40 per cent below 1990 levels by 2030. CARB’s strategy to achieve these emission reduction goals is set forth in its Scoping Plan and includes programmes in nearly every sector of the economy. CARB’s 2017 updated Scoping Plan seeks a 2030 target of 260 MtCO₂e and envisions an 80 per cent reduction in GHG emission by 2050. The central feature is a multi-sector cap-and-trade GHG emissions programme, first implemented in 2013. The programme governs 80 per cent of GHG emissions in the state, and is one of the largest carbon markets in the world. In July 2017, CARB established a ‘price ceiling’ and limits the use of out-of-state offsets. Starting in 2021, only 4 per cent of a covered entity’s compliance obligations can be met with offset credits, and that same year, CARB will start implementing a price ceiling of US$65 per allowance. On top of these mandates, the Clean Energy and Pollution Reduction Act of 2015 establishes state-wide goals in California for 2030 of 50 per cent electricity generation from renewable resources and doubling energy efficiency in electricity and natural gas usage.

CARB sets an annual cap on GHGs and issues a limited number of emission allowances, each of which authorises its holder to emit one MtCO₂e. The number of available allowances is limited by the cap, and declines by approximately 3 per cent each year. Entities that emit 25,000 MtCO₂e annually are obliged to surrender a certain number of compliance instruments to CARB, consistent with each entity’s reported emissions. Compliance instruments consist primarily of allowances, which can be purchased from CARB at quarterly auctions. In addition, up to 8 per cent of a covered entity’s obligation can be met with CARB-certified offsets, but starting in 2021 this number will drop down to 4 per cent, then increase to 6 per cent in 2026. Both allowances and offsets also may be bought and sold on the secondary market, subject to certain restrictions. Covered entities are required to disclose substantial information to CARB, including information about corporate ownership and affiliates, directors and officers, high-level employees, and legal and market-strategy advisers.

In 2019, the US Department of Justice (DOJ) filed a lawsuit in federal court in California challenging the constitutionality of linking California’s cap-and-trade programme to a similar programme operated by Quebec. The DOJ alleged that California’s actions to link its cap-and-trade programme to Quebec’s programme violated the US
Constitution’s Treaty Clause, Interstate Compact Clause, Foreign Affairs Doctrine and Foreign Commerce Clause. In two separate opinions, dated 12 March 2020 and 17 July 2020, the court ruled in favour of California on all claims, affirming the constitutionality of California’s linkage with Quebec and ending the case at the trial court level. It is yet to be seen whether DOJ will appeal.

Registration
13 Are there any GHG emission allowance registries in your country? How are they administered?

There is no GHG allowance regime at the federal level. The registry for RGGI allowances is called the ‘CO₂ Allowance Tracking System’. Each RGGI allowance has a unique serial number, which then tracks initial ownership, transfer, and retirement of allowances. California and other linked jurisdictions utilise the Compliance Instrument Tracking System Service as an allowance registry, which tracks the issuance, initial ownership, transfer, and retirement of allowances and offsets.

Obtaining, possessing and using GHG emission allowances
14 What are the requirements for obtaining GHG emission allowances? How are allowances held, cancelled, surrendered and transferred? Can rights in favour of third parties (eg, a pledge) be created on allowances?

There is no GHG allowance regime at the federal level.

TRADING OF GHG EMISSION ALLOWANCES (OR SIMILAR EMISSION INSTRUMENTS)

Emission allowances trading
15 What GHG emission trading systems or schemes are applied in your country?

There is no national GHG allowance regime or national-level emission trading system. Any qualified party can participate in RGGI allowance auctions; auction rules limit the number of allowances that associated entities may purchase in a single auction to 25 per cent of the total allowances offered for auction. RGGI allowances also are traded on a secondary market, along with associated futures and options contracts. California conducts quarterly auctions of GHG emission allowances. Both entities that are covered by California’s cap-and-trade programme, and others opting into the programme, can participate in the auctions.

Trading agreements
16 Are any standard agreements on GHG emissions trading used in your country? If so, describe their main features and provisions.

In October 2013, the International Emissions Trading Association released a trade agreement template for California allowances and offsets. Its provisions address offset invalidation, holding limits and buyer liability provisions.

In 2019, the US produced 6,227,281,000 barrels and consumed 7,469,280,000 barrels of crude oil and petroleum products. In 2019, there were 40.7 trillion cubic feet of gross withdrawals of natural gas in the US and the US consumed 31.01 trillion cubic feet of natural gas. In 2017, the US produced 756,200,000 short tons of coal and consumed 688,100,000 short tons of coal. In 2019, the US produced 200,000 pounds of uranium concentrate and nuclear power plants generated 809.4 billion kilowatt-hours of electricity. According to EPA’s 2019 report, total US GHG emissions were 6,676.6 MtCO₂e in 2018, representing an increase of about 3 per cent from 2017 levels.

The Trump administration has taken a series of steps aimed at slowing down or stopping the implementation of more stringent product efficiency standards, including taking the position that a congressionally imposed backstop standard for general service lamps would not take effect in January 2020 (and that state standards are pre-empted) and promulgating changes to its standard development and implementation process that would make it easier for the Department to decline to periodically strengthen product standards, prompting a number of legal challenges. The Ninth Circuit ordered the Department of Energy (DOE) to publish a number of efficiency standards that had been finalised during the Obama administration, but that had not been published in the Federal Register prior to President Trump taking office. States and NGOs have also brought suits to challenge the DOE’s ‘Process Rule’ and to force it to update efficiency standards where it has failed to meet statutory deadlines to do so.

While the Trump administration’s initial proposed budget called for the elimination of or transfer to a non-governmental organisation of the Energy Star Program, Congress rejected that approach and the programme remains active. The DOE runs the Federal Energy Management Program, which focuses on reducing energy consumption and increasing the proportion of renewable energy utilised at federal agencies. The DOE also runs a ‘Better Buildings’ programme, with a goal of increasing building energy efficiency by 20 per cent over the next decade across the commercial, public, industrial and residential sectors. Through these and other programmes, the federal government continues to create limited incentives and provides some support for energy efficiency and related technologies.

However, many US states also pursuing energy efficiency strategies. California, Vermont, Hawaii, Nevada, Colorado, Washington and Oregon continue to expand their appliance efficiency programmes, enacting standards for product categories where the DOE has not yet been active. Twenty-eight states have enacted Energy Efficiency Resource Standards (EERS) or other binding energy savings targets. Several other states have non-binding programmes, or aspirational programmes with very low efficiency targets. State programmes take a variety of approaches, but often mandate or incentivise demand-side energy efficiency programmes run by state and local electric utility companies. EERS vary widely, but generally target incremental energy efficiency gains of 0.5 per cent to 2.5 per cent annually. EERS and other similar programmes are driving significant investment in energy efficiency technologies, software and services in many US states. There is no standard methodology for registering and trading

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instruments based on energy efficiency, and each state takes a different approach in tracking and assuring compliance, typically at the utility level.

Other sectors

18 Describe, in general terms, any regulation on GHG emissions in connection with other sectors.

In 2009, EPA determined that the six primary GHGs recognised by the UN reasonably may be anticipated to endanger public health and welfare. Concurrently, EPA determined that GHG emissions from motor vehicles contribute to pollution that endangers public health and welfare. In September 2011, in coordination with the National Highway Traffic Safety Administration (NHTSA), EPA established fuel economy standards for light-duty cars and trucks as well as the first phase for medium and heavy-duty trucks. However, in March 2017, EPA announced its intention to reconsider this determination coordinated with a parallel rule-making process to be undertaken by the NHTSA regarding Corporate Average Fuel Economy (CAFE) standards for cars and light trucks for model year 2022 to 2025. In 2018, the Trump administration released a draft proposal that would have frozen CAFE standards at 2020 levels through to 2026. In September 2019, EPA formally revoked California’s unique ability to set stricter vehicle emissions standards, which are followed by about a dozen other states. On 31 March 2020, EPA and the NHTSA finalised rules governing CAFE standards for vehicle model years 2021–2026, and that increase fuel economy by 1.5 per cent annually. Prior rules would have resulted in fuel economy of 54.5mpg by model year 2025, while the new rules set the standard at 40.4mpg, representing a significant weakening of prior federal fuel economy standards.

On 15 August 2016, EPA promulgated an endangerment finding under section 231(a)(2)(A) of the CAA for aircraft, which determined that GHG emissions from certain classes of aircraft engines, including those used by most large commercial aircraft, contribute to the air pollution that causes climate change and endangers public health and welfare. According to EPA, GHG emissions from aircraft represent 12 per cent of transport-related GHG emissions in the US, and 3 per cent of total US GHG emissions. In March 2019, the FAA announced its Monitoring, Reporting, and Verification Program for the Carbon Offsetting and Reductions Scheme for International Aviation (CORSIA). Applying to US air carriers and commercial and general aviation operators, the FAA’s programme consists of voluntary carbon emissions reporting to establish standardised practices to implement CORSIA. On 22 July 2020, EPA unveiled its proposal for the first-ever emission standards for GHGs emitted by aircraft. If finalised, the standards would apply to manufacturers of new aircraft and new aircraft engines, with compliance determined as part of the Federal Aviation Administration’s airworthiness certification process. The proposed standards rely largely on fuel efficiency, and draw heavily from the 2017 Airplane CO2 Emission Standards established by the United Nations’ International Civil Aviation Organization.

When GHGs became a ‘regulated pollutant’ under the CAA, EPA undertook various rule-making processes to incorporate GHG emissions into programmes applicable to stationary sources, which include the Title V operating permit programme and the Prevention of Significant Deterioration programme as well as New Source Performance Standards for both existing and new electric generating units. The Clean Power Plan was released in 2015, but on 21 August 2018, EPA proposed to replace the Clean Power Plan with the Affordable Clean Energy Rule (the ACE Rule), which EPA finalised on 9 June 2020. As part of the ACE Rule, EPA significantly shifted its interpretation of its regulatory authority under CAA section 111(d). The ACE Rule only regulates fossil fuel-fired electric steam generating units by imposing modest efficiency requirements; it does not contain standards applicable to natural gas or integrated gasification combined cycle turbines. Numerous states and NGOs have sued to block the rule. If the validity of the ACE Rule is ultimately affirmed in court, it will require minimal GHG reductions at some power plants, largely in the form of efficiency upgrades.

In 2012, EPA promulgated standards that regulate volatile organic compound emissions from gas wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, storage vessels and leaking components at natural gas processing plants, and sulphur dioxide emissions from natural gas processing plants. EPA revised these standards in 2013, 2014 and early 2015. EPA also enacted revisions to the National Emission Standards for Hazardous Air Pollutants for Oil and Natural Gas Production Facilities. While not directly regulating GHGs, EPA predicted that these regulations would result in significant climate co-benefits owing to anticipated methane reductions. In 2016, EPA issued new standards specific to methane emissions from new and modified oil and gas wells and related facilities. In August 2020, EPA rescinded those standards in lieu of an approach focused on volatile organic compound emissions. Litigation is likely. In addition, the Bureau of Land Management (BLM), within the Department of the Interior, issued new regulations in 2016 to limit venting or flaring of gas from wells on federal or Indian lands, under the auspices of reducing ‘waste’ under the Mineral Leasing Act of 1920. In 2018, the BLM issued a final rule rescinding most of those standards, but a federal court struck down that rescission in July 2020. Both BLM rules remain in litigation.

RENEWABLE ENERGY AND CARBON CAPTURE

Renewable energy consumption, policy and general regulation

19 Give details of the production and consumption of renewable energy in your country. What is the policy on renewable energy? Describe any obligations on the state and private parties for renewable energy production or use. Describe the main provisions of any scheme for registration of renewable energy production and use and for trade of related accounting units or credits.

The US does not have a comprehensive national policy on renewable energy production or use. Instead, a patchwork of federal and state programmes and incentives drives the renewable power sector in the US.

Twenty-nine states, plus Washington, DC, have enacted binding renewable portfolio standards (RPS). Eight other states have non-binding RPS programmes or renewable energy goals. State RPS programmes operate by setting renewable energy targets for each year and requiring electric utility companies to achieve that level of renewable power. As a result, RPS programmes are the primary drivers for renewable energy investment in the US and are spurring significant investment in renewable energy infrastructure in many states. Collectively, these programmes are expected to dramatically increase the demand for wind power while also driving the expansion of solar and hydrokinetic power. About 16 states also have separate, smaller targets for solar energy, often referred to as a ‘solar carve out’, which usually operate in tandem with a net metering or feed-in-tariff programme. As solar energy becomes more price competitive, solar carve outs have experienced less support and lower expansion in recent years. RPS compliance is usually managed through a system of tradable renewable energy credits (RECs), with one REC representing one MWh of renewable power. In general, RECs are registered by state agencies and are tradable instruments. Most state programmes require compliance through use of RECs or renewable power generated in-state, with limited exceptions and eligible renewable resources and definitions can vary widely by state. This results in fragmented REC markets with prices varying widely by state and resource type.
In addition to mandatory RPS programmes, ‘green power’ programmes allow US energy consumers (typically residential and commercial) to purchase renewable or ‘green’ power from their utility company or independent power supplier. Energy suppliers purchase RECs on the voluntary market to meet green power demand. Voluntary REC supply is dominated by wind, though solar is increasing its market share. Prices for voluntary RECs hover around US$1/MWh, significantly lower than most RECs purchased for compliance purposes. It is estimated that more than 50 per cent of retail customers in the US now have an option to purchasing ‘green’ or low-carbon power from their utility. Net metering programmes allow grid-connected customers with renewable energy systems installed on their property to offset their electrical usage and sell excess electricity to their utility. Several states have also implemented feed-in-tariff programmes that provide a higher price to consumers generating certain types of renewable energy. These programmes have aided the expansion of residential and commercial solar projects in the US, but several states have recently moved to roll back or eliminate their net metering programmes and others are seeking new ways to properly value solar power. As this debate continues, numerous states have expanded their net metering programmes and are developing pricing mechanisms to reward solar power based on its value to the grid, factoring in time-of-service, displacement of new fossil-fuel generation and infrastructure, and environmental benefits, including GHG reduction.

At the federal level, the Department of Energy’s (DOE) loan guarantee programme backs investment in renewable power, energy efficiency and commercial climate technologies. Loans backed by the DOE have supported investment in solar, wind, geothermal, nuclear and energy storage technologies, among others. In 2013, the DOE announced the availability of US$8 billion in loan guarantees for advanced energy projects that substantially reduce GHGs and other air pollution. In 2014, the DOE announced availability of US$4.5 billion in loan guarantees available for innovative renewable energy and energy efficiency projects in the US that reduce GHG emissions. The DOE also runs parallel loan programmes for nuclear energy projects and ‘advanced fossil energy’ projects, each with its own solicitations and funding caps. Two federal tax credits also provide financial support for renewable energy facilities. The production tax credit provides a tax credit for each kilowatt-hour produced by eligible renewable power facilities. Combined with state RPS programmes, the PTC has been a major driver of wind power development in the US, between 2007 and 2014, US wind capacity nearly quadrupled. In late 2015, the US Congress extended the PTC for facilities that begin construction before 31 December 2019. The business energy investment tax credit (ITC) was also significantly expanded in 2008, which provides tax credits for capital investments in solar energy facilities, fuel cells, small wind turbines, geothermal systems, microturbines, and combined heat and power. The ITC was extended in late 2015, with a gradual step-down in credits between 2019 and 2022.

The federal government is also working to facilitate renewable power generation on public lands through a variety of programmes that are designed to streamline permitting and leasing. For example, the Department of Interior and Bureau of Land Management facilitate a solar energy programme in six western states, and the Bureau of Ocean Energy Management is working to identify and lease offshore wind energy areas for commercial wind development. The Council on Environmental Quality’s National Environmental Policy Act (NEPA) rule is also intended to facilitate energy projects. That said, decisions to conduct additional NEPA analysis and ongoing litigation have stalled the realisation of significant offshore wind developments to date.

Wind energy

Wind energy projects are subject to a range of federal, state and local environmental, land use and natural resources laws and regulations. A project may require multiple permits and consultation and coordination between multiple agencies. Access to transmission also remains a significant constraint for many wind projects, since wind energy resources in the US are not always located near demand. Developing new or expanded transmission lines can increase the complexity of the above regulatory requirements.

For projects located on federal land, federal land management agencies will likely act as the primary permitting authority. For projects on private or state land, in some states permitting authority is vested in one or more state agencies. In other cases, the primary permitting authority for a wind facility is the local planning commission, zoning board, city council or county board.

The Bureau of Ocean Energy Management (BOEM) administers the offshore wind leasing process on the outer continental shelf (three nautical miles offshore) through a competitive bidding process. Offshore wind projects also must coordinate with the US Coast Guard during construction and to address any navigational hazards. BOEM has held several auctions, resulting in the sale of various leases to develop offshore wind projects, primarily on the east coast. The first wind turbines were installed in US federal waters off the coast of Virginia in 2020. Multiple east coast states have set targets to purchase offshore wind. The timeline for developing an offshore wind project is long and the Trump administration is expected to propose streamlining regulations.

Renewable energy projects have seen significant litigation over environmental impacts and other issues. Litigation may involve local issues, such as noise, siting and site-specific impacts, or may implicate broader state or national policies. With respect to wind energy, impacts on birds are a frequent focus of litigation. The Migratory Bird Treaty Act (MBTA), the Endangered Species Act and the Bald and Golden Eagle Protection Act all protect certain species of birds with civil and criminal penalties. The Trump administration has proposed regulations that would interpret the MBTA as not applying to ‘incidental’ injuries or killing of birds, such as those caused by wind projects.

Solar energy

Solar energy experienced a record year in 2019, accounting for approximately 40 per cent of all new generating capacity nationally, though solar power (both small- and large-scale) generated only 2 per cent of the total electricity in the US. Overall, the US solar market grew by 23 per cent from 2018, despite tariffs on imported solar cells and modules. Federal, state and utility incentives programmes, alongside CO2 emission reduction targets, largely drove this growth, though many of the incentive programmes are in the process of phasing out, including the federal solar ITC. The ITC, which allows customers of new residential and commercial solar to deduct the cost of installing solar energy systems from their federal taxes, is scheduled to taper off from 30 per cent to 26 per cent in 2020 and eventually expire in 2022. Other states and the District of Columbia continue to offer incentives, such as up-front rebates, tax credits (including exemptions from property and sales taxes), production-based incentives and solar renewable energy credits. Several newly enacted laws focus on ensuring that solar technologies are available to lower-income consumers, including Maine and Virginia. California led the country’s electricity generating capacity growth, comprising 43 per cent of small-scale sources, potentially owing in part to the solar mandate going into effect on 1 January 2020.
requiring all new single- and multi-family homes under construction to have a solar system as an electricity source. In addition, an anticipated increase in the need for end-of-life management of photovoltaic (PV) solar panel waste is driving states such as California to take measures in support of streamlined solutions, including through a new 2020 regulation designating PV waste as ‘universal waste’, alongside electronics, batteries and other low-risk hazardous waste.

These trends reflect how residential solar, as well as commercial- and utility-scale, projects have gained notable traction in an increasing number of jurisdictions across the country. Even so, traditional regulatory approvals and permits are required for these projects, regardless of scale. Residential solar installations, such as rooftop solar projects, generally do not require major regulatory approvals, but are required to meet local and state building, zoning, land use and development regulations – including the acquisition of necessary permits. Rooftop solar projects also commonly face state and local requirements for grid interconnection standards, net metering eligibility, feed-in tariffs and state RPS regulations. Larger commercial- and utility-level solar energy projects implicate a much larger array of federal, state and local laws – including those concerning land access, siting, water rights, transmission and environmental review – all of which may be subject to litigation in the process of seeking regulatory approvals.

Hydropower, geothermal, wave and tidal energy

The Federal Energy Regulatory Commission (FERC) issues licences for construction of new hydropower projects. During the permitting process, FERC and the applicant must assure compliance with NEPA and must obtain a water quality certification from the appropriate state agency under the Clean Water Act (CWA). In many cases, permits also must obtain authorisations under various federal laws, including those protecting wildlife, such as the Endangered Species Act. In some states, additional authorisation may be required for hydropower resources to qualify for RPS or net metering programmes. With climate change an increasing concern, some states have increased focus on hydropower as a source of energy; in particular, states in the north-east are exploring ways to import more hydropower from Canada and increase capacity and production at existing hydropower facilities. On 1 June 2020, EPA finalised a rule revising its regulations for the CWA water quality certification process intended to promote hydropower projects. This rule is expected to be challenged by litigation.

Geothermal projects are regulated by a mix of federal and state agencies, with requirements varying by state and whether the project is located on state, federal or private land. The Geothermal Steam Act of 1970 requires the Department of the Interior to establish rules and regulations for the leasing of geothermal resources on lands managed by federal agencies. These regulations are issued by the Bureau of Land Management. Existing EPA Underground Injection Control Regulations under the federal Safe Drinking Water Act define Class V injection wells to include injection wells associated with the recovery of geothermal energy.

Waste-to-energy

Waste-to-energy is defined as a renewable energy source in many states and plants are therefore eligible to sell RECs. By the end of 2019, the US had fewer than 75 waste-to-energy facilities that combust municipal solid waste. There has been little development of new waste-to-energy plants since the 1980s and the 1990s; the first new waste-to-energy plant since 1995 was built in 2015. As combustion units, waste-to-energy systems are subject to regulatory requirements that are similar to fossil-fuel fired power plants, but often significantly more stringent. The US Clean Air Act (CAA) imposes numerous requirements on waste-to-energy facilities, which also must comply with the CWA, the Resource Conservation and Recovery Act and other federal, state and local laws. Waste-to-energy facilities and related ash landfills have come under increased legal and regulatory scrutiny in recent years and are at times the subject of lawsuits brought under environmental laws.

Biofuels and biomass

In 2007, EPA established a national Renewable Fuel Standard (RFS) programme that requires transportation fuel refiners to displace certain amounts of petrol and diesel with renewable fuels such as cellulosic biofuel, biomass-based diesel and advanced biofuel. The programme established the annual renewable fuel standards, responsibilities of refiners and other fuel producers, a trading system, compliance mechanisms and record-keeping and reporting requirements. Companies that refine, import or blend fossil fuels are obligated to meet certain individual RFS quotas based on the volume of fuel they introduce into the market. The production of biofuels is also subject to regulation under the CAA and other environmental laws.

EPA has scaled back biofuel requirements to account for declining petrol use and technical limitations related to ethanol blending and biofuel production. In November 2015, EPA finalised a goal of 18 billion gallons of renewable fuels for 2016. This was a modest increase from the agency’s June 2015 proposal, but it is still short of the 22.25 billion gallons required by Congress. Still, the 18 billion gallons goal exceeds 10 per cent of the projected petrol production for 2016, which some US carmakers advised could negatively affect the performance of cars and may violate certain warranties. EPA adopted a new ethanol rule in 2019, which allows fuel blends containing up to 15 per cent ethanol to be sold year-round in 31 states.

Farming interests are pressing for an increase in biofuel requirements, in particular for increased cellulosic ethanol targets, while petroleum companies and some vehicle manufacturers advocate lower requirements. President Trump has expressed support for biofuel requirements and it is likely that EPA will continue its path of modest, year-over-year, increases in biofuels requirements. Reflecting that trend, on 19 December 2019, EPA adopted rules finalising RFS volume requirements for 2020, which contained modest biofuel increases from 2019 levels.

On 23 April 2018, EPA issued a policy statement indicating ‘EPA’s policy in forthcoming regulatory actions will be to treat biogenic CO₂ emissions resulting from the combustion of biomass from managed forests at stationary sources for energy production as carbon neutral.’ Within the 2018 policy statement, EPA indicated that its policy is ‘not a scientific determination and does not revise or amend any scientific determinations that EPA has previously made’. Instead, EPA’s goal was to ‘promote the environmental and economic benefits of the use of forest biomass for energy at stationary sources, while balancing uncertainty and administrative simplicity when making programmatic decisions’, acknowledging the need for clear regulatory policy even in the face of continued debate on an accounting framework for biogenic CO₂ emissions.

EPA has continued to work on its proposal declaring woody biomass carbon neutral. In February 2020, EPA submitted its woody biomass proposed rule to the White House Office of Management and Budget.
for review. The rule has not yet cleared review. One noted reason for the delay is disagreement between EPA and the Justice Department over potential conflicts the rule may have with the recently adopted Affordable Clean Energy Rule governing power plant GHG emissions. There is no anticipated date that the rule will clear review or be finalised.

Carbon capture and storage

Carbon capture and storage (CCS) has substantial potential to reduce GHG emissions from industrial sources, but has not been widely demonstrated on a commercial scale. Several large CCS demonstration projects in the US are largely supported by resources allocated by the American Recovery and Reinvestment Act of 2009, as well as a variety of federal and state incentives, including tax credits and loan guarantees. On 1 December 2010, EPA published its final rule concerning an expansion of its GHG reporting rule to include facilities that inject and store CO₂ for geologic sequestration or enhanced oil and gas recovery. CCS has also begun to play an important role as a potential control technology for GHG regulations for power plants and President Trump has called for the expansion of technologies to reduce the emissions generated from coal-fired power plants.

In January 2014, EPA issued a final rule excluding CO₂ streams in CCS projects from classification as a hazardous substance under the Resource Conservation and Recovery Act, provided that the streams are injected into Class VI wells and not mixed or co-injected with any hazardous wastes. CCS projects are potentially affected by several other regulatory programmes. For instance, NEPA and state equivalents may present regulatory hurdles by requiring environmental review of project impacts. State and local agencies may also impose permitting requirements on CCS projects. High costs, complex regulatory schemes and the low price of natural gas have hindered the widespread development of CCS projects. In the future, lower technology costs and the development of multiple revenue streams from the CO₂ associated with CCS projects, particularly using captured CO₂ for enhanced oil recovery (EOR), may help spur CCS additional development.

In mid 2020, the Treasury Department proposed rules to implement section 45Q of the Tax Code, which provides tax credits for capturing and sequestering carbon oxides that would otherwise escape to the atmosphere. If finalised, these rules will provide: tax credits of up to US$50 per ton of carbon captured and placed in secure geological storage; and tax credits of up to US$35 per ton of carbon injected into oil or natural gas wells for EOR, and for carbon captured and sequestered using photosynthetic or chemo-synthetic processes or ‘for any other purpose for which a commercial market exists’.

Climate matters in M&A transactions

What are the main climate matters and regulations to consider in M&A transactions and other transactions?

Entities must consider a range of climate issues when undertaking M&A transactions. Risks generally fall into three categories: regulatory, economic and operational risk related to climate change impacts. Some matters also present M&A opportunities, such as incentives related to renewable energy. Matters to consider include:

- GHG reporting and permitting obligations for certain sectors;
- EPA regulation of GHG emissions and related costs for higher-emitting industries;
- regulatory uncertainty resulting from the lack of a comprehensive national climate change programme;
- regulatory costs associated with assuring compliance with a plethora of federal, state and local climate change, energy efficiency and renewable energy programmes;
- litigation exposure to claims based on alleged climate impact of corporate operations or of climate changes on corporate operations;
- direct and indirect effects of higher energy costs;
- financial disclosure and compliance obligations under Securities and Exchange Commission rules and state laws;
- adherence to the Equator Principles, if applicable, which include requirements for climate impacts;
- impacts to coastlines, ports and other infrastructure related to increased storm intensity and rising sea levels;
- impacts to natural resources and commodities related to climate change, such as water supplies, fisheries, forestry products and crops;
- global economic and security risks related to potentially destabilising impacts of climate change in certain regions; and
- market opportunities related to renewable power, REC and offset trading, GHG mitigation and energy efficiency.

UPDATE AND TRENDS

Emerging trends

Are there any emerging trends or hot topics that may affect climate regulation in your country in the foreseeable future?

The election of Donald Trump as President has had significant ramifications for climate regulation in the US. While the previous administration under President Obama had taken numerous actions on climate change, including ratification of the historic Paris Agreement, the Trump administration has reversed course on many of those measures. It is likely that the US will withdraw from the Paris Agreement and may also revisit its commitment to other international agreements related to climate and environmental issues. Whatever the outcome of the 2020 presidential election, it is sure to have a significant impact on future US climate change policy and law.

At the same time, many states have announced plans to continue or increase climate regulation at the state level and through regional programmes such as the Regional GHG Initiative and the US Climate Alliance. Eighty cities have also expressed a willingness to increase their focus on GHG emissions, improve resiliency to climate change impacts and expand clean energy efforts. Market forces also continue to drive the rapid expansion of wind and solar energy, and offshore wind power is poised to become a commercial reality in the US within the next five years. Collectively, these subnational measures, as well as private-sector initiatives taken in response to consumer demand, are significant but likely inadequate to reduce US emissions to levels previously committed to under the Paris Agreement. It is likely that the focus on climate change and renewable energy will persist or increase in some states, but that the US will not take significant action at the international or national level, under the current administration, to reduce GHG emissions.
Coronavirus

What emergency legislation, relief programmes and other initiatives specific to your practice area has your state implemented to address the pandemic? Have any existing government programmes, laws or regulations been amended to address these concerns? What best practices are advisable for clients?

Federal and state governments in the US have offered little or no relief for climate change regulations during the pendency of the covid-19 pandemic. GHG regulatory regimes continue to apply as usual, and regulated entities should remain focused on any current compliance obligations. If anything, action on climate change issues has accelerated during the pandemic, with several bills introduced in the US Congress to further regulate climate change, and action has been taken by several states to strengthen current climate change regulatory programmes or introduce new programmes.
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