The Energy Regulation and Markets Review

Fourth Edition

Editor
David L Schwartz

Law Business Research

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Editor
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Published in the United Kingdom
by Law Business Research Ltd, London
87 Lancaster Road, London, W11 1QQ, UK

www.TheLawReviews.co.uk

ISBN 978-1-909830-51-6

Printed in Great Britain by
Encompass Print Solutions, Derbyshire
Tel: 0844 2480 112

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ACKNOWLEDGEMENTS

The publisher acknowledges and thanks the following law firms for their learned assistance throughout the preparation of this book:

AFRIDI & ANGELL

ANDERSON MŌRI & TOMOTSUNE

ANGOLA LEGAL CIRCLE ADVOGADOS

ARZINGER

AVENT ADVOKAT

BASHAM, RINGE Y CORREA

BRUUN & HJEJLE

ENGLING, STRITTER AND PARTNERS

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YOON & YANG LLC

ZUL RAFIQUE & PARTNERS

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EDITOR'S PREFACE

Our fourth year of writing and publishing *The Energy Regulation and Markets Review* has been marked by significant infrastructure development needs, low oil and gas prices, financial and economic sustainability measures, and carbon reduction programmes.

As many of the world's economies have begun to regain their financial footing following the global economic crisis, we are seeing a strong focus on infrastructure development. India is heavily engaged in providing economic incentives for the development of generation, transmission and distribution facilities, and many countries have acknowledged significant generation development needs to meet growing demand, including in Central Africa, Egypt, Uzbekistan, Indonesia and Malaysia. In the wake of Russia's annexation of Crimea, Ukraine is seeking IMF financing assistance to invest in power sector infrastructure, and New Zealand is looking to build large transmission projects.

We have also seen continued efforts to promote sustainability and development of green energy resources. Denmark has created a climate council and new regulatory requirements to encourage development of green energy and to promote conservation. France has adopted an aggressive new energy efficiency and conservation law that includes a new 'carbon' tax. The United States Environmental Protection Agency has proposed a Clean Power Plan to limit CO2 emissions from existing generation facilities by 30 per cent by 2030. At the same time, however, a federal court of appeals in the United States has determined that the Federal Energy Regulatory Commission (FERC) had no authority to treat demand responsiveness (a form of conservation) with the same economic value as generation. Korea has been exploring eco-friendly sources of energy independence, and Brazil has encouraged renewable energy development to make up for reduced hydropower in recent years. Even China appears to be working to develop clean, safe and sustainable energy that reduces reliance on coal generation.

Oil and gas prices remain low, which appears to have allowed largely energy-dependent countries (such as Japan) to secure longer-term oil purchases, but appears to have had negative impacts on countries that largely rely upon oil export revenues, such as Russia, Angola and Iraq. Efforts to reduce reliance on nuclear generation continue to create demand for other energy sources in Germany, Japan and France.

We have seen significant energy sector regulatory reforms in many countries. In Spain and Portugal, there have been efforts to reduce the tariff deficit and promote financial and economic sustainability. Poland has worked to reform its regulatory system to encourage competition and development, while, at the same time, protecting state-owned companies from hostile takeovers. Romania has sought to encourage competition and reduce political interference with the regulatory process. The United States has continued to struggle with how to allocate transmission costs fairly and efficiently under FERC's Order 1000.

Certain countries have continued their efforts to privatise state-owned companies. Turkey has engaged in an effort to privatise its generation facilities. Cyprus is continuing its efforts to privatise its state-owned utility company. India is privatising its coal mines, and Mexico is encouraging private oil companies to bid for exploration and production rights.

On the nuclear energy front, Turkey has moved forward in its efforts to develop its first nuclear generation facility. At the same time, Japan and Korea have sought to reduce their reliance on nuclear energy, and Germany has continued on its path to shut down all nuclear facilities, all in the wake of the 2011 events at the Fukishima facility in Japan.

I would like to thank all the authors for their thoughtful consideration of the myriad of interesting, yet challenging, issues that they have identified in their chapters in this fourth edition of *The Energy Regulation and Markets Review*.

David L Schwartz
Latham & Watkins LLP
Washington, DC
June 2015

Chapter 5

CHINA

Monica Sun, Hao Su and James Zhang[1]

I OVERVIEW

Energy regulation in China involves a number of stakeholders including various governmental authorities which heavily regulate the energy sector, monopolistic state owned enterprises (SOEs), private companies that are trying to catch up, foreign companies that have had varying degrees of success, and a vast number of consumers. Currently, and for the foreseeable future, energy regulation in China is anchored in China's ambitious economic restructuring agenda. Top priority is being placed on environmental goals and the deployment of cleaner energy in China's economic reform plan. As one of the largest economies globally, China is also deeply embedded in the global energy value chain; therefore, the effects of China's energy consumption and production extend well beyond its borders.

China's prominent role in the global energy market underlines the importance of understanding China's domestic energy regulation regime and its market structure. This chapter aims to provide an overview of China's energy market and regulatory regime with a focus on oil and gas, power, and renewable energy from a foreign investment perspective.

II REGULATORY REGIME

i Regulators

Oil and gas

The Ministry of Land and Resources (MLR) is responsible for the supervision and administration of the exploration and exploitation of mineral resources throughout

1 Monica Sun is a partner, Hao Su is a senior associate and James Zhang is an associate at Herbert Smith Freehills LLP.

China. It has the authority to grant the licences required for the exploration and production of crude oil and natural gas in China. It also plays a role in examination and approval of blocks open to foreign investment.

The National Development and Reform Commission (NDRC) is in charge of setting out and implementing policies in respect of the oil and gas sector. It is also responsible for approving certain investment projects. The National Energy Administration (NEA) was established under the NDRC, with broad duties ranging from drafting energy strategies, proposing reform advice, implementing the management of energy sectors to approving overall development plan (ODP) for a specific oil or gas project.

The Ministry of Commerce (MOFCOM) was previously in charge of review and approval of making and amendments of all production sharing contracts (PSCs). Now such approval is no longer required, and instead record filing at MOFCOM is necessary.

Power

The NDRC also has the authority to approve certain investment projects in the power industry.

The State Electricity Regulatory Commission (SERC) regulates the power industry. It is responsible for the enactment and enforcement of regulations in this industry, and also for granting power business permits to power companies.

Other regulators

Other regulators include:

a the Ministry of Environmental Protection (MEP): takes charge of administering and enforcing environmental protection matters in China;

b the National Nuclear Safety Administration: an authority under the MEP which acts as the central government agency responsible for regulating nuclear safety, supervising all civilian nuclear infrastructure in China. It also inspects nuclear safety activities and regulates the approval mechanism; and

c the State Administration of Work Safety (SAWS): responsible for overseeing and administering work safety nationwide.

ii Laws and regulations

China has many laws and regulations governing its energy sector, including:

Oil and gas

a The Mineral Resources Law (1986, amended 1996) and its Implementation Rules (1994) establish the basic legal framework under which exploration and production activities (including oil and gas development) are to be carried out.

b The Oil and Natural Gas Pipeline Protection Law (2010) provides for the security requirements for the construction and operation of pipelines.

c The Regulation on Registration of Exploitation of Mineral Resources (1998, amended 2014) provides detailed requirements on the registration of mineral resources exploitation and the issuance of exploitation licences.

d The Measures for the Administration of Transfer of Mineral Exploration Rights and Exploitation Rights (1998, amended 2014) regulate the transfer of exploration rights and exploitation rights.

e The Regulation on Sino-foreign Cooperation in the Exploitation of Onshore Petroleum Resources (1993, amended 2001 and 2007) is the basis for foreign companies to participate in the exploration and exploitation of onshore blocks in China through PSCs.

f The Regulation on Sino-foreign Cooperation in the Exploitation of Offshore Petroleum Resources (1982, amended 2001) is the basis for foreign companies to participate in the exploration and exploitation of offshore blocks in China through PSCs.

g The Measures for Regulation of Fair and Open Access to Oil and Gas Pipeline Facilities (2014) (Third-party Access Measures) provide the third-party access regime, allowing third parties to use the surplus capacity of pipeline facilities.

Power

a The Electric Power Law (1996, amended 2015) is the main legislation governing the electricity sector.

b The Circular on the Reform Plan for Power Prices (2003) sets out the targets for the power price reform and is followed by the Regulation on Feed-in Tariffs (2005), the Regulation on Power Sales Price (2005) and the Regulation on Transmission and Distribution Price (2005).

c The NDRC Notice on Pilot Reform of Transmission Tariff in Shenzhen (2014) and NDRC Notice on Further Reform of Transmission Tariff Following the Zhongfa [2015] No. 9 Document (2015) regulate the ongoing transmission tariff reform.

d The Regulations on Electricity Regulation were issued in 2005 to strengthen and improve electricity regulation, focusing on maintaining the order of electricity markets and promoting the development of the electric power industry.

e The Administrative Regulations on Permits for the Power Industry (2005) focus on maintaining the order of the electricity markets and promoting the development of the electric power industry.

f The Opinions regarding Further Reform of the Electric Power Regime (2015) set out the plan for further reform. Further implementing measures for this roadmap document are due to be released.

In addition, there are numerous regulations and rules enacted by various administrative authorities, to define specific procedures or particular issues with respect to the electricity sector under the framework of the main law and regulations.

Renewables

a The Energy Conservation Law (2008) is aimed at promoting energy conservation.

b The Renewable Energy Law (2010) sets general principles on renewable energy.

c The NDRC Notice on Feed-in Tariff for Polar Energy (2011) provides for the feed-in tariff for polar energy projects.

d The NDRC Notice on Feed-in Tariff for Offshore Wind Power (2014) provides for the feed-in tariff for offshore wind farms.

e The NEA Notice on Facilitating the Development of Geothermal Power (2013) is aimed at promoting the development and utilisation of geothermal power.

iii Regulated activities

Oil and gas

As mentioned above, exploration and production activities are subject to exploration and exploitation licences issued by the MLR.

In upstream oil and gas exploration and exploitation, foreign companies should partner with and enter into PSCs with legally designated national oil companies (for details, see Section II.iv, *infra*).

Pipeline design and construction is subject to review based on criteria related to safety, environmental protection, optimal land use and economic feasibility. The construction of oil and gas pipeline networks must be approved by the NDRC or its local branches. The qualifications of the enterprises and personnel engaged in the design, installation, use and inspection of pipelines must be accredited by the General Administration for Quality Supervision, Inspection and Quarantine or its local counterpart as the case may be.

A business permit is required to engage in crude oil storage or trading; or refined oil wholesale, retail or storage.

Power

Power companies are required to obtain electric power business permits issued by SERC. Electric power business permits are divided into three categories depending on the type of business:

a a power generation permit for power generation companies;

b a power transmission permit for power transmission companies; and

c a power supply permit for power supply companies.

A company applying for an electric power business licences must demonstrate that it has the financial capability and personnel with the required experience. In addition, power companies must obtain approval for each specific power project from relevant authorities and comply with environmental regulations in order to be issued with the electric power business licence.

Exemptions are available for the power generation permit. The NEA granted the following power plants by notice issued in April 2014:

a distributed generation projects registered or approved by the NEA;

b small hydropower stations with single-station generating capacity below 1MW;

c new-energy generation projects such as solar, wind, biomass, ocean power and geothermal power with generating capacity below 6MW;

d power projects with comprehensive use of heat and pressure by-products; and

v captive power plants without direct combustion of fossil fuel and which are dispatched by dispatching organisations at city level or below.

iv Ownership and market access restrictions

Oil and gas

The state has ownership over all mineral resources within the territory of China. Pursuant to the Mineral Resources Law, a licensing regime has been adopted and the MLR has the authority to grant exploration licences and production licences. Applicants for exploration licences or exploitation licences must be approved by the State Council to engage in oil and gas exploration and production activities. Such approved companies are national oil companies (NOCs) and include China National Petroleum Corporation (CNPC), China Petrochemical Corporation (Sinopec) and China National Offshore Oil Corporation (CNOOC).

Foreign companies can partner with designated Chinese oil companies (usually CNPC, Sinopec or CNOOC) through the PSC regime to invest in onshore and offshore exploration and production in China.

Regarding unconventional oil and gas, exploration and exploitation of coalbed gas generally follows the regime for conventional oil and gas – exploration licences and exploitation licences are granted to designated companies and foreign companies can invest through the PSC regime. Both the licencing regime and PSC regime, however, apply to shale gas exploration and exploitation by foreign investors. Foreign companies can partner with Chinese companies holding an exploration licence of a shale gas block or establish a joint venture with a Chinese partner to bid for the licences directly.

The Foreign Investment Industrial Guidance Catalogue (the Catalogue) is issued by the NDRC and MOFCOM, setting out encouraged, restricted and prohibited activities and sectors. Any activity or sector not included in the Catalogue is permitted. Projects that are encouraged benefit from simpler approval procedures and can also benefit from customs incentives. Restricted activities and sectors must generally be approved at higher levels of government, which means that approvals can be harder to obtain. Sino-foreign joint venture cooperation in the exploration and development of shale gas is 'encouraged' under China's recently revised Foreign Investment Industrial Guidance Catalogue (2015). This allows foreign investment in shale gas to receive certain tax and administrative benefits. MOFCOM's Notice on Development Plan of Shale Gas has an additional requirement that foreign investors should have expertise in the exploration and production of shale gas. Neither the Catalogue nor the Notice requires Sino-foreign joint ventures to be majority controlled by Chinese partners; however, this is a requirement in the MLR's second bid round. Accordingly, under the current regime, a Sino-foreign joint venture engaged in shale gas extraction must be controlled by the Chinese partner or partners. However, as the PSC regime is more established through the conventional oil and gas cooperation, in practice, most sino-foreign cooperation on shale gas exploration and exploitation still follows PSC regime.

The midstream oil and gas industry, however, is dominated by NOCs. CNPC controls nearly all the long-distance pipelines in China, including the West-East Pipeline. The 2013 annual report of CNPC shows that it operates nearly 80 per cent of the natural gas pipelines and 70 per cent of the crude oil pipelines in China. It is reported that the government is now looking at options to reform the energy regime in China, including stripping oil companies of their pipeline assets and setting up a national pipeline company or regional pipeline companies that would own and operate oil and gas pipelines. Whether and when such reform steps could be implemented, however, remains uncertain.

The downstream oil and gas sector is still dominated by NOCs. Sinopec has focused on downstream activities, such as refining and distribution, with these sectors making up over 70 per cent of the company's revenues in recent years.

Power

The main market players in the power industry include power companies (among which the five large state-owned generators are China Huangneng Group, China Datang Corporation, China Huadian Corporation, China Guodian Corporation and China Power Investment), grid companies (namely, State Grid Corporation of China and China Southern Power Grid Co.), and ancillary companies engaged in power engineering and construction (China Energy Engineering Group Co. and Power Construction Corporation of China).

The main opportunities for foreign investors in the power industry lie in the construction and operation of power stations with certain technologies and renewable energy. Specifically, the following types of business in the power industry are 'encouraged' in the Catalogue:

a construction and operation of ultra-supercritical power stations with single unit power of 600,000kW or more;

b construction and operation of power stations for heat-power co-generation units of back-pressure (extraction-back) type, heat-power-cool multi-generation units, and heat-power co-generation units of 300,000kW or more;

c construction and operation of power stations with large air-cooled generation units with single unit power of 600,000kW or more in regions suffering from water shortage;

d construction and operation of projects of power generation via integrated gasification combined cycle and other clean coal power generation projects;

e construction and operation of power generation projects with single unit power of 300,000kW or more that use fluidised bed boilers and coal gangue, middling, and coal slurry;

f construction and operation of hydropower stations for the primary purpose of power generation;

g construction and operation of nuclear power stations (the Chinese party must hold a controlling interest);

h construction and operation of new-energy power stations (including solar energy, wind energy, geothermal energy, tidal energy, wave energy and biomass energy); and

i construction and operation of a power grid (the Chinese party must hold a controlling interest). This was previously a 'restricted' item under the 2011 Catalogue.

The Catalogue restricts the following two types of power plants to small grids:

a power plants utilising coal-fired and steam condensation thermal generator sets whose single generator capacity is 300,000kW at most; and *b* thermoelectric power stations utilising coal-fired steam condensation and extraction thermal generator sets whose single generator capacity is 100,000kW at most. The above types of power connected to large grids fall into the prohibited category for foreign investment.

v Transfers of control and assignments

The transfer of exploration rights and exploitation rights for non oil or gas resources is allowed provided that the following conditions are met:

a two full years have passed since the issue of the exploration licence, or the discovery of the mineral resources available for further exploration or exploitation in the exploration zone; or one full year has passed since the exploitation enterprise began exploitation;

b the specified minimum input for exploration has been fulfilled;

c no disputes have arisen regarding the ownership of the exploration rights and exploitation rights;

d the exploration right usage fees, exploitation fees or any price for the exploration and exploitation rights have been paid; and

e a transferee of mineral exploration rights or exploitation rights should meet the qualifications of a mineral exploration right applicant or exploitation right applicant prescribed in the Measures for Area Registration Administration of Mineral Resources Exploration and Survey or the Measures for the Registration Administration of Mineral Resources Exploitation.

The MLR will decide whether to approve the transfer within 40 days after receipt of the application. The transfer contract will take effect as of the day of approval.

There is no regulatory requirement for transfer of participating interest under a PSC. Previously, any amendments to the PSC were required to be approved by MOFCOM. Such requirement was abolished in 2013 and now only record filing with MOFCOM is required. In practice, Chinese PSCs often provide that the consent of a foreign investor is required if the NOCs propose to take over the production operations before foreign contractors full recovery of the development costs. After the full recovery of the development costs incurred in accordance with the ODP of any oil or gas field within the contract area, the NOCs may, at any time, have the right by giving a written notice to the foreign contractor to take over the production operations.

Transfer of power generation units in operation requires a change to the power business licence, which shall be approved by the SERC. The SERC will review if the requirements for granting the relevant licences are satisfied.

III TRANSMISSION/TRANSPORTATION AND DISTRIBUTION SERVICES

i Vertical integration and unbundling

The State Grid and China Southern Grid control the transmission, distribution and sale of power in China. Under the current power regime, grid companies purchase power from power generation companies at the regulated feed-in tariffs and sell power at the regulated power sales prices.

The ongoing power price reform, however, aims to separate the sale of power from grid companies. The Opinions regarding Further Reform of the Electric Power Regime (2015) provide that power generators will enter into agreements directly with retailers or users with term contracts or spot trades, with the power price being freely negotiated between the parties. The transmission tariff will be regulated by the government on a 'cost plus reasonable profits' basis. This reform is now carried out in pilot provinces including Anhui, Hubei, Inner Mongolia, Ningxia, Shenzhen and Yunnan.

Since 2009, the user-generator direct trading system has been put on trial in seven provinces. Companies with high electricity consumption (such as aluminium electrolysis and steel plants) can purchase electricity directly from generators. The price paid by such consumers is composed of the power purchase price negotiated between the generator and the consumer (under a power purchase contract), the transmission and distribution price paid to the grid company (under a service contract) and government surcharges. The Opinions regarding Further Reform of the Electric Power Regime (2015) also set out further goals for the development of this user–generator direct trading system.

ii Transmission/transportation and distribution access

Oil and gas

China established the third-party access scheme in the Third-party Access Measures for a trial period of five years. In addition, The Regulation on Construction and Operation of Natural Gas Infrastructure (2014) encourages investment into natural gas facilities.

Under the Third-party Access Measures, pipeline and facility operators should equally open pipeline networks and associated facilities to third parties if operators have surplus capacity and, in the case of multiple users, non-discrimination principles should apply but priority should be given to contracts already in place. The facilities to be opened include not only trunk pipelines and branch pipelines for crude oil, refined oil and natural gas, but also the relevant associated facilities including ports, receiving terminals, and liquefaction, compression and storage facilities.

The Third-party Access Measures also state that pricing authorities should decide the service fee for such access. It remains to be seen how the Measures will be implemented in practice.

Power

A grid operator must ensure non-discriminatory and fair opening of their grid to qualified power plants and disclose the following information to power plants within their network:

a grid structure and line layouts;
b amount and status of transformation facilities;
c total installed capacity;
d power supply and demand and transmission capacity of major lines and outgoing lines; and
e tariffs and prices for inter-provincial power transactions and direct trading.

An interconnection agreement will be entered into by the grid operator and the power generator, specifying terms and conditions including capacity and feed-in tariff.

Grid companies must ensure non-discriminatory and fair access to their grid to qualified power plants.

For renewable power generation (RPG) enterprises, the grid operators are required to:

a build and manage the interconnection system for the qualified RPG projects;

b enter into grid connection agreements with qualified RPG enterprises; and

c purchase all the on-grid power generated by such RPG projects at a higher feed-in tariff.

iii Rates

Oil and gas

Pipeline transportation fees are regulated by the NDRC. A national price will apply for earlier pipelines, while for newly constructed pipelines the NDRC will issue a separate notice on transportation fees.

Power

In theory, the rates that the grid companies charge end-users seek to recover power purchase costs and fees for transportation, distribution and sale services, power losses and the like. However, in practice, the rates are set by the government and vary depending on the type of user and the region.

iv Security and technology restrictions

Oil and gas pipeline owners and operators have obligations under the Oil and Natural Gas Pipeline Protection Law, including those to patrol, inspect and maintain the pipelines; to upgrade, transform or stop using those pipelines which do not satisfy the safe use requirements in a timely manner; to post, repair or change signs related to the pipeline; and to take effective safety protection measures for a pipeline not in operation.

As gas pipelines are considered to be 'specialised equipment' under the specialised equipment regulatory regime, a pipeline operator is required to hold a Specialised Equipment Registration Certificate. In addition, both natural gas and gas pipelines are considered to be 'hazardous material' under the hazardous material regulatory regime. The 'producer' of hazardous material is required to hold a Production Safety Permit and the 'trader' of hazardous material is required to hold a Hazardous Material Operation Permit. However, it is not clear whether the pipeline owner and operators will be considered 'producer' or 'trader' of hazardous material.

Power grid operators also have security obligations under the Electricity Law. The power grids shall be operated in accordance with the principles of safety, high quality and economy. Power grid operations must be maintained in an uninterrupted and stable way, with a stable supply of electricity guaranteed.

IV ENERGY MARKETS

i Development of energy markets

The price of product oil and natural gas is regulated by the NDRC. However, the current pricing regime is expecting reform towards a market-oriented pricing mechanism this year or next year.

As mentioned above, under the current regime, grid companies purchase power from power generation companies at regulated fixed prices and sell power to the customers at regulated fixed prices. Generation is dispatched on a fair and equal basis.

ii Energy market rules and regulation

Oil and gas

To engage in crude oil storage or trading, or refined oil wholesale or retail, a business permit issued by MOFCOM is required. There are certain requirements for applicants to obtain a business permit, including a certain amount of registered capital, long-term supply agreements, and stable sales channels and facilities. Foreign-invested enterprises may also apply for permits.

State trading enterprises and non-state trading enterprises may engage in the importation of crude oil and refined oil. MOFCOM publishes a list of state trading enterprises, and companies outside that list may become a non-state trading enterprise if they:

a have a foreign trade business qualification;
b satisfy the requirements published by MOFCOM; and
c register with MOFCOM.

Both state trading enterprises and non-state trading enterprises must obtain an import licence issued by MOFCOM. However, non-state trading enterprises shall be subject to import quotas. There is no market entry restriction on the import or export of gas.

In addition, trading of oil and gas requires safety permits under, for example, the hazardous material regulatory regime.

Power

Sale of power to customers is controlled by the State Grid and China Southern Grid through their subsidiaries. Power companies must obtain an electric power business licence issued by the SERC.

iii Contracts for sale of energy

Oil and gas

There are two types of government regulated prices:

a government fixed price; and
b government guidance price.

The former is fixed and there is no flexibility, while the latter is more flexible. Government guidance price can be in the form of:

a a benchmark price with a float range;

b maximum price;
c minimum price;
d the rate of price difference; and
e the profit rate.

When a foreign company invests in upstream oil and gas through the PSC regime, parties would normally agree in the PSC that the NOC will sell the foreign investor's share of oil and gas on its behalf. Usually the price is determined by reference to the prevailing price in an arm's-length transaction for a long-term sales contract of similar quality of crude oil in the main world oil markets with adjustment to be made for quality, delivery, transportation, payment and other terms, and expressed as 'free on board' price at the delivery point in China

Upstream crude oil prices and gas prices are not regulated, while refined oil prices and natural gas prices at city gate are subject to government regulation:

a the retail and wholesale of gasoline and diesel, as well as sale of gasoline and diesel to wholesale business, railway customers and transportation customers are subject to the governmental guidance price; and
b the supply of gasoline and diesel for state reserves or Xinjiang Production and Construction Corps as well as the factory price of aviation gasoline and aviation diesel are subject to government (regulated) pricing.

The price of gasoline and diesel will be adjusted every 10 business days based on international crude oil price, processing cost, taxes, transmission fees and reasonable profits.

The government caps the price of natural gas at the city gate while the ex-factory price can be negotiated between parties. The prices of shale gas, coalbed gas, coal gas, and liquefied natural gas are determined freely by suppliers and consumers.

Power

Power prices are set by the government, taking into account the power purchasing cost, the loss from power transmission and distribution, power transmission and distribution price and government funds. The prices vary depending on a number of factors including season, peak hour, region and type of user (namely, residential user, agricultural user and industrial and commercial user).

Customers with large volume demands for power may enter into power purchase agreements directly with power generators in pilot projects. The terms and conditions of these agreements can be freely negotiated between the power generator and the customer. The Opinions regarding Further Reform of the Electric Power Regime (2015) set out future steps to further facilitate the reform, including determining qualified generators based on energy conservation and environment protection requirements; expanding the direct trading to power supply companies; and encouraging long-term agreements between generators and customers.

V RENEWABLE ENERGY AND CONSERVATION

As part of government policy in response to climate change, the State Council set an objective to reduce energy consumption and to save 670 million tonnes of standard coal in the 12th Five Year Plan period (2011 to 2015). The NDRC also set Mid and Long Term Plans for renewable energy development: 10 per cent of the total energy consumption should be sourced from renewable energy by 2010, and 15 per cent by 2020. The midterm target (10 per cent by 2010) has been achieved.

In addition, the Chinese government has established a clean development mechanism fund to support construction and industrial activities that are beneficial to strengthen proper responses to climate change since 2010. The construction and operation of power stations using renewable energy is encouraged under the 2015 Foreign Investment Catalogue.

Under the current power regime, the government sets higher feed-in tariffs (FITs) to encourage power generation from renewable energy. The table below sets out the feed-in tariffs for wind, biomass and solar power.

Electricity source	*FITs*
Wind	Onshore project: four tiers ranging from RMB 0.49/kWh to 0.61/kWh, depending on project locations. Offshore projects: RMB 0.85/kWh or 0.75/kWh depending on the distance to shore.
Biomass	RMB 0.75/kWh.
Solar	RMB 1.15/kWh (for projects approved before 1 July 2011 and in production before 31 December 2011). RMB 1.00/kWh (for projects approved after 1 July 2011 or projects approved before 1 July 2011 but not in production before 31 December 2011).

Other incentives include:

a surcharges collected from end-users, which are used to subsidise the difference between feed-in tariffs and the benchmark price for desulfurised coal generators, operations and maintenance for independent public power systems, and costs for connecting renewable energy generators to power grids;

b favourable loans with financial discounts for renewable energy projects listed in the Guidance Catalogue for renewable energy Industry Development;

c subsidies for renewable energy development in areas such as new-energy vehicles, building-integrated solar photovoltaic systems, wind turbines and biomass power generation; and

d tax incentives.

Also, the NDRC approved a nuclear project in March 2015 marking the official re-launch of nuclear projects in China. The Mid and Long Term Development Plan of Nuclear Power by State Council set the target at a nuclear power installed capacity of 58,000,000kW and 30,000,000kW under construction by 2020, which means a shortfall of 39,000,000kW. The industry is expecting a large wave of investment into nuclear power in the near future.

VI THE YEAR IN REVIEW

The State Council released the Energy Development Strategy Action Plan (2014–2020) in November 2014, listing out future energy strategies for an efficient, clean, safe and sustainable energy system. According to the Plan, the annual primary energy consumption will be capped at an amount equivalent to 4.8 billion tonnes of standard coal by 2020. The Plan sets goals on future energy structure, with at least 10 per cent of energy supplied from natural gas and at most 62 per cent from coal by 2020. Another goal to be achieved by 2020 is an open energy market. The 2014 Third-party Access Measures and the ongoing power reform, as mentioned above, also reflect the government's intention for an open energy market. And this may open opportunities for foreign and private investment.

The Catalogue (2015) released the restrictions on foreign investment in the energy sector. The construction and operation of power grids, for instance, has moved from the 'restricted category' to the 'encouraged category'. In addition, the requirement to involve Chinese parties in the construction of power transmission equipment and the development of exploration and exploitation technology has been cancelled. This trend towards opening up the energy industry to private and foreign investors is in line with the major SOE ownership reform since 2013. In response to the hybrid ownership reform, Sinopec took the lead in February 2014 on involving private investors in its sales business. In September 2014, 25 investors acquired 29.99 per cent of Sinopec's sales business unit.

Another approach taken by the government to tackle the marketisation of energy is the reform of the pricing regime. The gas price reform plan issued in June 2013 has been implemented step by step. So far, non-residential gas price has been unified and gas prices with direct users can be freely negotiated in pilot projects. Power transmission and distribution prices are also under reform to separate the transmission price from power price. Pilot projects in Shenzhen and Inner Mongolia have been expanded to four additional provinces.

The efforts of the Chinese government to reform the energy regime in China and to introduce competition into the domestic market provides both challenges and opportunities to foreign investors who are interested in this market. We have also seen a tendency for global oil and gas companies to reconsider their strategy in China as part of their global strategies. Anadarko, for instance, sold its Chinese upstream assets as part of its strategy to reorganise its foreign holdings and concentrate on domestic oil and gas operations.

Still, there are good signs in the market, mainly driven by the Chinese government, such as:

a the framework agreement between China and Russia on natural gas supply via the eastern route pipeline;

b the successful re-launch of the nuclear project in China; and

c the plan to construct 44 offshore wind farms in the NEA's Offshore Wind Power Plan (2014–2016).

VII CONCLUSIONS AND OUTLOOK

The regulatory environment is changing fast in China, and the energy sector is no exception. Both the economic restructuring plan and the development of green energy technology have had a profound influence on the energy industry. Various stakeholders and their demands contribute to innovation in the industry, while also adding complexity to the reform process. With reforms in the regulatory regime and the restructuring of the market, it is vital to keep a close eye on energy regulation in China.

Appendix 1

ABOUT THE AUTHORS

MONICA SUN
Herbert Smith Freehills LLP
Monica Sun, part of Herbert Smith Freehills' global energy practice in Beijing, has experience of advising on oil and gas (including LNG), power, renewables, mining projects and transactions around the world, in particular advising major PRC companies on their outbound investment. Her clients include major Chinese state-owned enterprises such as Sinopec, CNOOC, CNPC, State Grid, Huaneng, Huadian, Shenhua and Minmetals. Her practice covers M&A, joint venture, project development and project finance, private equity investment, corporate and corporate finance. She also has considerable experience in advising foreign clients on doing business in China. Monica has advised on acquisitions and projects in jurisdictions including China, Australia, Indonesia, Africa, the former Soviet Union, South America and the United Kingdom.

HAO SU
Herbert Smith Freehills LLP
Hao Su, part of Herbert Smith Freehills' global energy practice in Beijing, is admitted as a solicitor in Hong Kong. He is also admitted as a solicitor in England and Wales. He has worked in Hong Kong, Beijing and London. Hao has experience in a wide range of commercial and corporate transactions including mergers and acquisitions in the oil and gas sector, foreign direct investment into China, natural resources projects, IPOs and acquisition finance.

Hao is a native speaker of Mandarin Chinese and is fluent in English.

JAMES ZHANG

Herbert Smith Freehills LLP

Part of the global energy practice in Beijing, James has advised clients on upstream oil and gas (including LNG) projects in Africa, the UK, North and South America, Southeast Asia, the Middle East, Australia and Greater China, in respect of equity M&A, project development, project operation, facility tie-in and joint venture arrangements. James also has experience in electricity, nuclear power and construction.

HERBERT SMITH FREEHILLS LLP

28th Floor Office Tower
Beijing Yintai Centre
2 Jianguomenwai Avenue
Chaoyang District
Beijing 100022
China
Tel: +86 10 6535 5000
Fax: +86 10 6535 5055
monica.sun@hsf.com
hao.su@hsf.com
james.zhang@hsf.com
www.herbertsmithfreehills.com/