THE ENERGY REGULATION AND MARKETS REVIEW

SEVENTH EDITION

Editor
David L Schwartz

THE LAWREVIEWS

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PREFACE

In our seventh year of writing and publishing *The Energy Regulation and Markets Review*, we have seen dramatic changes in global energy policies. Europe has experienced a strong economic rebound, which has allowed many countries to dedicate increased resources to the infrastructure needs of the energy sector, including for renewables. While the United States commenced efforts to withdraw from the Paris Agreement, the signatories to the Paris Agreement countries have continued to make efforts to reduce greenhouse gases (GHGs). There is still a significant need to invest in infrastructure, and we have seen significant investment throughout the supply chains in the oil, gas and power sectors globally. The 2011 Fukushima nuclear incident continues to impact energy policy in many countries, and we continue to see extensive liberalisation of the energy sector. Oil prices have started to rebound somewhat, which presents some hope to those countries that remain dependent upon oil prices for national revenue.

I CLIMATE CHANGE DEVELOPMENTS

With respect to climate change efforts, the Paris Agreement was placed into effect on 4 November 2016, but President Trump announced last year that the United States would be withdrawing from the Paris Agreement. Nonetheless, we continue to see significant carbon reduction efforts, such as increased development of renewable resources, as well as energy efficiency and demand reduction measures, globally, including in the United States.

Following the Brexit vote, the United Kingdom closed its 'renewable obligation' programme to new generation, and limited new contracts for differences, which has significantly reduced new renewable construction this year. France has announced a plan to close all coal-fired power plants within five years, double the capacity of wind and solar renewable generation and prohibit shale gas production and all new searches for hydrocarbons. Denmark continues to seek to have renewable energy meet all of its electricity demands by 2050, and over the past year has initiated an effort to improve the output of solar and wind resources through technology improvements. The Netherlands has a goal of reducing GHGs by at least 25 per cent by 2020, and has announced its intent to close all coal plants by 2030. While Germany will likely miss its 2020 renewable energy goals, it has an ambitious goal to achieve 65 per cent renewable generation capacity by 2030. Belgium has continued its effort to develop offshore renewable wind resources (including the development of an offshore grid), but has reduced historical green certificate subsidies. Italy is seeking to reduce carbonisation by having a goal of relying on renewable resources for 28 per cent of its energy needs by 2030. Switzerland has continued to promote the development of renewables and is supporting the development of large-scale hydroelectric resources through state subsidies.

Spain is seeking to reach 20 per cent renewables by 2020, and has initiated new auctions for 6,000MW of new renewable installed capacity. Turkey seeks to have 30 per cent renewables by 2023.

China released a plan to have 15 per cent of its energy supplied by non-fossil fuels, 20 per cent from natural gas and no more than 58 per cent from coal by 2020. Korea's goal is to cut GHGs by 37 per cent by 2030, and it is seeking to have 95 per cent of all new installed capacity come from clean energy sources and to shut down coal power plants that are more than 30 years old. India's announced goal to have at least 40 per cent of its installed electric capacity powered by non-fossil fuels may be overshadowed by the fact that it is developing and constructing 50,000MW of new coal-fired generation capacity. Japan is looking at offshore wind and a variety of other new renewable energy sources to assist with the reduction of capacity following the shutdown of most of its nuclear generation capacity. Malaysia has been working hard to reduce its overdependence on coal and natural gas, and to encourage the production and use of renewable energy in an effort to meet its target of 50 per cent renewable resources by 2050. As of last year, 33 per cent of the installed capacity in the Philippines was from renewable resources, and 35 per cent was from coal generation. The United Arab Emirates continues its efforts to reduce its carbon footprint, announcing a goal of having 25 per cent of its capacity from renewables by 2030, and 75 per cent by 2050. South Africa relies upon coal generation for 85 per cent of its generation capacity but has taken steps to increase the development of renewable resources. Australia is adding significant new renewable resources to meet its 2020 renewable energy targets.

While the Trump Administration is seeking to reverse the Obama administration's Clean Power Plan, we are seeing continued significant investment in renewable energy development in the United States. Individual states are moving forward to achieve reduced reliance on fossil fuels and greater reliance on renewable energy, including California and New York, which are seeking a 50 per cent renewable portfolio standard goal by 2030, and Hawaii, which is seeking 100 per cent reliance on renewables by 2045.

II INFRASTRUCTURE DEVELOPMENT

For many countries, reliable energy supply is the primary concern, regardless of fuel source. Rural electrification and system reliability remain priorities in India, Indonesia, Myanmar, Mozambique, Angola, parts of Nigeria and Central and West Africa and we are seeing significant efforts to pursue electric generation and transmission projects in those regions. Turkey seeks to increase energy industry infrastructure in the power sector and the oil and gas sectors, in light of an estimated 6 per cent demand growth per year through 2023. Denmark has a new North Sea Agreement to secure future exploration and production of hydrocarbons from the North Sea. Panama continues to seek to attract foreign investment to assist with badly needed transmission and generation infrastructure needs. The 8 May 2018 announcement by President Trump that he intends to withdraw from the Iran nuclear deal and institute significant new sanctions is expected to present a significant roadblock to further foreign investment in the Iranian energy sector.

III NUCLEAR POWER GENERATION

Seven years after the Fukushima disaster, Japan has stopped operations for 43 out of its 48 nuclear power stations, and 14 nuclear power stations are in the process of complying

with new safety standards for possible restart. Germany continues to phase out all nuclear generation by 2022. Belgium is seeking to dismantle all nuclear plants by 2025. France is seeking a reduction of nuclear power generation to 50 per cent of total electricity production within five years. Switzerland and Korea are planning to limit the life of their nuclear generation units, with Korea abandoning the construction of six new nuclear power plants and cancelling the extension of others.

On the other hand, Turkey is continuing with development of the Akkuyu nuclear power plant (first unit estimated to be operational in 2023), and the United Arab Emirates is almost finished with the construction of the Barakah nuclear power plant, both of which are expected to be operational in 2020. South Africa is facing substantial resistance to its efforts to develop 9,600MW of new nuclear generation capacity. India's goal of 40 per cent non-fossil fuel generation is expected to require a substantial ramp-up of nuclear generation capacity.

In the United States, the early retirement of certain nuclear plants has been driven by cost and power market considerations, rather than safety concerns. Some nuclear owners in the United States have sought state subsidies in New York, Illinois, Ohio and Pennsylvania, among others, in order to avert premature retirements. Illinois and New York have implemented legislative and regulatory payment programmes for nuclear facilities in those states, but they are currently being challenged on constitutional grounds and remain pending before US federal circuit courts of appeal.

IV LIBERALISATION OF THE ENERGY SECTOR

We have seen significant energy sector regulatory reforms in many countries. Italy is seeking to reduce the gap between price and cost of energy, compared to the rest of Europe. Portugal continues to work on liberalising its electricity and gas markets. Japan has now fully liberalised the retail electricity sector. And we are seeing continued efforts to encourage further privatisation of the electricity sector in the United Arab Emirates and in certain countries in Central and West Africa. Turkey is seeking to privatise its generation assets. Brazil has seen significant privatisation, including the auction of four hydroelectric plants. Given Switzerland's interest in promoting the use of renewable resources, it has suspended a planned 49 per cent divestiture of its state-owned hydroelectric fleet. China has made moves to deregulate energy pricing. In a move away from privatisation, Colombia ordered the liquidation of Electricaribe (owned primarily by Gas Natural Fenosa), which is now in arbitration.

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 seventh edition of *The Energy Regulation and Markets Review*.

David L Schwartz
Latham & Watkins LLP
Washington, DC
May 2018

Chapter 29

SOUTH AFRICA

Lido Fontana and Sharon Wing[1]

I OVERVIEW

The year 2017 brought with it significant uncertainty in respect of transformation in the South African energy sector in relation to renewable energy. In February 2017, former President Jacob Zuma announced in his state of the nation address that state-owned power provider Eskom Holdings SOC Limited[2] (Eskom) would sign all outstanding power purchase agreements for renewable energy from bid windows 3.5 and 4 within the coming months. However, 27 contracts totalling US$4.7 billion and covering 2.3GW of renewable energy projects were only signed in the first quarter of 2018, owing to Eskom's continuous delay tactics and an interdict brought by the National Union of Metalworkers of South Africa together with Transfrom SA.

There was further uncertainty in respect of when the 20 small-scale projects (with capacity between 1MW and 5MW and an aggregate capacity of 100MW) that had been awarded through the bidding process under the Small Scale Renewable IPP Programme would be able to begin operations owing to delays in the small-scale projects reaching financial close. Only 10 of the 20 small-scale projects had been able to obtain the required licences from the National Energy Regulator (as required under the Electricity Regulation Act 4 of 2006). The South Africa government has decided to exempt independent power producers (IPPs) owning generators not exceeding 1MW from obligation to apply and hold a licence (discussed below).

Although coal-fired generation still dominates the energy sector with a net output of 35.6GW (representing 85 per cent of South Africa's total capacity), at the end of 2017 a total of 3.2GW of renewable energy projects had been constructed and connected to the grid. This has brought the total investments in renewable energy to approximately 195 billion rand[3] under the Renewable Energy Independent Power Production Procurement Programme (REIPPPP). Further, South Africa was ranked 10th among G20 countries for renewable energy investment conditions by Allianz Climate and Energy Monitor.

The South Africa government has been the subject of additional pressure from environmental groups, with various court applications challenging the Department of Energy's (DOE's) procurement of the proposed Khanyisa and Thabametsi coal-fired power stations (the projects will add approximately 863MW to the national electricity once operational) owing

1 Lido Fontana is of counsel and Sharon Wing is an associate at Covington & Burling (Pty) Ltd.

2 Eskom is the buyer of electricity for these projects.

3 https://www.greencape.co.za/assets/Uploads/GreenCape-Renewable-Energy-MIR-2017-electronic-FINAL-v1.pdf.

to alleged concerns regarding their climate impact. It is understood that the government is seeking to engage with various stakeholders in order to assess whether cleaner coal technology can be used in the DOE's proposed baseload procurement programme.

Unfortunately, there have been no new developments in respect of the expressions of interest called by the South African government during 2016 in relation to the proposed 600MW gas-fired power project alongside one or more state-owned companies. Moreover, a South African court revoked fracking regulations governing proposed shale gas fracking in the Eastern Cape (discussed below). South Africa's plans in respect of further nuclear power stations also appear to be on hold, given several recent statements from the government that the country cannot afford to develop nuclear power plants. Although the Integrated Resource Plan was approved by Cabinet in 2017, it has been subsequently sent back for processing and is currently expected to be released in August 2018.

II REGULATION

i The regulators

In South Africa, energy regulation is split among three regulators, being:

a the National Energy Regulator (NERSA), established under the National Energy Regulator Act 2004, which regulates electricity, piped gas and petroleum pipelines industries;

b the National Nuclear Regulator (NNR), established under the National Nuclear Regulator Act 1999, which regulates nuclear energy; and

c the Petroleum Agency of South Africa (PASA), established under the Mineral and Petroleum Resources Development Act 28 2002 (MPRDA), which regulates petroleum exploration and production.

Each of these Acts, together with other key legislation regulating the relevant industry (the Electricity Regulation Act 2006 (the Electricity Regulation Act) in the case of electricity; the Petroleum Pipelines Act 2003 in relation to the petroleum industry; the Gas Act 2001 (the Gas Act) as regards piped gas; the Nuclear Energy Act 1999 in the case of nuclear energy; and the MPRDA in respect of petroleum exploration and production) establish the framework for energy regulation in South Africa. That legislation, together with regulations, notices, rules and guidelines issued thereunder grant expansive regulatory power to the regulators, including the powers to issue, amend and revoke licences, as well as to approve tariffs.

ii Regulated activities

Under the Electricity Regulation Act, a licence is required for the operation of each of electricity generation, transmission and distribution facility and in respect of the import, export and trading of electricity (collectively, the Licensed Activities). That Act provides exemptions for licences in respect of (1) any generation plant constructed and operated for demonstration purposes; (2) any generation plant constructed and operated for own use; (3) any non-grid connected electricity supply other than for commercial use; and (4) any other activity relating to the Licensed Activities in respect of which NERSA has determined that a licence is no longer needed. In relation to the last referenced exemption, NERSA may require that persons undertaking such activities nevertheless register the activities with NERSA.

A person obliged to hold a licence in terms of the Electricity Regulation Act must apply to NERSA for the licence in the form and applying the procedure prescribed. The application must be accompanied by the prescribed licence fee. The information required to form part of such an application includes, among other things: (1) a description of the applicant, including the vertical and horizontal relationships with other persons engaged in the operation of the relevant Licensed Activity; (2) the administrative, financial and technical abilities of the applicant; (3) a description of the proposed generation, transmission or distribution facility to be constructed or operated; (4) a detailed specification of the services that will be rendered under the licence; (5) a general description of the type of customer to be served; (6) the tariff and price policies proposed to be applied; and (7) evidence of compliance with the Integrated Resource Plan.[4] The process entails publication of notices of the application in appropriate newspapers or other media, the applicant responding to objections to the application being granted, and culminates in NERSA making a decision on the application within the prescribed period.

In terms of the National Nuclear Regulator Act 1999, no one is allowed to procure a site, construct, operate, decontaminate or decommission a nuclear installation except under the authority of a nuclear installation licence. The process prescribed for the making, consideration and issue of such licences is similar to that outlined above, albeit that the time lines are shorter and an applicant may further be directed to serve a copy of its application upon every municipality affected by the application and such other body or person as the chief executive officer of the NNR determines.

Licences are also required for the storage, transportation and reticulation of gas and petroleum through petroleum pipelines. The licences for the storage, transportation and reticulation of petroleum through pipelines are issued by NERSA. Although the procedure for applying for the licences is similar to that of Licensed Activities, only owners of storage, transportation and reticulation facilities respectively, may apply for licences for the storage, transportation and reticulation of petroleum.

Licences for exploration or production rights in petroleum resources are generally issued pursuant to bidding processes initiated by the Minister of Mineral Resources. The Minister invites applications for exploration and production rights in respect of designated blocks on predefined terms and conditions.[5] Successful applicants are still required to submit applications to PASA for a reconnaissance permit, technical cooperation permit, exploration right or production right. In certain instances, the Minister will upon consideration of PASA's recommendations either grant or refuse the application. In the event that the application is granted, the exploration right or production right must be registered with the Mineral and Petroleum Titles Registration Office, while the permits must be filed and noted with the Mineral and Petroleum Titles Registration Office. The rights issued by the Minister of Minerals Resources only constitute limited real rights.[6]

iii Ownership and market access restrictions

In 2010, much of South Africa's electricity generation capacity was state-owned. At that stage, Eskom, a state-owned utility with a monopoly over the national transmission grid

4 Section 10(2)(a)–(h) of the Electricity Regulation Act, 2006.

5 Section 73(1) of the MPRDA.

6 Section 5(1) of the MPRDA.

produced close to 95 per cent of the country's electricity, while the balance of the country's electricity was sourced mainly from municipalities. Like electricity generation, transmission and distribution capacity was restricted to the state and state-owned entities.

In 2011, the South Africa government launched the Integrated Resources Plan, which called for the doubling of the country's electricity capacity from its 2010 level of 238,272GWh using a diverse mixture of energy sources, mainly coal, gas, nuclear and renewables, including large-scale hydro to be imported from other countries in the southern African region.

The REIPPPP has served as the primary vehicle through which the South African government has procured renewable energy from private sector power producers. That programme provides that projects developed thereunder must be 40 per cent owned by South Africans with people of colour holding a minimum of 12 per cent (with a target of 20 per cent), and a minimum of 2.5 per cent ownership by local communities (those communities within a 50km radius of the project). In addition to the ownership requirements, REIPPPP bidders are also required to bid on other non-price factors known as 'economic development requirements', which are designed to achieve the government's Integrated Resource Plan objectives of promoting job growth, domestic industrialisation, community development and black economic empowerment (a programme designed to counter the adverse economic impacts of apartheid by initiating, among other things, ownership and control of capital by South Africans of colour, women and disabled persons (Historically Disadvantaged Persons or HDSA), as well as skills transfer and enterprise development of legal entities owned by HDSAs).

The Coal Baseload IPP Procurement Programme provides that 51 per cent of each project must be owned by South Africans. Ownership criteria for the gas-to-power and nuclear procurement is still unknown. Save as outlined above, there are no foreign ownership or aggregate holdings constraints under the REIPPPP and the Coal Baseload IPP Procurement Programme.

The preliminary information memorandum (PIM) for the Liquefied Natural Gas to Power Independent Power Producer Procurement Programme (LNG-to-Power IPP Procurement Programme) was released on 4 October 2016 by the DOE. The PIM provides insight into the proposed LNG-to-Power IPP Procurement Programme and provides the basic framework being considered by the DOE for the minimum mandatory socio-economic objectives, all of which will be provided in further detail under the request for qualifications (RFQ), which was meant to be issued during November 2016. To date, the RFQ has not been issued and in all probability the RFQ will only be released once the DOE has finalised the contentious updated Integrated Resource Plan, which was released for public comment in December 2016 and was extended to 31 March 2017(discussed below).

The Petroleum and Liquid Fuels Charter, issued under the MPRDA provides a framework for black economic empowerment within that industry. Holders of exploration and production rights are obliged to reserve shareholdings for HDSAs in their respective companies. Companies active in the upstream sector are obliged to reserve participation interest of not less than 9 per cent for HDSAs, while companies in the midstream and downstream sectors must reserve a 25 per cent participating interest for HDSAs. These companies must further make contributions towards the funding of skills development initiatives.

iv Transfers of control and assignments

Transfer of control and the assignment of a licence issued in respect of Licenced Activities, including generation licences issued to IPPs, are restricted by conditions imposed on the licensee by NERSA.[7] Accordingly, each licence must be reviewed on a case-by-case basis to determine what specific approvals are required for its transfer. However, the Electricity Regulation Act generally provides that a licensee may not cede or transfer its powers or duties under a licence to any other person without the prior consent of NERSA. The transfer of control and the assignment of licences issued to IPPs are further regulated by the Implementation Agreement between the South African DOE and the IPP; that agreement provides for, *inter alia*, government support for the development and financing of relevant IPP projects.

A nuclear licence is not transferable in terms of the National Nuclear Regulator Act 1999.

Regarding the transfer of control and the assignment of a licence or permit in the petroleum sector, the position is as follows: (1) a reconnaissance permit is not transferable, nor does it grant the holder any exclusive right; (2) a technical co-operation permit is not transferable, but the holder of the right has an exclusive right to apply and be granted an exploration right over the area described in that permit; (3) an exploration right is transferable and the holder has an exclusive right to apply for and be granted a renewal of the right, or for a production right, over the area described in that exploration right; and (4) a production right is transferable and the holder has an exclusive right to apply for and be granted a renewal of that production right.

The consent of the Minister of Mineral Resource must be obtained in the event that a holder wishes to cede, transfer, let, sublet, assign, alienate or otherwise dispose of a prospecting right or exploration right or interest in such a right, or a controlling interest in a company that holds such a right (except in the case of a change in controlling interest in a listed company). An application for the Minister's consent must set out and prove that the transferee has the required technical and financial ability to comply with the obligations imposed on the holder of the exploration or production right.

A licence granted to a person or entity under the Gas Act may not be assigned to another party, is valid for a period of 25 years and may be renewed after the expiry of the licence period.

III TRANSMISSION/TRANSPORTATION AND DISTRIBUTION SERVICES

i Vertical integration and unbundling

Electricity

The Independent System and Market Operator (ISMO) Bill was introduced in 2011. The ISMO Bill intended to restructure the electricity supply industry by providing for the establishment of the ISMO as a state-owned company autonomous from Eskom to serve as the dedicated procurer of electricity for onward sale to wholesale off-takers. The ISMO Bill, when established would have removed the operation of the transmission grid from Eskom and allow for easier access to the grid by IPPs.

7 Section 15(1)(k) of the Electricity Regulation Act, 2006.

However, the ISMO Bill was suddenly withdrawn in its final stages of being adopted by its sponsor, the DOE, in June 2015.

In 2015, the government had apprised the market that a new ISMO Bill was being drafted; however, a draft has not yet been released for public comment and there is uncertainty if it will in the near future.

Gas

The gas pipeline network comprises the Rompco Pipeline[8] (used to transport gas from Mozambique into South Africa), which is the main pipeline network in South Africa, and several other short-range pipelines, which are privately owned. Owners of these pipelines are compelled under their licence conditions to grant access to third parties on commercially reasonable terms only to the extent that they have uncommitted capacity in these transmission pipelines.

ii Transmission/transportation and distribution access

The transmission of electricity is currently being undertaken exclusively by Eskom. Save for contractual commitments under wheeling agreements with Eskom, there is no obligation on Eskom to provide third-party access to the transmission grid. Eskom distributes electricity directly to customers and to municipalities, who redistribute the same (see Section IV on energy markets, below).

There is currently no regulated framework for use-of-system charges for embedded generators. Some of these generators (primarily IPPs) sell to Eskom through approved power purchase agreements, while others wheel energy to third parties through bilateral agreements with Eskom.

Generators that wish to wheel energy face a number of challenges, including the charges involved, which may render small projects uneconomical; the generator being required to obtain a licence from NERSA to generate and for the wheeling transaction; the generator having to comply with Eskom's onerous requirements for grid connection; and entering into multiple agreements with various distributors.

Although Eskom has provided guidelines on its website for wheeling costs on its network,[9] it still remains a complicated process. NERSA has said that it is currently working on developing a standardised framework for these arrangements.

The Gas Act provides that a licensee of a gas transmission pipeline must provide access to its transmission pipelines to third parties, while the Petroleum Act provides that a licensee of a petroleum pipeline must provide access to its loading facilities and uncommitted capacity in storage facilities to third parties. These requirements will be provided as conditions on a licensee's licence. However, a distributor is not compelled to grant access.

iii Rates

Electricity

Eskom's tariffs are regulated by NERSA under the Electricity Regulation Act. These tariffs are based on Eskom's costs plus a reasonable rate of return.

8 This is a joint venture between South African Gas Development Company Limited (iGas), Companhia Limitada de Gasoduto (CMG) and Sasol Gas Holding Proprietary Limited.

9 www.eskom.co.za/Whatweredoing/Pages/Wheeling_Of_Energy.aspx.

A suite of supply policy guidelines for the integrated national electrification programme 2016/2017 was released by the DOE (the integrated national electrification programme's objective is to achieve universal access to electricity by 2012, the date of which was changed to 2019 and is one of the pillars of the South African government's energy transformation strategy, born in the 1998 White Paper on Energy Policy).

The objective of the policy guidelines is to develop and provide a suite of supply frameworks in line with the 1998 White Paper Policy and guidelines, thus providing a uniform set of standardised supply options and connection fees, as well as a uniform approach to electrification tariffs for electrification customers for all licensed entities providing electricity.

Oil and gas

In relation to gas and piped petroleum product, tariffs are negotiated on a commercial basis and then approved by NERSA.

The DoE is mandated to regulate the tariffs applicable to the manufacturing, wholesaling and retailing of petroleum products through the implementation of the Petroleum Products Act 1977 and the responsibility resides with the Controller of Petroleum Products (this is too wide a matter to be discussed in this chapter).

iv Security and technology restrictions

South Africa's nuclear legislation,[10] which is based on several international conventions to which South Africa is a party,[11] provides for the establishment of internationally endorsed protocol on nuclear safety, political and financial risk and ultimate state liability. The NNR is mandated to provide for the protection of persons, property and the environment against nuclear damage as the competent authority for nuclear regulation in South Africa.

The NNR has regulatory requirements developed in accordance with the National Regulator Act, the South African Nuclear Energy Policy (2008), Minimum Information Security Standards and IAEA Nuclear Security Series No. 7. The IAEA Nuclear Security Series No. 7 is the International Atomic Energy Agency implementing guide on Nuclear Security Culture, which prescribes characteristics, attitudes and behaviour of individuals, organisations and institutions in supporting the establishment of effective nuclear security. The development of the regulatory requirements is to assure nuclear security or physical protection systems at nuclear installations or associated actions in South Africa.[12]

Several of Eskom's power stations and other facilities, as well as municipality distribution installations, have been designated national key points. National key points are strategic installations, which require heightened state security.

10 Nuclear Energy Act 46 of 1999.

11 For example, the Convention on Nuclear Safety, 1994; the Convention on Early Notification of a Nuclear Accident, 1986; the Convention on Assistance in the Case of Nuclear Accident or Radiology Emergency, 1986; the Convention on Physical Protection of Nuclear Material, 1979. See also: www.nti.org/treaties-and-regimes/treaties/.

12 www.nnr.co.za/nuclear-security/.

IV ENERGY MARKETS

i Electricity

NERSA is mandated to, *inter alia*, regulate trading activities such as electricity resale (buying and selling). Eskom purchases electricity that is supplied by IPPs to the national grid and in turn sells the electricity to industrial, mining, commercial, agriculture and residential customers in South Africa, some members of the Southern African Development Community and redistributors (municipalities), who in turn redistribute electricity to businesses and households within their areas.

Section 155(6)(a) and (7) Schedule 4B of the Constitution[13] lists electricity reticulation as a competence of municipalities in South Africa. Each municipality is a service authority for the electricity reticulation function for the whole of its jurisdictional area and has the right to set tariffs in respect of its sale of electricity in its areas of jurisdiction. On 30 October 2014, the South African Local Government Association entered into a memorandum of understanding and active partnering agreement with all distributors, including Eskom, to ensure cooperative and collaborative working relationships.

Electricity can also be onsold to multiple customers by persons with bulk supply points, such as bodies corporate and office parks (known as Resellers). These Resellers are 'non-licensed traders' of electricity in terms of the Electricity Pricing Policy.[14] Resellers are not required to hold a distribution licence, but they must be registered with the licensed authority (generally a municipality) from which the bulk connection was obtained.

To resell electricity the licensed authority must complete a service level agreement with the Reseller to operate in its area of jurisdiction. The Reseller is also obligated to supply its customers with information on tariffs and tariff structures.

South Africa is part of the Southern African Power Pool (SAPP), which includes several Southern African utilities. While SAPP faces a number of major challenges such as lack of maintenance of infrastructure, high transmission losses and limited funds to finance new investments, the energy volumes traded by Eskom since its inception in 1996 (around 4,500GWh) have increased steadily to over 9,977GWh a year since 2003.[15]

ii Natural gas

The use of natural gas as an energy source has stagnated and is unlikely to be a feature of the South African energy mix (other than gas pipelines) until 2019. Some setbacks that occurred for the gas sector during 2017 are set out below.

Shale gas

Exploration right applications were submitted to the Department of Mineral Resources to explore the possibility of a shale gas resource of 485 trillion cubic feet in the Karoo Basin. However, first expropriation licences are only expected, as a minimum, to be issued in 2019 owing to a ruling handed down by the Eastern Cape High Court in *John Douglas Stern v. Mineral of Mineral Resources (2015) EC*, setting aside the decision of the Minister of Mineral Resources to make the Regulations for Petroleum Exploration and Production 2015 (Regulations) (which manages shale gas exploration) on the basis that the Regulations

13 The Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996).

14 Electricity Pricing Policy, GN 1398 of 19 December 2008.

15 www.energy.gov.za/files/esources/electricity/electricity_powerpool.html.

were invalid. The Regulations were passed in terms of Section 107(1)(a) of the Mineral and Petroleum Resources Petroleum Act 28 of 2002, which included the right of the Minister of Mineral Resources to pass regulations in respect of environmental matters. However, the Mineral and Petroleum Resources Development Act 49 of 2008 (the Amendment) subsequently deleted Section 107(1)(a). The Court therefore found that the Minister of Mineral Resources lacked the authority to pass the Resolution as the Resolution was passed after the Amendment. The South Africa government will now have to draft new regulations to manage shale-gas exploration.

600MW gas

No new developments have been made in relation to the expression of interest, which closed on 20 June 2016 for the Gas 600MW IPP Procurement Programme. The IPP Office has said that request for proposals in relation to gas-fired power plants would only be potentially looked at in the first quarter of 2019.

iii Gas pipeline

During 2017, the Industrial Development Corporation approved 218 million rand in loan finance to be used by Tetra4 (the natural gas subsidiary of JSE listed energy company Renergen) to develop a new natural gas project that will span over 187,000 hectares of gas fields across Welkom, Virginal and Theunissen, in the Free State, South Africa. The aim of the project is to produce South Africa's helium and liquefied natural gas instead of importing it, which will result in 107km of pipeline network and associated gas-processing facilities being constructed.

iv Nuclear

The development of nuclear power in South Africa was highly contested during 2017, with little or no progress being made to develop the nuclear new-build progamme. It is unclear whether nuclear energy will be included in the energy mix in the much anticipated revised Integrated Resource Plan (IRP).

V RENEWABLE ENERGY AND CONSERVATION

i Development of renewable energy

Background

The South African energy sector has undergone extensive transformation in recent years. In August 2011, the government's DOE launched the REIPPPP, an unprecedented, world-class procurement programme with the audacious goal of the country producing 17,800MW of renewable energy by 2030. This objective was set against a backdrop of the country's then current generation capacity becoming increasingly inadequate to meet the ever rising electricity demand of a growing economy. The inadequacy manifested in Eskom, with a monopoly over generation and transmission capacity, implementing rolling blackouts throughout the country in late 2007 and early 2008. Rolling blackouts resurfaced in 2014 and early 2015. Although widespread load-shedding has not occurred since September 2015, consumer trust in Eskom's ability to deliver reliable power supply is conditioned on a wait-and-see approach.

After the electricity blackouts in 2008, the country decided to draw investor interest by initiating a process to introduce renewable energy feed-in-tariffs (REFIT) to facilitate the

introduction of renewable energy into the power system. In 2009, NERSA published REFITs with proposed tariffs designed to cover generation costs plus a real after-tax return on equity of 17 per cent, fully indexed for inflation.

However, in 2011, NERSA terminated the REFIT programme because the National Treasury was of the opinion that the REFIT approach contravened public finance and procurement regulations. The REFIT programme was subsequently terminated and replaced by the REIPPPP.

The Integrated Resource Plan

The initial IRP sets out the South African government's strategy for the establishment of new generation and transmission capacity for the country for the period 2010 to 2030. It calls for the doubling of the country's electricity capacity from its 2010 level of 238,272GWh, using a diverse mixture of energy sources, mainly coal, gas, nuclear and renewables, and including large-scale hydro to be imported from other countries in the southern African region. The initial IRP further details how this demand should be met in terms of generating capacity, type, timing and cost. The initial IRP also serves as an input to other government planning functions, *inter alia*, economic development, funding, environmental and social policy formulation. It is also a process by which the requirement for further investment in electricity generation capacity for South Africa is determined.

At the time that the IRP was initially promulgated, the South Africa government advised that the IRP should be viewed as a 'living plan' that would be revised by the DoE every two years to ensure its relevance with regard to (among other things) technological and environmental developments in the global arena. An update to the IRP was provided for public comment in November 2013; however, this document was subsequently gazetted and remains of no binding relevance. On 2 November 2016, the Minister of Energy released drafts of an updated Integrated Energy Plan (IEP) and an IRP on 22 November 2016. The IEP serves as the government's master plan for the entire energy system, with its focus on the broader objective of reducing the overall energy intensity of the country. The IEP regulates energy industries and promotes electric power investment, greater employer benefits and more favourable environmental impact. The IRP on the other hand, being the subordinated legislation to the IEP, focuses specifically on electricity.

The updated IRP has received more attention due to the South African government (and Eskom) promoting the importance of nuclear power within the overall electricity provision forecasts to 2050. The Minister of Energy extended public consultation to 31 March 2017. This allowed the South African government to make the necessary adjustments and promulgate the updated IRP in 2017, once approved by Cabinet. During the consultation process, major issues, particularly in relation to the base case, were raised. Some critics believe that the cost assumptions for solar PV and wind were too high and that if proper costs were reflected there would be no need to construct a nuclear plant up to 2050. The IRP was approved by Cabinet in December 2017 but was sent back for processing for reasons not disclosed. President Cyril Ramaphosa has announced that the revised IRP will be released in August 2018 after a brief public participation. To date, no further drafts have been provided for public comment.

What is the IPPPP?

The Independent Power Producer Procurement Programme (IPPPP) was introduced as a vehicle for securing private sector investment for the development of new electricity

generation capacity. The 1998 White Paper on Energy Policy identified that IPPs were expected to play a key role in developing and producing new electricity capacity in the country.

The REIPPPP was initiated with a request for proposals in August 2011, in terms of which IPPs were invited to bid in a competitive process.

VI THE YEAR IN REVIEW

i Amendment to the MPRDA

The Mineral Petroleum Resources Amendment Bill [B15D – 2013] (MPRDA Bill) was sent to the National Council of Provinces for public hearings on 10 October 2017. The MPRDA Bill, which was revised by the National Assembly in 2016, did not differ substantially from the MPRDA Bill that was referred to the President for his assent during March 2014 and subsequently referred back to Parliament on the grounds of its being unconstitutional. The MPRDA Bill provides for state participation in any successful minerals and gas or oil development exercises carried out by the private sector that would result in the state receiving a right to free carried interest in all such exploration and production rights. The MPRDA proposes that the South African government be provided with a 20 per cent 'free carry' in all new exploration and production rights.

ii Exemption to hold licence

Under the Electricity Regulation Act, NERSA can exempt any activity relating to the Licensed Activities in respect of which NERSA has determined that a licence is no longer needed (discussed above). During 2017, a licensing exemption and registration notice was published in the Government Gazette,[16] which exempted independent power producers (IPPs) owning generators not exceeding 1MW from holding a licence; however, the IPPs still need to be registered with NERSA. These rules will mainly focus on the registration and connection process, tariff structures and reporting requirements.

VII CONCLUSIONS AND OUTLOOK

Although there were not many developments during 2017, it was a year that proved that government will buckle under political pressure to ensure that economic growth, stability and foreign investment is achieved. The future looks very positive for renewable energy and the much-anticipated revised draft of the IRP will help understand which energy sector the new South African governments will be supporting in the years to come.

16 'Licensing Exemption and Registration Notice', published in the Government Gazette Notice 1231 in the Government Gazette No. 41237 of November 2017.

Appendix 1

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