United States

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General

1 Describe, in general terms, the key commercial aspects of the oil sector in your country.

The US oil industry is divided into three sectors: upstream (exploration and production), midstream (processing, storage and transportation) and downstream (refining, distribution and marketing).

Industry participants are categorised as 'supermajors', 'majors' and 'independents'. 'Supermajors' are the handful of very large companies integrated across all sectors that account for most of the US oil industry revenues. US-based supermajors include ExxonMobil, Chevron and ConocoPhillips, whereas the overseas-based supermajors, BP and Shell, have substantial US operations. Smaller-scale integrated firms include Marathon, Hess and Murphy Oil.

A larger number of companies specialise in particular sectors. The 'independents' engage predominantly in upstream activities and include Occidental, Devon, Anadarko and Apache. Midstream specialists include Kinder Morgan. Refining and marketing operations are conducted by Valero, Sunoco, Tesoro and Western. The industry is supported by oil service companies led by Schlumberger, Halliburton and Baker Hughes, and by a variety of trade associations including the American Petroleum Institute (API).

US subsidiaries of national oil companies owned or controlled by foreign governments (NOCs) are important participants in the US oil industry. For example, Venezuelan-based Petróleos de Venezuela SA (PDVSA) owns Citgo, which supplies gasoline to nearly 6,000 retail outlets and owns interests in three refineries in the US.

2 What percentage of your country's energy needs is covered, directly or indirectly, by oil as opposed to gas, electricity, nuclear or non-conventional sources? What percentage of the petroleum product needs of your country is supplied with domestic production? What are your country's energy demand and supply trends, especially as they affect crude oil usage?

In 2010, oil provided an estimated 37 per cent of total US energy needs, along with coal (21 per cent), natural gas (25 per cent), nuclear (9 per cent) and renewables (8 per cent). 71 per cent of oil consumption occurred in the transport sector, primarily in the form of gasoline. The industrial sector consumed another 22 per cent for heating, diesel engines and as petrochemical feedstock. Only 1 per cent of US power generation is fuelled by oil.

In 2010, the US consumed 19.1 million bbl/d of petroleum products. The domestic production of the US represents approximately 51 per cent of the total petroleum it consumes. Canada, Mexico, Nigeria, Saudi Arabia and Venezuela collectively provided 67 per cent of US net imports.

The Energy Information Administration (EIA) projects US liquid fuels and other petroleum consumption to increase by 0.5 per cent annually until 2035. US crude oil production peaked in 1970 and has declined 45 per cent since. Domestic production is nonetheless projected to increase until 2035 as rising world oil prices spur both onshore and offshore drilling.

Although US energy consumption is projected to continue to increase over the next 25 years, crude oil as a share of overall energy is projected by the EIA to decrease as a result of federal and state renewable energy programmes and the rising cost of fossil fuels.

'Proved reserves' are estimates of the amount of oil that is reasonably certain to be recoverable from known reservoirs under current economic and operating conditions. According to the CIA World Factbook, the United States ranked 13th among nations in proved oil reserves. The EIA estimated US proved reserves at 20.7 billion barrels at the beginning of 2011. US proved reserves peaked in 1970 and have since declined by 47 per cent. About one-fifth of proved reserves are located offshore.

In 2009, the Securities and Exchange Commission (SEC) changed its reporting guidelines for public companies to permit companies to report probable and possible reserves, as well as proved reserves.

3 Does your country have an overarching policy regarding oil-related activities or a general energy policy?

There is no single source of law that can be considered a United States energy policy. At the federal level, the Department of the Interior (DOI), the Department of Transportation (DOT), the Department of Energy (DOE) and the Environmental Protection Agency (EPA) play important roles in the development and maintenance of a national energy policy. At the state level, their counterpart agencies, which are often delegated authority by federal legislation, play a similar role.

Over the years, there have been several legislative efforts by the United States Congress to develop a general energy policy that promotes the domestic production of oil and gas and other sources of energy, while also responding to environmental concerns. For instance, after many years of debate, Congress passed the Energy Policy Act of 2005. The Act is intended to facilitate the increased domestic production of oil and gas as well as electric and other forms of energy. The law also clarified the reach of the Safe Drinking Water Act in hydraulic fracturing matters, and the application of EPA's storm water rules to the construction of oil and gas production sites.

On the heels of the 2005 Energy Policy Act, the Congress enacted the Energy Independence and Security Act of 2007 (EISA). The EISA expanded the renewable fuel programme established by the Energy Policy Act, which required volumes of renewable fuel to be incorporated into gasoline sold in the United States. The EISA, and subsequent regulatory revisions implemented by EPA in 2010, increased the volumes established for renewable fuel and added new specific volume requirements for advanced biofuels, biomass-based diesel and cellulosic biofuel. The EISA articulated a national policy aimed at reducing the country's carbon footprint and dependence on foreign oil through the use of renewable fuels.

President Obama has endorsed regulatory and legislative initia-

tives aimed at enhancing energy independence and the reduction of greenhouse gases, such as the increase of the fuel efficiency standards for motor vehicles, the development of renewable energy technology and 'green' jobs. The Obama Administration has proposed the toughest fuel economy standards for passenger vehicles in US history, requiring an average performance equivalent of 54.5 miles per gallon by 2025.

Regulation overview

4 Describe the key laws and regulations that make up the general legal framework regulating oil activities.

The determination of which laws apply to oil activities at a given surface location depends on whether the underlying resources and location are owned by a federal or state government or by private parties, and whether the location is onshore or offshore.

The Mineral Leasing Act of 1920 and the Mineral Leasing Act for Acquired Lands of 1947 govern upstream activities on federal onshore property, while the Outer Continental Shelf Lands Act (OCSLA) governs development of federal offshore property. Additional industry-specific federal statutes include the Oil and Gas Royalty Management Act, which governs lease and royalty agreements, and the Petroleum Marketing Practices Act, which regulates supply agreements and leases held by retailers and wholesalers of trademarked motor fuels.

State laws, such as the Texas Natural Resources Code and the California Public Resources Code, govern exploration and production on state-owned land, including state offshore property, and privately owned land.

5 Identify and describe the government regulatory and oversight bodies principally responsible for regulating oil activities.

Within the DOI, the Bureau of Land Management (BLM) regulates oil exploration and production on federal onshore property; the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) manage federal offshore oil production activities; the Office of Natural Resources Revenue (ONRR) collects royalties for both onshore and offshore oil production; and the Bureau of Indian Affairs (BIA) regulates American Indian land development along with the BLM. The Federal Energy Regulatory Commission (FERC) has jurisdiction over interstate oil pipelines. The DOE administers the Strategic Petroleum Reserve, collects industry data, and funds and conducts other energy research and production programmes.

Each of the major oil-producing states has an agency tasked with regulating certain upstream activities, such as the issuance of drilling permits and intrastate pipeline transportation. These agencies include the Railroad Commission of Texas; the California Department of Conservation's division of oil, gas and geothermal resources; the Louisiana Office of Conservation; and the Alaska Department of Natural Resources' division of oil and gas. Some state public utility commissions oversee aspects of intrastate oil pipelines.

Many other agencies enforce police power laws and regulations regarding environmental, health, safety and work conditions (see question 21).

6 What government body maintains oil production, export and import statistics?

Official statistics on oil production, imports and exports are collected by the EIA of the DOE. EIA also provides forecasts and analysis of oil consumption, production, reserves, refining and trade. State agencies maintain data on local oil production.

Natural resources

7 Who holds title over oil reservoirs? To what extent are mineral rights on private and public lands involved? Is there a legal distinction between surface rights and subsurface mineral rights?

In the US, title to oil, gas and minerals is generally held by the owner of the surface until and unless that right is severed and granted to others. This title to the mineral estate may be separated from the surface estate by a grant or a reservation. When the mineral estate has been severed from the surface estate, the mineral estate owner holds what is referred to as the 'dominant estate', and the surface estate owner holds the 'servient estate'. In general terms, this means that the mineral estate owner has the right of reasonable access to and use of the surface estate in order to exploit the minerals.

In Louisiana, the only civil law state in the US, mineral rights do not exist as a separate, perpetual estate in land, but rather can only be held separately from the surface in the form of a 'mineral servitude'. The servitude gives its holder the right to enter the property and extract the minerals, but it may expire, or prescribe, after 10 years of non-use.

Both the federal government and many states own oil, gas and mineral rights both onshore and offshore.

Government and private transfers frequently reserve to the grantor all or a portion of the mineral rights, so the land title records must be carefully reviewed.

8 What is the general character of oil exploration and production activity conducted in your country? Are areas off-limits to exploration and production?

In 2011, US oil production was concentrated in Texas (26 per cent), federal offshore waters (24 per cent), Alaska (10 per cent), California (9 per cent), North Dakota (7 per cent) and Oklahoma (4 per cent). The primary contributors to production growth in 2011 were the onshore fields in the lower 48 states, which together offset decreased production from Alaskan resources and the offshore fields in the federal waters of the Gulf of Mexico.

Almost all existing offshore leasing is in the central and western Gulf of Mexico. In March 2010, the US president proposed allowing for the first time oil and gas production in large areas off the East Coast, in the eastern Gulf of Mexico, and potentially off the coast of Alaska. This proposal was almost immediately followed by the Deepwater Horizon drilling rig explosion and oil spill in the Gulf of Mexico. As a result, the US president declared a six-month moratorium on deepwater drilling activities in the Gulf of Mexico, cancelled a lease sale off the coast of Virginia and suspended all applications for exploratory drilling in the Arctic. In the draft five-year oil and gas leasing programme for 2012 – 2017, the Obama Administration reinstated much of the programme proposed in 2010, including annual area-wide lease sales in both the Western and Central Gulf, as well as two sales in the Eastern Gulf. The first of the Gulf sales under the new five-year plan are to be held late in 2012. In addition, the programme provides for potential lease sales in the Chukchi and Beaufort seas off Alaska, as well as a special interest sale in Cook Inlet. Although the proposed plan does not reinstate the lease sale off the coast of Virginia, it does contemplate increased seismic activity in the mid- and south-Atlantic to collect data about the oil and gas potential in the region.

Onshore, the Arctic National Wildlife Refuge in Alaska remains off limits to drilling despite many years of intense debate in Congress. Apart from national parks and wilderness areas, federal lands outside Alaska are largely available for exploration and production. However, federal and state agencies can also impose drilling restrictions on particular lands on environmental, military or other grounds.

9 What government body regulates oil exploration and production in your county? How are rights to explore and produce granted?

US practices do not feature concessions or production sharing agreements typically associated with a state oil company. The right to conduct exploration and production on the lands of another is obtained through an oil and gas lease granting the right to explore for and extract oil from the leased premises, and the ownership of oil actually produced. The terms of the lease and applicable law limit leaseholder activities.

Processes established by the BLM (onshore), BOEM (offshore), and BIA (American Indian land) govern the awarding of leases for land subject to federal jurisdiction. Analogous state agencies award leases for state-owned land. Private owners of subsurface mineral rights negotiate or invite tenders for leases, which may follow trade association formats or contain terms and conditions specific to the particular lease.

10 If royalties are paid, what are the royalty rates? Are they fixed? Do they differ between onshore and offshore production?

Federal leases impose a fixed royalty of a defined fraction of the amount or value of the oil or gas removed or sold from each lease. A royalty rate of one-eighth was common up until the 1970s, although now rates such as three-sixteenths or one-sixth are more common. For onshore operations, the federal rate must be no less than one-eighth, whereas offshore rates tend to be higher subject to the various statutory requirements.

Statutes fix most federal royalty rates, but both the DOI and special legislation (such as the Deep Water Royalty Relief Act) can modify standard terms, usually by reducing the stated royalty rate or suspending payment of royalties, to make frontier development more attractive. State and private leases have more variability in their royalty terms and rates, and may include a basis for payment other than proceeds or market value. States reap varying portions of the royalty for federal leases of land within or adjacent to their borders.

11 What is the customary duration of oil leases, concessions or licences?

Private and public oil and gas leases usually feature a fixed primary term and a conditional secondary term. The number of years in the primary term ranges from as low as one year in mature fields to 10 years for frontier regions; private and American Indian leases tend to have short primary terms. Even though no production may be required during the primary term, the lease may be subject to termination if the leaseholder fails to drill test wells or undertake specified action or, in lieu thereof, pay an additional rental fee.

The secondary term continues indefinitely beyond the primary term so long as either the leased area produces oil or gas in paying quantities or the lessee performs other specified activities on the leased premises. The lease often excuses brief interruptions in production and longer interruptions due to force majeure.

12 For offshore production, how far seaward does the regulatory regime extend?

The Submerged Lands Act establishes state jurisdiction over submerged lands extending three nautical miles – 3.5 statutory miles, or 5.6km offshore (except Texas and Florida on the Gulf of Mexico, whose jurisdiction extends three leagues (approximately 10 statutory miles, or 16km)). The OCSLA establishes federal jurisdiction beyond the state limit, and a 1983 presidential proclamation declared that jurisdiction to extend to the boundary of the US Exclusive Economic Zone, 200 nautical miles (about 230 statutory miles, or 370km) from the coastline (in practice, oil development is active only to the edge of the OCS).

13 Is there a difference between the onshore and offshore regimes? Is there a difference between the regimes governing rights to explore for or produce different hydrocarbons?

Upstream activities on onshore federal property are governed by the Mineral Leasing Act of 1920 and the Mineral Leasing Act for Acquired Lands of 1947, while the OCSLA governs development of federal offshore property, see question 4. There are a variety of differences and similarities between the two regimes, see questions 10, 14, 17, 18, 21.

Generally, there is no difference in regimes governing the rights to explore for or produce different types of hydrocarbons. On the state level, however, regulations will occasionally specifically apply to exploration and production activities at specific geologic intervals, usually aimed at shale formations. Various states have passed regulations governing oil and gas drilling as a result of hydraulic fracturing, a widely used technique in shale oil and gas drilling.

On 18 April 2012, EPA issued rules aimed at reducing pollutants that may result from hydraulic fracturing, but such rules will be phased in over several years and compliance will not be required until January 2015. Several other federal regulatory agencies are considering issuing new rules regulating oil and gas drilling, mainly as a result of shale oil and gas drilling.

14 Who may perform exploration and production activities? What criteria and procedures apply in selecting such entities?

Pursuant to OCSLA and in accordance with a five-year plan, the BOEM grants offshore oil leases on the OCS to the highest qualified responsible bidder on the basis of sealed competitive bids. Auctions are based not on variable royalty rates but rather on the 'signature bonus' offered.

Pursuant to the Mineral Leasing Act, BLM has responsibility for oil leasing on federal lands onshore, as well as state and private surface lands where mineral rights have been retained by the federal government. Lands cannot be leased until they are first offered competitively at an auction, which is conducted by oral bidding; no sealed or mailed bids are accepted. Leases are awarded to the highest qualified responsible bidder. Lands that have been offered competitively and received no bids are then made available non-competitively for leasing for two years.

On privately held lands, any person or entity capable of legally contracting with the lessor can do so, subject to state regulatory requirements.

See question 29 regarding restrictions on foreign holdings.

15 What is the legal regime for joint ventures?

The US does not specify a particular kind of agreement for collaborative development of an oil production project owned by multiple parties. Collaborative development or joint ownership is not considered a 'joint venture' under some applicable laws and often the agreement for collaborative operations negates the existence of a 'joint venture'. Operations by one or more parties come in two main categories. The first is a contract to share costs and benefits from a joint undertaking, often conducted by one mineral rights owner or lessee on behalf of others with interests in the same land or in lands embracing a particular reservoir. An example is the joint operating agreement, often entered into on Association of International Petroleum Negotiators (AIPN) or Association of American Landmen (AAPL) forms. The accounting procedure under a joint operating agreement is often that specified by the Council of Petroleum Accounting Societies (COPAS). The second category consists of separate legal entities, which are typically encountered in processing, midstream and downstream applications. These entities include general or limited partnerships, corporations and limited liability companies. The particular terms

of both types of agreements may substantially differ from those for a joint venture outside the US.

16 How does reservoir unitisation apply to domestic and cross-border reservoirs?

Unitisation is the consolidation of exploration and production activities affecting several parcels of land, or several interest holders in a given parcel. The consolidated activities are usually conducted by a unit operator. The goal is the efficient development of a common reservoir and equitable distribution of the costs, risks and benefits of production. Unitisation may be consensual or, in several jurisdictions, may be mandated when statutory requirements are triggered or agency determinations are made. Unitisation of federal lands requires DOI approval. Pooling can be voluntary or compulsory under certain state statutes.

Transfers to third parties

17 Is government consent required for a company to transfer its interest in a licence, concession or production sharing agreement? Does a change of control require similar approval? What is the process for obtaining approval?

The transfer process differs for federal, state and private agreements, and also differs between onshore and offshore for federal properties. For example, assignments of record title interests and operating rights interests in federal OCS oil and gas leases, as well as offshore pipeline right-of-way grants, require approval of BOEM. The time frame for BOEM processing of assignment applications is not specified. For onshore leasing and operational activities on federal lands, similar assignments are approved by BLM. The new operator on a lease must notify BOEM or BLM of the change in operator and furnish bonding or equivalent financial collateral to secure performance of its operations and cover liabilities. Approval of state and/or local agencies may also be required for transfers of interests in assets under their jurisdiction.

Decommissioning

18 What laws or regulations govern decommissioning of oil and gas facilities and pipelines? In summary, what is the obligation and liability regime for decommissioning? Are there any other relevant issues concerning decommissioning?

Regulations, conditions of approval and lease terms establish the applicable requirements, procedure, and time frames for decommissioning of wells, structures and pipelines on terminated leases, and decommissioning of pipelines on terminated pipeline rights-of-way. On federal outer continental shelf lands, decommissioning is governed by BSEE regulations. When facilities cease to be useful for production, the lessee must obtain BSEE approval to decommission wells and pipelines, platforms and other facilities, permanently plug wells, remove platforms and other facilities (with specified exceptions), and decommission pipelines and remove obstructions on the seafloor created by the lease and pipeline right-of-way operations. Post-production removal of oil and gas facilities may be deferred if they are converted to renewable energy generation or alternate use. Lessees or operators of a right-of-use and easement for renewable energy or alternate use generally must also meet the decommissioning obligations when their projects cease operation. BSEE also may approve conversion of a platform to an artificial reef, if a state agency accepts title and liability for the structure. Lessees, owners of operating rights and holders of a right-of-way are jointly and severally liable for decommissioning obligations.

For onshore leases on federal lands, BLM regulations require lessees or operators to submit a surety or a personal bond in an amount sufficient to ensure compliance with applicable requirements including plugging of wells, reclamation of the lease area, and the restoration of land and surface waters adversely affected by lease operations upon abandonment or cessation of oil and gas operations. States and private lessors generally address offshore and onshore decommissioning through lease terms.

Typical provisions require the lessee to maintain a bond in favour of the state and to either surrender or remove all improvements, at the option of the state, upon lease termination. The lessee may retain the right to remove equipment with reuse or salvage value.

Transportation

19 How is transportation of crude oil and crude oil products regulated within the country and across national boundaries? Do different government bodies and authorities regulate pipeline, marine vessel and tanker truck transportation?

Rates and other terms for oil transportation via interstate pipelines are regulated by FERC, and pipeline operators must file tariffs with FERC. FERC generally allows carriers to charge market-based rates up to a ceiling. FERC regulations also require interstate carriers to provide non-discriminatory service to all shippers. The Pipeline and Hazardous Materials Safety Administration of the DOT regulates the safety of interstate oil pipelines. States regulate intrastate oil pipelines and may regulate gathering lines and other transportation activities. Some states have adopted variations of FERC's market-based rates policy.

Trucking and marine vessel transportation prices are not currently regulated, although safety, health and environmental regulations apply generally to pipelines, vessels and trucks (see question 21).

20 What are the requisites for obtaining a permit or licence for transporting crude oil and crude oil products?

Construction of a new interstate oil pipeline does not require approval from the federal government unless the pipeline will cross federal lands, but the operator must file a tariff with FERC. Pipeline construction projects require permits from state or local agencies, although some states no longer require public utility approval to construct new pipelines. Other forms of transportation are not generally subject to public utility regulation, but are subject to the Federal Motor Carrier Safety Act and other health, safety and environmental law.

Pipelines across national boundaries require a Presidential Permit for construction. Pursuant to Executive Order 13337, this authority has been delegated to the State Department. The State Department must determine whether the proposed pipeline is in the 'national interest,' taking into account the project's potential effects on the environment, economy, energy security, foreign policy, and other factors and must consult with relevant state and federal agencies and solicit public comments. See 'Update and trends'.

Health, safety and environment

21 What health, safety and environment requirements apply to oil-related facility operations? What government body is responsible for this regulation; what enforcement authority does it wield? Are permits or other approvals required? What kind of record-keeping is required? What are the penalties for non-compliance?

The legal regime for energy production and development

A new or modified exploration or development operation will usually need a local land use development permit as well as drilling and operating permits. Many projects must undergo a thorough environmental impact review under the federal National Environmental

Policy Act (NEPA) or a state analogue. The process includes substantial public involvement and can be quite contentious. Failure to complete the process or comply with permits can lead to significant delays, penalties and injunctions.

Discharge restrictions

The federal laws applicable to the discharge of pollutants into the environment are generally not industry-specific. They are instead based on a particular impact: The Resource Conservation and Recovery Act (RCRA) regulates the management of solid and hazardous waste; the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) governs the clean-up of contaminated sites; the Clean Air Act (CAA) regulates air emissions from mobile and stationary sources; and the Clean Water Act (CWA) and Safe Drinking Water Act (SDWA) protect surface water and underground sources of drinking water. The principal federal enforcement agency is the EPA, but state agencies enforce similar state laws and can also be delegated authority by the EPA to implement and enforce certain federal statutes such as the CAA, the CWA and RCRA.

While the foregoing environmental laws are applicable throughout the economy, there are some statutes that are focused on the oil and gas sector. For example, under the CWA, the EPA has issued effluent guidelines specific to both upstream and downstream oil operations, as well as rules applicable to the discharge of oil into navigable waters. The Oil Pollution Act of 1990 (OPA) addresses clean-up and damage assessments relating to oil spills into the navigable waters of the US, the adjoining shorelines, or the exclusive economic zone. Another example is the Pipeline Safety Improvement Act of 2002, which governs the way in which the natural gas industry ensures the safety and integrity of its pipelines. By way of contrast, state regulatory agencies protect 'state waters', which are usually intrastate bodies of water and groundwater.Virtually all oil and gas facilities are subject to the requirements of the CWA, which generally protects the waters of the US from sources of pollution by prohibiting the discharge of pollutants without a permit. The CWA establishes and protects water quality standards, prohibits the oil pollution of these waters and exacts stringent penalties if such pollution takes place, establishes a comprehensive system of water discharge permits, and authorises the US Army Corps of Engineers to issue permits for the discharge of dredged and fill material into waters of the United States. The scope of the federal government's jurisdiction over these waters is often controversial, and the EPA and the Corps of Engineers are developing a new guidance policy for the regulated community. As is the case with most federal environmental statutes, many CWA powers have been delegated to state environmental agencies, subject to EPA oversight.

OPA is a 1990 amendment to the CWA, which increased the federal government's authority to respond to large spills of oil into the waters of the United States. It applies to the owners and operators of onshore and offshore oil handling facilities, including oil cargo vessels, and imposes a CERCLA-like regime of joint and several and strict liability for these spills.

In 1980, CERCLA gave funding and enforcement authority to the EPA for the clean-up of sites contaminated by the spill or release of hazardous substances into the environment. Those persons or business entities determined to be 'responsible parties' can be held jointly and severally liable for the payment of clean-up costs on a strict liability basis; negligence need not be proven. CERCLA contains a 'petroleum exclusion', which excludes petroleum, crude oil and many petroleum products from the list of hazardous substances.

In addition to penalties and enforcement, CERCLA and OPA provide for the assessment of natural resource damages resulting from such spills or releases. Specific to the oil industry, OPA provides that responsible parties under the Act are liable for certain damages caused by an oil spill, which include damages to natural resources, real or personal property, subsistence use, lost government revenues, lost profits and earning capacity, and lost public services.

Both CERCLA and OPA designate state and federal governments and Indian tribes as trustees over the natural resources with the obligation to act on behalf of the public to recover damages. Therefore, when natural resources are damaged due to a discharge or release, one or more trustees will be responsible for ensuring that the resources are restored to their baseline condition and that the public is compensated for the interim loss of use. For example, the National Oceanic and Atmospheric Administration (NOAA) has primary responsibility to ensure that coastal resources are restored to their original condition and use.

Air pollution discharge or emission limits which are enforced under the CAA may apply to all sources of a particular type (eg, refinery heaters and boilers), or may be facility-specific. The CAA utilises permits to control the emission of air pollutants into the environment from industry and commercial activities. The oil and gas sector is subject to stringent regulations in the exploration and production, transportation, petroleum refining and distribution phases of operations. Federal and state environmental laws regulate both new and existing sources of air pollution. New sources, including existing sources undergoing major modifications, must often comply with more stringent emissions or technology standards.

Regulations and permit conditions may include detailed record-keeping and reporting requirements. Each statute and agency has considerable penalty, injunction and criminal law remedies for non-compliance (eg, maximum of $37,500 per day fines and imprisonment for CAA violations), and in some cases private parties may also recover damages or enforce public interests via citizen suits.

Following the Supreme Court's decision in *Massachusetts v EPA*, the mandates of the CAA are being extended to the generation of greenhouse gases, principally carbon dioxide. Recently, the EPA has enacted regulations under the CAA requiring certain facilities to monitor and record greenhouse gas emissions pursuant to the Mandatory Reporting Rule (MRR). Depending on the facility, the monitoring and record-keeping requirements can be substantial. Facilities covered by the rules include both upstream and downstream oil and gas operations.

Waste management

The federal Solid Waste Disposal Act and its 1976 amendment known as RCRA regulate the management and disposal of solid waste and especially hazardous waste. With respect to oil and gas operations, a number of production wastes are specifically excluded from hazardous waste regulation, and states also generally consider these wastes to be non-hazardous solid wastes. On the other hand, several petroleum refinery wastes are listed as hazardous wastes, and are subject to much more extensive regulation. The RCRA waste management system has been described as a 'cradle to grave system', requiring the observance of comprehensive permitting, record-keeping and reporting obligations. Under RCRA, many regulatory powers have been delegated to state agencies for permitting and enforcement.

Navigation

Activities affecting the waters of the United States are regulated by EPA, the Army Corps of Engineers, the US Coast Guard, and various other agencies such as port authorities, each of which enforce laws such as the CWA and the River and Harbors Act.

Ecology

The Endangered Species Act (ESA) can prohibit activities that might materially impair the habitats of threatened and endangered species. For example, a new facility might be prohibited in an area with an endangered plant species, or particular mitigation measures (such as habitat replacement or augmentation) might be required to minimise adverse impacts to an animal species. For offshore exploration, the Fishery Conservation and Management Act governs the effects on the fishing industry, and the Marine Mammal Protection Act (MMPA)

does the same for the affected mammals. In addition, the Migratory Bird Treaty Act (MBTA) prohibits the taking or injuring of migratory birds, including nests and eggs, and the National Marine Sanctuaries Act authorises the secretary of commerce to designate and protect areas of the marine environment having special national significance. The prohibitions enforced by the MBTA have been applied to oil and gas production pits and other facilities, which can present a threat to migratory birds.

Cultural resources

A number of mandates deal with projects that may disturb or uncover property of cultural significance, including the National Historic Preservation Act of 1966, the American Antiquities Act of 1906, the Archaeological Resources Protection Act of 1979 and the Abandoned Shipwreck Act of 1987.

Health and safety

OCSLA authorises the DOI to lease offshore tracts for oil and gas exploration and development, and to regulate that development through permitting, inspections and enforcement actions. (see question 9). The OCSLA permitting scheme involves extensive health and safety requirements.

The Occupational Safety and Health Administration (OSHA) and state and local governments all enforce rules protecting employees and contractors from workplace injuries. The BSEE regulates and enforces safety rules at offshore facilities such as drilling rigs and oil platforms. Record-keeping requirements can be very significant; for example, records of occupational injury must be kept for the duration of the employee's service plus 30 years.

In addition to record-keeping requirements, OSHA also imposes certain inspection and safety programme requirements involving mechanical integrity of equipment, hazards analysis and process safety. OSHA has recently revised and strengthened the Hazard Communication Rule, which requires the workers be advised of the presence and threats of chemical products in the workplace. OSHA inspects facilities and has the power to issue citations for violations. (See question 23 for additional information on OSHA.)

The Chemical Safety Board (CSB), an independent federal agency, has authority under the CAA to investigate accidental releases resulting in a fatality, serious injury or substantial property damages. This authority includes releases occurring at oil-related facilities such as refineries. Although the CSB does not possess enforcement powers under its enabling statute, the board does issue public recommendations and reports that can influence other agency decisions. See question 23 for additional information on CSB.

Homeland security

The Department of Homeland Security (DHS) implements requirements relating to safety and security under the Maritime Transportation Security Act of 2002 (MTSA) and the Chemical Facility Anti-Terrorism Standards (CFATS). The MTSA requirements include development of site security plans, designation and management of certain information as sensitive security information (SSI), and security clearances for personnel. The CFATS interim final rule issued in 2007 requires covered chemical facilities to prepare security vulnerability assessments, which identify facility security vulnerabilities, and to develop and implement site security plans, which include measures that satisfy the identified risk-based performance standards.

22 What health, safety and environmental requirements apply to oil and oil product composition? What government body is responsible for this regulation; what enforcement authority does it wield? Is certification or other approval required? What kind of record-keeping is required? What are the penalties for non-compliance?

The EPA regulates the composition of mobile source fuels and fuel additives. However, a large portion of oil regulation occurs at the state level. Sales of imported products that do not comply with EPA standards are prohibited. Uniquely, California may adopt its own fuel standards, which may then be adopted verbatim by other states. These regulations specify many elements of fuel composition, such as volatility and aromatics, oxygenate and sulphur content.

Recently there have been several major federal fuel specification changes. Among these changes are a reduction in the sulphur content of gasoline, the elimination of the 2 per cent oxygen content requirement under the CAA for reformulated gasoline, and the 2012 revisions to the renewable fuels standard programme (RFS2) under the EISA (see question 3). Under the Clean Air Act Section 211(o), as amended by the Energy Independence and Security Act of 2007 (EISA), the Environmental Protection Agency (EPA) is required to annually establish specific annual volume standards for cellulosic biofuel, biomass-based diesel, advanced biofuel, and total renewable fuel that must be used in transportation fuel for the following year based on projections from the energy Information Administration (EIA).

On the state level, California regulators adopted the Low Carbon Fuel Standard (LCFS) in 2009, which regulates the carbon intensity of transportation fuels sold in California in order to reduce the amount of greenhouse gas emissions. However, in December 2011, the US District Court for the Eastern District of California held that the LCFS regulations were in violation of the Commerce Clause of the United States Constitution. That decision is on appeal to the Ninth Circuit, and if upheld, would prevent other states from adopting an LCFS regulation identical to California's. In addition, 11 states (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont) signed a Memorandum of Understanding to work toward adopting a regional Low Carbon Fuel Standard and issued a draft programme framework in August 2011.

In most cases, fuel composition must be certified by the EPA or the state air authority. These agencies may impose substantial penalties for sale of non-complying fuels and for failure to maintain accurate composition and manufacturing records. The EPA incentivises self-evaluation, self-disclosure and correction of violations by not recommending civil or criminal penalties for entities that promptly address their non-compliance.

Other oil-based products, such as lubricants and solvents, are regulated by the EPA pursuant to the Toxic Substances Control Act (TSCA). The TSCA authorises the EPA to require pre-manufacture notifications (PMN) for any new chemical substances prior to its being imported to, or manufactured in, the US above a certain threshold amount. In most cases, PMNs must be supported by adequate health and safety data, and the TSCA imposes reporting and record-keeping obligations on manufacturers and distributors of subject chemical substances. Violations of the TSCA can result in civil and criminal penalties, as well as seizure of products manufactured or distributed in violation of TSCA.

Labour

23 What government standards apply to oil industry labour? How is foreign labour regulated? Are there anti-discrimination requirements? What are the penalties for non-compliance?

Foreign workers

All employers in the United States, including oil companies, must confirm each newly hired employee's identity and lawful right to work for that specific employer in the intended position. The Federal laws requiring this action were established in November 1986 as part of the Immigration Reform and Control Act (IRCA) and apply equally to US citizen and permanent resident workers and foreign national personnel. Recently, certain states, cities and municipalities have enacted additional compliance requirements that businesses must follow to hold business licences within those regions of the

Update and trends

Deficiencies in the US's oil infrastructure cause price discrepancies across the nation. Whether crude oil can flow from one side of the US to the other, or from a producing region to a refining area, depends largely on the pipeline system present in the areas. Disconnectedness among the regions means that refiners in different regions are forced to pay widely varying prices for crude oil depending on the source they are able to access. During 2010, the bulk of petroleum product pipeline movements took place among the East Coast, Midwest and the Gulf Coast. By contrast, the Rocky Mountain region and West Coast have very small volumes entering and leaving by pipeline, with nothing leaving the West Coast.

Improvements are beginning to be made, however. In 2008, TransCanada Keystone Pipeline, LP, filed an application for a Presidential Permit with the Department of State to build and operate the Keystone XL Project. The proposed Keystone XL Project consists of a 1,700-mile crude oil pipeline that would primarily be used to transport Western Canadian Sedimentary Basin crude oil across the Canadian border to Oklahoma and Texas. On 18 January 2012, President Obama denied the application due, in part, to environmental concerns relating to the proposed northern section of the pipeline transversing the sensitive Sand Hills of Nebraska. While it reworks the northern route of the pipeline, TransCanada recently announced that it will proceed to build the non-controversial southern section of the pipeline extending from Oklahoma to Texas, which will help to alleviate the oversupply of crude oil in the north by allowing more oil to reach capable refineries along the Gulf Coast.

country. Failure to properly document the review of appropriate employment verification paperwork can result in substantial fines most often calculated based on the number of personnel employed.

When choosing to hire personnel who are not US citizens nor lawful permanent residents ('green card holders'), it is critical for an employer to understand the rules established by IRCA and the nature of documentation that can be presented by a foreign national to evidence their lawful right to work in the US for that specific business. Non-immigrant visas, which are temporary in nature and not intended to result in green card issuance, can include visitors, students, trainees and employment categories. Commonly used employment-based non-immigrant visas include:

- the L-1 classification used for executive, managerial or personnel with specialised skills and knowledge who are transferred within a corporate group from a location abroad to a related US subsidiary, affiliate or branch location;
- the H-1b classification used for positions classifiable as 'specialty-occupations', which require college-level degrees in a specific field of study to perform the duties and responsibilities of the position;
- the specialised visas created by treaty for citizens of Canada, Mexico, Singapore, Chile and Australia with similar standards to the H-1b classification;
- the E classification for executive, managerial or personnel with essential skills and knowledge who are of the same nationality as the intended employer and are nationals of one of 82 countries with whom the US maintains specialised treaties.

In some cases a foreign national who lacks employment authorisation in the United States can enter in the B-1 (business visitor classification) to represent the interests of a foreign employer. However, that foreign national cannot provide local productive employment while in the United States, but rather can only further the goals of the company abroad.

It is also important to note many recent changes in the law regarding the use of contracted personnel. Although much of the risks and liabilities associated with contract workers is maintained by the company assigning the worker, in recent years the government has increased the responsibilities, notice requirements and many of the liabilities of the company accepting the contract personnel as well.

Labour relations

Employers in oil, as well as other sectors, must comply with a wide range of federal statutes and regulations, including the National Labor Relations Act (NLRA), the Fair Labor Standards Act (FLSA), the Family and Medical Leave Act (FMLA), and the Occupational Safety and Health Act (OSH Act). State and local laws and agencies supplement the federal workplace rules.

The NLRA confers on private sector employees a variety of rights to form unions; to engage in union organisation campaigns; to bargain collectively; and to strike and take other concerted activity. The NLRA also imposes limitations on those rights, and empowers employers to conduct labour relations alone or in concert with similarly situated firms, and is enforced by the National Labor Relations Board. Important labour unions in the US oil industry include the Oil, Chemical and Atomic Workers Union.

The FLSA imposes overtime and minimum wage requirements

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for certain 'non-exempt' employees (ie, those not in exempt categories, including management and some administrative activities). Specific wage or overtime rules are provided for some particular oil industry employers, such as certain wholesale distributors of refined products. The FLSA is enforced by the Department of Labor (DOL).

The FMLA requires larger employers to provide up to 12 weeks of unpaid annual leave for certain employees who have serious health conditions or who desire to care for dependants. An employee who exercises the FMLA right enjoys certain assurances of post-leave employment and protection from retaliation. This statute is also enforced by the DOL.

The OSH Act created OSHA to set and enforce workplace health and safety standards. OSHA and similar state agencies remain committed to rigorous enforcement of process safety in the aftermath of high-profile refinery accidents, including the 2005 explosion and fire at the BP refinery in Texas that killed 15 employees and injured 170 others. Another federal agency, the CSB, focuses on safety within the energy industry and champions what the agency considers safer technologies. Several refinery incidents involving the release of hydrogen fluoride, for example, may lead CSB to recommend the use of alternate alkylation catalysts. The CSB's investigation of the Deepwater Horizon incident also will likely lead the agency to re-emphasise the importance of safety culture and oversight much the way the agency did after the Texas City disaster. CSB also may make recommendations to sister federal agencies regarding the offshore safety regulatory scheme. Many observers anticipate that CSB may recommend the implementation of a 'safety case' common in other countries such as the United Kingdom and Australia.

Anti-discrimination

Many federal, state and local laws prohibit discrimination in employment on the basis of a 'protected classification' such as race, colour, sex, religion, national origin, disability (mental or physical, including pregnancy), age, Vietnam-era veteran status, sexual orientation or medical condition. Even an ostensibly neutral policy that results in a 'disparate impact' on a race or sex classification can be the basis for a claim, unless the employer can demonstrate the policy is justified by 'bona fide occupational qualifications'. The federal laws include title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, 42 USC section 1981 (prohibiting racial discrimination in employment), the Equal Pay Act, the Rehabilitation Act and the Americans with Disabilities Act. These statutes are generally enforced by the Equal Employment Opportunity Commission.

The remedies for a discrimination claim can be significant. They can include orders of reinstatement, back and front pay, compensatory damages such as pecuniary losses and emotional distress, and punitive or exemplary damages. Only a few of the anti-discrimination laws have maximum penalties, such as the $300,000 per employee limitation under title VII for compensatory and punitive damages. Oil industry employers have faced significant claims, both by individuals and by collections of similarly situated employees bringing class actions. For instance, in 1996 Texaco paid over $170 million to settle racial discrimination lawsuits. At the time, it was the largest racial discrimination settlement in the United States.

Taxation

24 What is the tax regime applicable to oil exploration, production, transportation, and marketing and distribution activities? What government body wields tax authority?

The income tax regime for exploration and production has numerous special features, whereas transportation, marketing and distribution are generally subject to the same rules facing other industrial businesses. A host of industry-specific deductions apply to upstream expenditures – including pre-drilling exploration costs, intangible drilling costs, accelerated depreciation of oilfield equipment and depletion of subsurface resources. Tax planning is required for optimal acquisition and divestiture of leases and other production interests, such as production payments and farm-ins. State income tax laws supplement these provisions and incentives (though not all states impose an income tax). Some states also impose severance taxes on production.

Federal and state excise taxes are collected on the retail sale of motor fuels. Oil companies are subject to state property tax on holdings of real property and certain personal property; state sales and use tax on certain acquisitions of personal property; withholding requirements on distributions to certain foreign shareholders and partners; and transfer taxes on sales of real property.

The Oil Spill Liability Trust Fund, authorised under OPA, is funded in part through a tax levied on oil companies for barrels of oil produced in or imported into the US.

The principal tax agency is the Internal Revenue Service at the federal level, with customs duties being handled by the US Customs Service of the Department of the Treasury, and state taxes being administered by a variety of agencies.

Commodity price controls

25 Is there a mandatory price-setting regime for crude oil or crude oil products? If so, what are the requirements and penalties for non-compliance?

Crude oil is an international commodity, and as such its price is determined by international supply and demand factors. Neither the US federal government nor the states currently regulate the price of crude oil or refined products. More than half of the states have laws or regulations that seek to regulate 'price gouging', particularly during times of declared emergency.

Competition, trade and merger control

26 What government bodies have the authority to prevent or punish anti-competitive practices in connection with the extraction, transportation, refining or marketing of crude oil or crude oil products?

Two agencies have principal responsibility for enforcing federal competition laws (called 'antitrust laws' in the US): the antitrust division of the Department of Justice (DOJ) and the Federal Trade Commission (FTC). Each agency has civil authority to enforce statutes of general application, including the Sherman Act prohibition against a wide array of restraints of trade, and monopolisation, attempts and conspiracies to monopolise; the Clayton Act on mergers, exclusive dealing and tying arrangements; and the Robinson-Patman Act amendments to the Clayton Act on price discrimination and related practices. Only the DOJ, however, has authority to pursue criminal investigations for cartel behaviour. The FTC also enforces the Federal Trade Commission Act prohibiting 'unfair methods of competition' and similar offences, and has the option of challenging anti-competitive behaviour before either an administrative tribunal or a federal court.

Many states and some subdivisions have antitrust and unfair competition acts of broader generality. Private parties may also bring lawsuits seeking relief for most competition laws. At all levels, sanctions can include compensatory damages, punitive damages (often mandatory trebling of the compensatory damages), recovery of attorneys' fees and injunctive relief.

Regulations on concentration of oil lease holdings include the BOEM's List of Restricted Joint Bidders, which limits joint bids by two or more companies with high daily average production, and the review of winning OCS lease bids by the FTC and DOJ before any bid is formally accepted.

27 What is the process for procuring a government determination that a proposed action does not violate any anti-competitive standards? How long does the process generally take?

The DOJ's business review letter programme and the FTC's advisory opinion programmes are sometimes used for comfort on proposed joint ventures, information exchanges and similar concerted activities. The review period can extend many weeks or months from the submission of all supporting data, and the agencies only describe their current enforcement intentions without definitively approving the conduct.

Certain joint ventures, mergers and business purchases are subject to mandatory reporting under the Hart-Scott-Rodino Antitrust Improvements Act (HSR Act). Reports are made to both the DOJ and the FTC, but the FTC usually takes the more active role for oil industry matters. The parties are prohibited from closing the transaction until expiration of a waiting period for the government to decide whether to seek an injunction. The waiting period is usually 30 days after filing, or 15 days in the case of a cash tender offer, but is extended significantly when an agency issues a request for additional information, commonly known as a 'second request', for data, documents and interrogatory answers. The issuance of such a request suspends the HSR waiting period until 30 days after the parties comply with the request for additional information (10 days in case of a cash tender offer), although it has become common practice for the FTC to negotiate a 'timing agreement' with the parties providing the government with additional time to review the submission. Unlike in many other jurisdictions, however, neither the DOJ nor the FTC has the ability itself to block a proposed merger at the expiration of the HSR waiting period. Rather, it is necessary for the agencies to seek a preliminary injunction from a federal court pending a trial on the merits of the deal. When DOJ acts, that trial is typically held in the same federal court as the preliminary injunction challenge. When the FTC acts, however, the trial on the merits is held before a hearing officer, typically an FTC administrative law judge (ALJ), and the ALJ's initial decision is thereafter reviewed by the commissioners themselves. Companies may appeal Commission adverse decisions to a US court of appeals. The FTC recently adopted new procedural regulations aimed at expediting the administrative processes, but also giving greater authority to the commissioners themselves to control key aspects of the administrative adjudication.

The FTC and DOJ may also challenge transactions that are not required to be notified under the HSR Act or that are reported but which, for one reason or another, the agencies permit to be consummated without challenge in the first instance. While these challenges are the exceptions, not the rule, the agencies have shown an increasing interest in such post-consummation challenges in recent years. In 2005, for example, the FTC imposed divestiture orders on a merged oilfield business four years after the merger closed.

International

28 To what extent is regulatory policy or activity affected by international treaties or other multinational agreements?

Although the United States is not a signatory to the Law of the Sea Treaty, federal laws and executive orders have established US offshore territorial zones and economic exclusion zones that are comparable to those under the Treaty.

The 1978 protocol to the 1973 International Convention for the Prevention of Pollution from Ships (MARPOL) has spawned several US statutes pertaining to oil tankers, including OPA, the Port and Tanker Safety Act and the Act to Prevent Pollution from Ships.

The US is a member of the World Trade Organization (WTO) and a party to various WTO agreements. These instruments generally prevent member states from discriminating against imported products and services or between products and services of different member states. There is an exception for free trade agreements such as the North American Free Trade Agreement (NAFTA), which created a zero-duty regime for imports and exports of products among Canada, the US and Mexico. The United States has free trade agreements with a number of other countries.

29 Are there special requirements or limitations on the acquisition of oil-related interests by foreign companies or individuals?

The presence of BP, Shell and PDVSA/Citgo demonstrates that foreign investment in oil resources has been welcomed and successful. However, some restrictions exist or may emerge.

Under the Mineral Leasing Act, aliens may hold interests in federal onshore leases only by stock ownership in US corporations holding leases and only if the laws of their country of citizenship do not deny similar privileges to United States citizens. Aliens may not hold a lease interest through units in a publicly traded limited partnership. Foreign-owned and foreign-flagged oil tankers may call at US ports en route to and from foreign destinations. The combination of statutes known as the Jones Act requires that 'coastwise' trade between US ports generally must be conducted by vessels built and flagged in the US and staffed with US crews.

OCSLA limits foreign staffing of many OCS facilities. Foreign investors must comply with record-keeping requirements of the International Investment and Trade in Services Survey Act.

The Exon-Florio Amendment to the Defense Production Act of 1950 empowers a committee of several executive branch agencies (collectively known as the Committee on Foreign Investment in the United States, or CFIUS) to investigate whether proposed foreign acquisitions of US businesses pose a risk to the national security of the United States. Upon receiving a recommendation from CFIUS, the president is authorised to determine whether to block the proposed transaction or require divestment if the transaction has already occurred.

Amendments to the statute in 2007 expanded the review factors to include the effects of the proposed transaction on national requirements for energy sources and physically critical infrastructure 'such as major energy assets'. The impact of CFIUS review is fact-specific depending on the characteristics of the proposed acquisition.

30 Do special rules apply to cross-border sales or deliveries of crude oil or crude oil products?

Imports

Imports of crude oil generally are subject to the regulations and standards of the US Federal Trade Commission, US Customs and Border Protection, the US Department of Energy, and the Federal Energy Regulatory Commission. Furthermore, if the import is a consumer product or a hazardous material, the import is subject to regulations and standards of the Consumer Product Safety Commission in the first instance and regulations and standards of the US Department of Transportation in the second. While in a few limited instances the Department of Energy must authorise importation of petroleum products, generally, licences are no longer required to import petroleum products.

Exports

The Department of Commerce restricts exports of all domestically produced crude oil by requiring a licence for the export of crude oil to all countries, including Canada. Except for a few categories of transactions that are exempted or have a presumption of approval by the Bureau of Industry and Security (BIS), the BIS reviews licence applications on a case-by-case basis. The BIS will analyse the application to determine if the transaction is in the national interest and consistent with the purposes of the Energy Policy and Conservation Act. Exports of refined products are not currently limited in this manner.

Embargoes

The United States maintains economic embargoes on certain countries, including Burma, Cuba, Iran, Libya, North Korea, Sudan (but not South Sudan), and Syria pursuant to regulations administered by the Treasury Department's Office of Foreign Assets Control. These embargoes can prohibit US persons and foreign persons from engaging in transactions involving the embargoed countries or their companies or nationals, even when nothing will be imported into or exported from the United States.

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