DLA PIPER

ASIA PACIFIC

RENEWABLE ENERGY & CLIMATE CHANGE GROUP

LEGAL UPDATE

Contents

Foreword

We are pleased to present to you DLA Piper's first *Asia-Pacific Renewable Energy and Climate Change Group Legal Update*.

This Legal Update provides a snapshot of the state of play of renewable energy in the Asia-Pacific, focussing specifically on trends in Japan, the Republic of Korea and the Philippines where there has been recent and remarkable progress. We discuss India and China as emerging superpowers turning to renewable energy to meet energy security issues. Further south, despite renewable energy investment in Australia steadily increasing over the past decade, it is clear we must raise our 'Renewable Energy Country Attractiveness Indices" profile.

Despite its location outside the Asia Pacific, we also consider South Africa which has endured a power crisis of its own since 2007. There are lessons to be learned from DLA Piper's experience with the South Africa Renewable Energy Independent Power Producers Procurement Programme which continues to grow despite inherent challenges.

Beyond the increase in government incentives in the Asia-Pacific region, there are signs that European developers are beginning to broaden their international focus to this market. Whether international developers will require further government incentives remains to be seen but it is clear that Asia Pacific countries continue to encourage accelerated growth in the renewables sector.

If you would like further information in respect to this *Legal Update*, please contact Stephen Webb, Damian McNair or any of the DLA Piper contacts on page 24 of this document.

Stephen Webb
Partner and Head of Renewable Energy & Climate Change, Asia Pacific
stephen.webb@dlapiper.com

Damian McNair
Partner and Head of Finance & Projects, Asia Pacific
damian.mcnair@dlapiper.com

RENEWABLE ENERGY SECTOR OVERVIEW ASIA-PACIFIC

Authors

Stephen Webb – Partner and Head of Renewable Energy & Climate Change, Asia Pacific

Alison Dodd – Senior Associate, Finance & Projects

Jeffrey Sheehy – Paralegal, Finance & Projects

STATE OF PLAY

Renewable energy is arguably at the forefront of the 'Asian Century'. It offers sustainable and self-sufficient development options for governments, while also largely avoiding environmental, carbon emission and potential geopolitical issues more readily associated with coal, gas and oil-sourced energy.

However, the development of renewable energy in the Asia Pacific also faces considerable hurdles, including cheaper fossil fuels and wary investors which, as 2012/13 has shown, seem to be precluding the promised levels of investment. This article offers an insight into the differing levels of investment within the Asia Pacific region by looking at the state of play in the renewable energy industries, and the rapidly changing regulatory frameworks, of Australia, Japan, Korea, and the Philippines.

JAPAN

While the Australian approach to renewable energy has been more gradual, Japan's response following the Fukushima Dai-ichi nuclear meltdowns of March 2011 was swift. All 50 of the country's nuclear reactors, which once supplied a third of Japan's electricity, were taken offline (and only a few have since reopened). Former Prime Minister Naoto Kan's last stand in power was the passing of an act promoting renewable energy, which introduced a feed-in tariff, exempted solar power stations from some planning regulations, allowed for geothermal power development in national parks and gave power generation companies control over the substance of power purchase agreements.

The act came into force on 1 July 2012 and industry insiders hailed Japan's "remarkable energy drive". In the first few months following the introduction of the feed-in tariffs, the Ministry of Economy, Trade and Industry approved a number of large projects, including 10 solar farms and a 48MW wind farm (Softbank Corp), offshore wind farms with capacity of 250MW (Marubeni Corp and Wind Power Energy) and a proposal for 250 solar farms with a generation capacity of 500MW (Orix Corp and West Holdings Corp).

The rush of projects came after the government offered the most generous feed-in tariffs in the region (see table on page 7). Despite investment discussions continuing, the number of renewable energy deals has stagnated in recent months. While there are rumours of an impending reduction in feed-in tariffs, a number of international developers are of the view that high start-up costs and global economic uncertainty are the key inhibitors to renewable energy growth in Japan.

JAPAN'S "REMARKABLE ENERGY DRIVE".

In the first few months following the introduction of the feed-in tariffs, the Ministry of Economy, Trade and Industry approved a number of large projects, including

10 SOLAR FARMS

48 MW WIND FARMS

250 MW OFFSHORE WIND FARMS

PROPOSAL FOR **250** SOLAR FARMS

REPUBLIC OF KOREA

2012/13 has been a big period for the renewable energy regulatory environment in South Korea with the introduction of a renewable portfolio standard (replacing the feed-in tariff scheme) which requires the country's major utilities and independent power providers to generate 10% of power using renewable sources by 2020. Further, in May 2012, the Korean Parliament enacted a mandatory ETS to commence from January 2015. Unlike Australia, it received strong bipartisan support from lawmakers. Separate from the ETS, the Greenhouse Gas and Energy Target Management System (**TMS**) was introduced in 2012, under which the government now requires approximately 480 domestic companies that emit over 125,000 tonnes of CO_2 to reduce emissions by 18 million tonnes (requiring a reduction of approximately 3%).

Additionally, in conjunction with the United Kingdom, Korea has established a three-stage ocean energy technology co-operation project to further its status as a market leader in offshore technology and energy generation.

JEWEL IN KOREA'S OFFSHORE CROWN

The "jewel in Korea's offshore crown" remains the 2.5GW wind farm project off the southwest coast of the Korean Peninsula which will comprise an impressive 500 x 5MW turbines. The project will be built under a PPP model and is expected to attract investment of up to US$8.2 billion. South Korea also operates the world's largest tidal power station at Lake Shihwa which has an output capacity of 254MW. The strong tidal variations off Korea's southern and western coasts have led to plans for a 480MW facility at Garolum and a mammoth 1GW facility at Inchoen Bay.

Korea's regulatory response has fostered a diversified approach across a number of renewable sources.

PHILIPPINES

The Congress of the Philippines passed the *Renewable Energy Act of 2008* as part of the nation's goal to increase renewable energy-based capacity by 100% by 2013 from 2002 levels.

To help reach this goal, the national renewable energy program and the renewable energy act established a market-based policy requiring electricity suppliers to source a portion of their energy supply from eligible renewable energy resources and empowered the Department of Energy to establish a renewable energy market to be operated under the wholesale electricity spot market. The act also includes generous tax and import concessions for renewable energy companies, as well as key mechanisms to accelerate the development of emerging renewable energy resources such as priority purchase and "must dispatch" transmission electricity. The feed-in tariffs in the Philippines are more generous than its neighbouring countries but dwarfed by Japan's tariffs (see table on page 7). Recently though, the Philippines' Department of Energy released its guidelines on feed-in tariff eligible projects. The Philippines' regulatory environment is now largely settled with rates and a commitment period of 20 years established, as well as eligibility requirements now clear. Accordingly, developers have turned to the issue of financing.

Overall the Philippines does have a comparatively higher renewable energy contribution than its peers due to a combination of its rich natural resources, topography suited to hydropower and geothermal power, additional capacity requirements attributable to gross domestic product growth and an upgrade in its sovereign investment rating. Geopolitical factors continue to encourage renewable energy investment for countries like the Philippines due to concerns over oil and gas supply routes through the Malacca Strait as well as competing claims to offshore deposits in the South China Sea.

AUSTRALIA

Although renewable energy investment in Australia has steadily increased over the past decade, it has been subject to challenges such as polarising partisan debate and delays, as well as complex and inconsistent regulation in comparison to Australia's northern neighbours. Now that the Liberal National Coalition has been elected on anti-carbon tax policies, there is concern that renewable energy incentives too could be scaled back. However, the Coalition will likely continue to face a hostile Senate and for now, the Labor Government's market incentives remain.

The key policy mechanism incentivising renewable energy investment in Australia is the Renewable Energy Target (**RET**), which is implemented under the *Renewable Energy (Electricity) Act 2000* (Cth). The goal of the RET is for 20% of Australia's electricity to be generated from renewable sources by 2020, up from the current levels of around 13%. This is to be achieved by requiring electricity retailers to purchase and surrender 'certificates' from large-scale and small-scale renewable energy producers. Although the RET has sparked investment in renewable energy in Australia, there is concern in some sectors that it will not foster a sufficiently diverse or well developed renewable energy industry. This is due to a range of factors, including the relatively short timeframe of the RET compared to the investment horizon required for power generation facilities and the fact that the current configuration of the RET favours wind projects (due to their current lower cost) at the expense of other technologies (such as solar PV, concentrated solar power, geothermal, hydropower, wave and biomass). The RET will be reviewed in 2014, as required by the legislation.

Australia's clean energy regulatory sphere has seen notable developments in 2012/13. On 1 July 2012, Australia's carbon pricing mechanism (**CPM**) commenced, with a fixed price of AU$23 (approx. US$24) per tonne of greenhouse gas emissions covered by the scheme set for the first three years of the CPM's operation. The Federal Government subsequently announced that when the CPM transitions to a 'cap and trade' (rather than a fixed price) scheme in 2015, a proportion of permits required to be surrendered under the CPM will be able to be purchased from the European Union's emissions trading scheme (**ETS**). This will mean that the price of permits under the CPM will be linked to the prices under the world's largest ETS, which is currently substantially lower than the AU$23 fixed price under the CPM. However, there are concerns that even the fixed price of AU$23 is too low to provide a significant driver for renewable energy investment. The effectiveness of the CPM in driving renewable energy development will be determined by whether the government of-the-day commits to a competitive CPM and whether international price of carbon rises sufficiently post-2015 to encourage investment to shift away from fossil fuel based generation. As is well-known throughout Australia though, the Coalition has stated its 'first order of business' when Parliament resumes in October or November will be to remove the CPM and related legislation.

The prior labor government further attempted to incentivise renewables through the Clean Energy Finance Corporation (**CEFC**) and the Australian Renewable Energy Agency (**ARENA**). The CEFC received AU$10 billion (approx. US$10.5 billion) of federal government funding to help private investors "overcome capital market barriers that hinder the financing, commercialisation and deployment of renewable energy, energy efficiency and low emission technologies". The CEFC is intended to be the "catalyst" for private sector investment that is currently not available for clean energy technologies, however the Coalition climate spokesman Greg Hunt has strongly hinted that the incoming Government will keep its' promise of dismantling the CEFC altogether. Like repealing the carbon tax though, this would require the approval of both houses of parliament. ARENA has been established as another avenue to encourage investors and to date has contributed funding to over 30 projects across a range of technologies. While ARENA has been allocated AU$2.2 billion (approx. US$2.3 billion) in funding to 2020, just AU$385 million (approx. US$403 million) is available until 2015. Cuts to ARENA's budget have been flagged by the incoming government.

Adding further complexity to the regulatory regime relating to renewable energy development, in the last few years both New South Wales and Victorian state governments have introduced new planning regulations restricting where wind farms may be sited. For example, the regulations in Victoria provide residents with the power to veto any turbine construction within two kilometres of their homes. The new federal government has also flagged the possibility of expensive 24-hour wind turbine noise monitoring, so understandably some investors are nervous about possible anti-wind policies at State and Federal level.

The Australian Capital Territory (**ACT**) government has held reverse solar auctions for the development of up to 40MW of solar energy with guaranteed tariffs for 20 years, which is in line with the broadly-held industry view of ensuring the viability of large solar projects by guaranteeing a sufficient long term tariff rather than subsiding capital costs. In September 2012, Spanish group FVR was awarded the first 20MW contract which will become the largest solar facility in Australia. The facility recently received project finance from ANZ and NAB and the project will be the first large-scale solar farm to be connected to the National Electricity Market. Other attempts at encouraging investment, such as through the Solar Flagships Program have not been successful with both the 150MW Moree Solar Farm and 250MW Solar Dawn project both unable to meet financial close due to factors such as an inability to secure finance following the withdrawal of government funding.

To further facilitate renewable energy investment in Australia, there needs to be much more than a renewable energy target, but also a renewable portfolio standard and/or purchase obligations on electricity retailers across different sources of renewable energy, however in the current regulatory environment even the RET as it stands faces reduction or perhaps deferral.

[Editor's Note: for more commentary on the effect of the incoming Coalition Government's policies on renewable energy, we would be happy to provide you with a copy of our articles that were published by the Australian Financial Review, Reneweconomy website and Project Finance International magazine. Please contact us if you'd like any copies].

DEVELOPMENTS IN OTHER ASIAN COUNTRIES[1]

The emerging superpowers India and China, who together account for a third of the global population, are turning to renewable energy to meet energy security problems associated with unprecedented economic growth and urbanisation. It is estimated that China will spend US$1.54 trillion on clean energy in the next 15 years to further its current status as the number one renewable energy technology producer and generator in the world while India is aiming to connect 29.8GW of new grid-interactive renewable power by 2016/17.

Further south, populous Indonesia is seeking 10.1GW of new renewables capacity by 2014, chiefly through geothermal and hydropower. Renewable energy targets of around 20% by 2020 are common throughout the region and are being achieved through feed-in tariffs, such as in Thailand and Malaysia (see table). The second phase of Mongolia's National Renewable Energy Program has seen a number of large projects, such as a 50MW wind farm south of Ulan Bator as it seeks to become the 'Saudi Arabia of the East' for renewable energy. Other developing countries like Vietnam and East Timor are turning to renewables as a means of sustainable development and of rural electrification.

[1] For a detailed report on all these countries, please contact lee.hale@dlapiper.com.

PROMISING SIGNS FOR 2013?

Despite a breadth of government incentives, the Asia Pacific renewable energy industry is in a state of stagnation. Generally, this can be attributed to the global economic climate as well as caution from investors about the longevity of incentives in an emerging and relatively young industry. Many international developers are waiting to see if governments will seek energy solutions from natural gas or even nuclear energy.

By contrast to this stagnation, the South African market has seen a large number of deals closed in 2012 as a result of the country's renewable energy independent power producers procurement programme. Nevertheless, there are signs that European developers are beginning to broaden their international focus from markets such as South Africa to the emerging Asia Pacific markets. Whether international developers require further government incentives to push big deals through, remains to be seen but it is clear that governments have, and will continue to, encourage accelerated growth in the renewables sector.

TABLE: FEED-IN TARIFF RATES COMPARISON[2]

COUNTRY	HYDROPOWER	BIOMASS	WIND	SOLAR
CHINA				
RMB/kWh	0.29 to 0.45	0.65	0.51 to 0.61	1 to 1.15
USD/kWh	0.05 to 0.07	0.1	0.08 to 0.1	0.16 to 0.18
INDONESIA				
IDR/kWh	656	850 to 975	Yet to be introduced	Yet to be introduced
USD/kWh	0.07	0.09 to 0.1	Yet to be introduced	Yet to be introduced
JAPAN				
JPY/kWh	25.20 to 35.7	13.65 to 40.95	23.1 to 57.75	31 to 37.8
USD/kWh	0.26 to 0.36	0.14 to 0.42	0.23 to 0.59	0.32 to 0.38

[2] NOTE ON TABLE: While all efforts were made to ensure the accuracy of the information in this report and table, it is not intended to be, and should not be used as, a substitute for independently checking the latest tariffs and taking advice in any specific situation. Investors should note that feed-in tariff rates may vary within a country and change over time (often without being published) or differ depending on the amount of energy generated. Exchange rates apply as of 24 June 2013.

COUNTRY	HYDROPOWER	BIOMASS	WIND	SOLAR
MALAYSIA				
MYR/kWh	0.00	4.05	Yet to be introduced	0.00 to 3.46
USD/kWh	0.00	1.26	Yet to be introduced	0.00 to 1.08
MONGOLIA				
MNT/kWh	64.69 to 143.75	Yet to be introduced	115 to 215.63	215.63 to 431.25
USD/kWh	0.045 to 0.1	Yet to be introduced	0.08 to 0.15	0.15 to 0.30
PHILIPPINES				
PHP/kWh	5.90	6.63	8.53	9.68
USD/kWh	0.13	0.15	0.20	0.22
THAILAND				
THB/kWh	0.8 to 1.5	0.3 to 0.5	3.5 to 4.5	6.5
USD/kWh	0.03 to 0.05	0.01 to 0.02	0.11 to 0.14	0.21
VIETNAM				
VND/kWh	Yet to be introduced	Yet to be introduced	1,640.73	Yet to be introduced
USD/kWh	Yet to be introduced	Yet to be introduced	0.078	Yet to be introduced
GERMANY				
EUR/kWh	0.034 to 0.127	0.06 to 0.25	0.035 to 0.19	0.018 to 0.244
USD/kWh	0.04 to 0.17	0.08 to 0.33	0.05 to 0.25	0.02 to 0.32
ITALY				
EUR/kWh	0.096 to 0.257	0.125 to 0.257	0.127 to 0.291	0.00
USD/kWh	0.13 to 0.34	0.16 to 0.34	0.17 to 0.38	0.00
UNITED KINGDOM				
GBP/kWh	0.32 to 0.217	0.92 to 0.152	0.042 to 0.217	0.069 to 0.154
USD/kWh	0.05 to 0.33	0.14 to 0.23	0.06 to 0.33	0.11 to 0.24

JAPAN'S RENEWABLE ENERGY FEED-IN TARIFF REGIME

Author

Stephen Webb – Partner and Head of Renewable Energy & Climate Change, Asia Pacific

BACKGROUND

Prior to the Fukushima nuclear disaster in March 2011, Japan relied on nuclear power for roughly 30% of its energy needs, with 60% coming from conventional sources such as coal, oil, and natural gas. In 2010 hydroelectric power accounted for 3% of Japan's energy resources, with other renewables – solar, wind, biomass, and geothermal energy – contributing only 1% of the total power capacity of the nation. Since the disaster, however, most of Japan's nuclear reactors have been taken offline, leaving power generated from the remaining sources to fill the gap. Currently, 90% of all power in Japan is derived from fossil fuels.[1]

[1] World Nuclear News, 31 May 2012. http://www.world-nuclear-news.org/EE_Fossil_fuels_rule_Japan_3105121.html

In an effort to diversify the country's energy base, the Japanese Diet has taken an aggressive measure to encourage the development of renewable energy resources. The *Act on Purchase of Renewable Energy Sourced Electricity by Electric Utilities* (the Act), which became effective on 1 July 2012, establishes a feed-in tariff (FIT) regime for renewable energy. Under the Act, electric utility operators are required to purchase electricity generated from renewable sources (Renewable Electricity) from suppliers for prices and durations fixed by the Ministry of Economy, Trade and Industry (**METI**). This regime guarantees a market with fixed, and relatively high, prices for electricity generated from renewable resources, and is widely expected to spur investment in Japan's renewable energy supply industry.

STRUCTURE OF THE FIT REGIME

Sources of Renewable Energy

The Renewable Electricity targeted by the Act includes electricity generated by (i) solar, (ii) geothermal, (iii) wind (iv) hydroelectric, (v) biomass, and (vi) other renewable means to be stipulated by ministry ordinances under the Act, such as ocean thermal energy, wave power, and tidal current power.

Facility Accreditation

In order to receive the benefit of the FIT, a supplier must first obtain accreditation from METI for the facility generating Renewable Electricity. While there are particular requirements for each kind of renewable resource, the following criteria apply to all:

- the facility must have a system in place that enables it to maintain its expected capacity during the anticipated term of the agreement with the electric utility operator that will purchase the electricity;
- the facility must have a proper mechanism to accurately measure the amount of the Renewable Electricity supplied;
- the functions and operations of the facility must be specifically identified and reported to METI; and
- the installation and operating costs of the facility must be recorded accurately and filed with METI.

There is no charge for an entity to apply for its facility to be an accredited Renewable Electricity facility. The accreditation process will take approximately one month.

Foreign Investment

It should be noted that there are no restrictions on foreign investment for participation in the FIT regime. In fact, foreign investment is welcomed by the Japanese government to help increase the country's Renewable Electricity base.

Guaranteed Market for Renewable Electricity

After a supplier has received accreditation, it may then apply to enter into an agreement with an electric utility operator. The electric utility operator must enter into an agreement with the Renewable Electricity supplier to purchase the Renewable Electricity. The terms of the agreement are determined by METI. The electric utility operators are also obligated to connect the suppliers to their power network if the suppliers apply for such connection.

Price and Term

Under the Act, METI has the authority to determine the price per kilowatt hour of the Renewable Electricity as well as the duration of the agreement between the electric utility operator and Renewable Electricity supplier. METI will exercise this authority to set prices and agreement durations before the beginning of each year, and bases such price and duration on the type and scale of the electric power facility where the Renewable Electricity is to be generated.

Generally speaking, the price and the duration of the agreement will be determined in consideration of the following factors:

- the anticipated cost of generation of energy from the particular Renewable Electricity source, based on the assumption that the Renewable Electricity supplier is operating efficiently;
- costs actually incurred by the suppliers who supplied Renewable Electricity before enforcement of the Act;
- the expected amount of Renewable Electricity to be supplied by the Renewable Electricity supplier;
- an allowance for modest profits for the Renewable Electricity supplier; and
- the overall supply of Renewable Electricity in Japan.

In particular, METI will give special consideration to the profits to be received by the Renewable Electricity supplier during the first three years of the Act's enforcement. It is understood that the profits may be geared to be higher during these first three years in order to provide strong incentives for suppliers to make the necessary initial investments.

In principle, METI's prices and agreement durations are set after consultation with other relevant governmental ministries and are set in a neutral fashion, with no preference toward either the Renewable Electricity supplier or electric utility operator.

As well as the above considerations, METI bases the duration of the agreements between the Renewable Electricity supplier and the electric utility operator on industry standards. In deciding on the duration, METI will take into account the standard lifespan of the kind of facility generating Renewable Electricity. For 2012, the terms of the METI-defined contracts range from 10 to 20 years.

Once a Renewable Electricity supplier and an electric utility operator have concluded an agreement, the price of the Renewable Electricity will be fixed for those parties until the end of the term of the agreement, even if METI sets a different price for the Renewable Electricity during the term of the agreement. Such price will only apply to agreements concluded after the new price has been put into effect.

The 2013 prices (inclusive of tax) and terms for the different energy sources follow:

SOLAR POWER

Electricity Generated	Under 10kW	More than 10kW
Procurement price	JPY 38/kWh	JPY 37.8/kWh
Procurement term	10 years	20 years

WIND POWER

Electricity Generated	Under 20kW	More than 20kW
Procurement price	JPY 57.75/kWh	JPY 23.1/kWh
Procurement term	20 years	20 years

HYDROELECTRIC POWER

Electricity Generated	Under 200kW	More than 200kW Under 1MW	More than 1MW Under 3MW
Procurement price	JPY 35.7/kWh	JPY 30.45/kWh	JPY 25.2/kWh
Procurement term	20 years	20 years	20 years

GEOTHERMAL POWER

Electricity generated	Under 15MW	More than 1815MW
Procurement price	JPY 42/kWh	JPY 27.3/kWh
Procurement term	15 years	15 years

BIOMASS POWER

Generation Method	Methane fermentation gasification power generation	Unused wood combustion power generation	Wood combustion power generation	Waste material (excluding wood) combustion power generation	Recycled wood combustion power generation
Procurement price	JPY 40.95/kWh	JPY 33.6/kWh	JPY 25.2/kWh	JPY 17.85/kWh	JPY 13.65/kWh
Procurement term	20 years	20 years	20 years	20 years	20 years

Source: METI Website

Funding the FIT

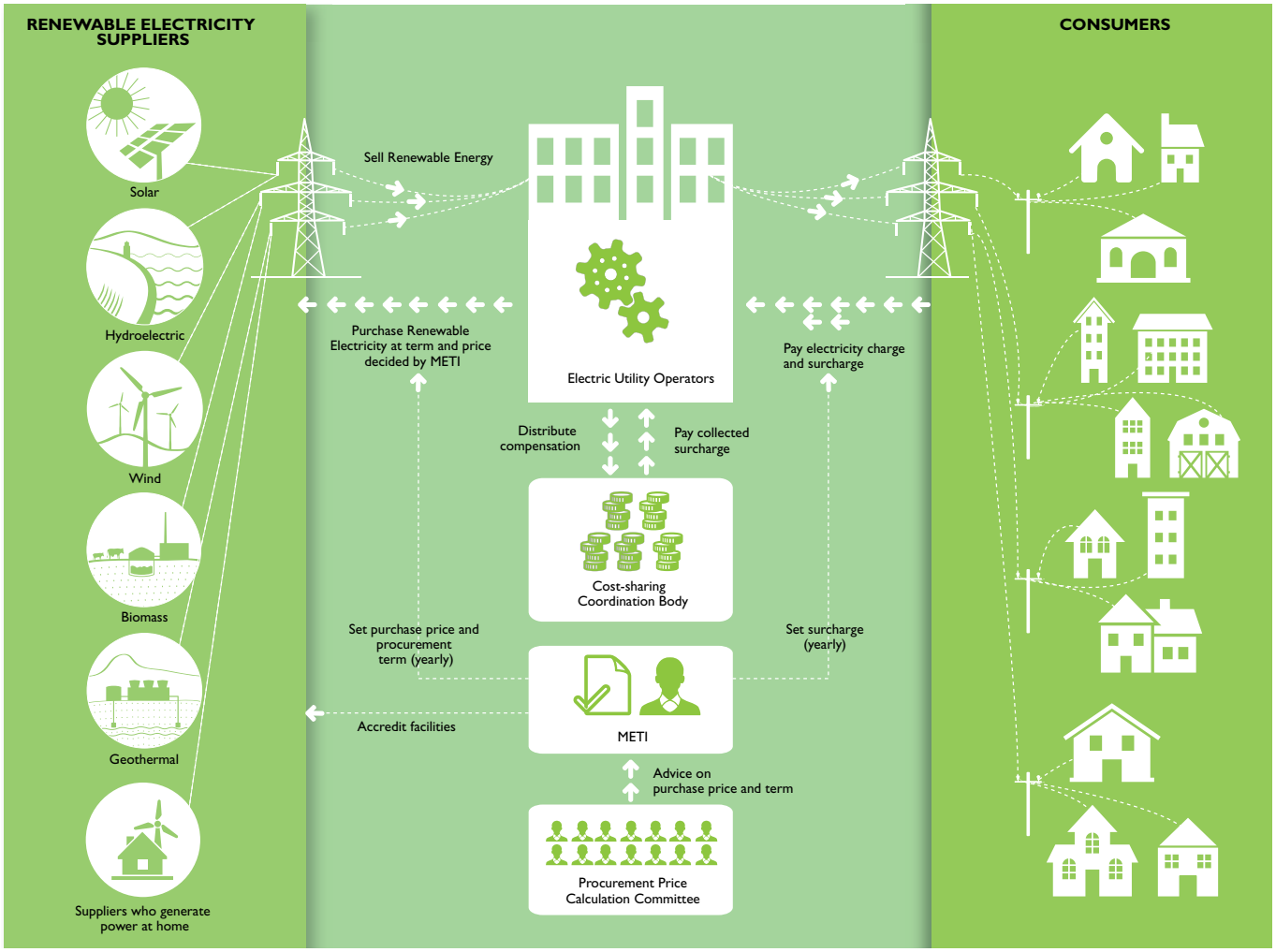
Costs incurred by the operators of electric utilities due to their purchase of Renewable Electricity are recovered through surcharges to consumers. The surcharge is to be determined by METI each year.

EFFECT

The rates provided for Renewable Electricity generation are very favourable, especially for solar energy. A price of JPY 37.8 to 38 per kWh is at least double similar tariffs imposed in France and Germany. It can be expected that both Japan-based and foreign businesses will see opportunities to take advantage of these high rates that are locked in for as long as 20 years. Japan's Softbank Corporation is aiming to be the country's largest solar power firm, with plans to open seven large solar plants throughout the country, producing a combined 256.5 MW. Nippon Telegraph and Telephone Corp. (NTT) has invested 15 billion yen to build solar plants in 20 locations, with a total output of 60 MW.[2]

It is most important to note that the prices for Renewable Electricity are determined by METI each year, and that such prices are based in part on the overall supply of Renewable Electricity in Japan. This is a measure that allows METI to continuously retune the FIT depending on its level of success in generating investment in Renewable Electricity. One of the clear goals of the FIT is to encourage early investment, particularly in the first three years of its operation. After that, it is foreseeable that the high prices could reduce to levels that are enough to sustain the industry, but not encourage new investment to the same extent as the initial three years to date, there has only been a small reduction in the tariffs for Solar PV. The lasting effect of the FIT has not yet been determined. Whether the FIT will jumpstart a robust industry for which the FIT may eventually no longer be needed, or whether it will create an industry that will always be reliant on the FIT, remains to be seen. Whatever the ultimate outcome, we will certainly be seeing significant growth in Japan's Renewable Electricity industry in the short term.

ANNEX I: STRUCTURE OF FIT REGIME



[2] Nikkei, 26 May 2012. http://e.nikkei.com/e/ac/TNKS/Nni20120625D2506A15.htm?NS-query=Largest%20Solar%20Operator%20

SOUTH AFRICAN RE IPP PROGRAMME

LESSONS LEARNED TO DATE

Authors

Damian McNair – Partner and Head of Finance & Projects, Asia Pacific

Alison Dodd – Senior Associate, Finance & Projects

Energy security is a long-standing issue in South Africa. Although its cost of power is amongst the lowest in the world, South Africa has endured an ongoing power crisis since 2007.

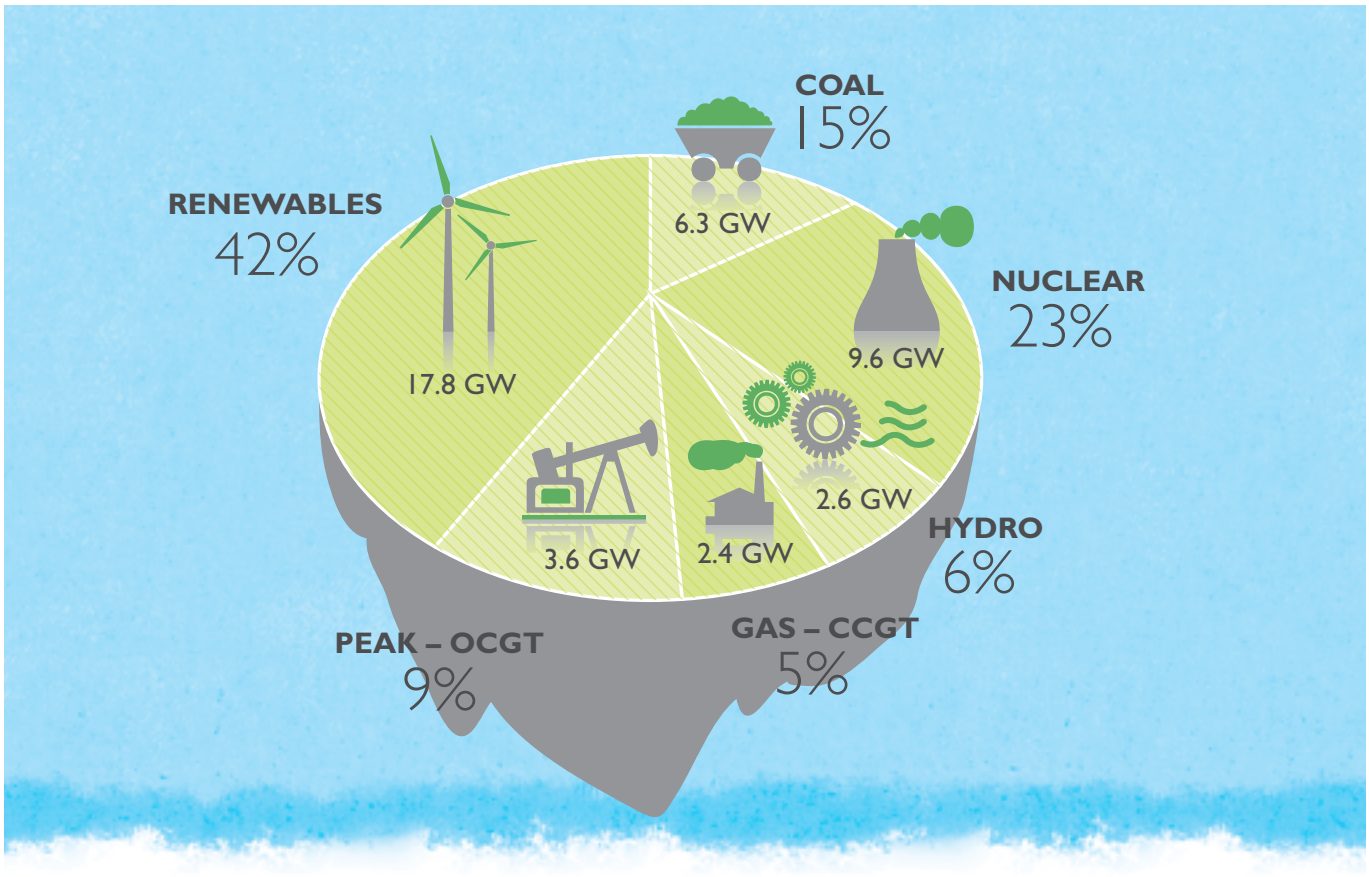
At this time State power supplier Eskom encountered problems with aging plants and meeting electricity demand, necessitating power cuts to residents and businesses in the major cities. Country-wide rolling blackouts continue, constraining economic growth, particularly in the energy intensive mining and mineral processing sectors. Combined with South Africa's rapid industrialisation, these shortages have culminated in an urgent need to increase electricity generation capacity.

In addition to increasing demand, the diversification of energy supply is also a key aspect of South Africa's long term renewable energy strategy. In its *White Paper on Energy Policy 1998* and reiterated in the supplemental *White Paper on Renewable Energy 2003* (**White Paper**), the South African Government considered a range of measures regarding the integration of renewable energies into the mainstream energy economy, and cited that an increase in renewable energy capacity would provide improved opportunities for energy trade and would enhance energy security by encouraging diversity of both supply sources and primary energy carriers. Under the White Paper, South Africa committed itself to a target of 10,000 GWh (4%) of renewable energy contribution to final energy consumption by 2013, to be produced mainly from wind, solar, biomass and small-scale hydro.

In 2011 the Department of Energy (**DOE**) published the Integrated Resource Plan (**IRP**), which contemplated the addition of over 55GW of energy generation by 2030 (an increase of more than 170% on existing levels), 42% of which was to be sourced from renewable energy sources.

Initially, it was assumed that the additional renewable energy capacity outlined in the IRP would be delivered by the Renewable Energy Feed-In Tariff (**REFIT**) Program. Announced in 2009, the REFIT Program proposed to provide a guaranteed tariff for electricity supply from renewable energy sources that covered the cost of generation plus a 'reasonable profit'. In June 2011, the DOE announced that it would instead no longer proceed with the REFIT Program and that it would instead procure the additional capacity under a program now known as the Renewable Energy Independent Power Producers Procurement Programme (**RE IPP Programme**).

TOTAL ADDITIONAL NEW CAPACITY UNTIL 2030 (GW) UNDER IRP 2010 (EXCLUDING COMMITTED CAPACITY IN SOUTH AFRICA)



RE IPP Programme

Under the RE IPP Programme, bidders submit bids to construct and operate renewable energy projects and sell power to Eskom. Key features of the RE IPP Programme include:

- a competitive bid process with five rounds ('Phases'), with selection on price and non-price criteria;
- bidders must meet minimum thresholds in respect of economic development requirements in order for their bid to be compliant;
- in addition to minimum thresholds, strong weighting on criteria relating to job creation, local content and ownership, social development, preferential procurement and management control for black South Africans;
- bidders bid the price (tariff) which will be payable by Eskom (as Buyer) pursuant to the Power Purchase Agreement (**PPA**), with the price not to exceed the price cap for each technology for each Phase;
- bidders required to submit the detailed heads of terms of material contracts, including financing agreements and construction and operation contracts (generally an engineer, procure and construct (**EPC**) contract and an operating and maintenance (**O&M**) contract); and
- successful ('preferred') bidders required to reach financial close and commercial operation of the project within specified timeframes.

The technologies comprising the RE IPP Programme, and their envisaged split, are set out below:

Technology	Proposed amount	Percentage allocation
Onshore wind	1,850MW	49.7%
Concentrated Solar Power	200MW	5.3%
Solar Photovoltaic	1,450MW	38.9%
Biomass	12.5MW	0.3%
Biogas	12.5MW	0.3%
Landfill gas	25MW	0.7%
Small hydro (<10MW)	75MW	2%
Small Projects IPP	Total of 100MW	2.8%
Total	3,725MW	100%

The bid submission date for Phase 1 of the RE IPP Programme was 4 November 2011, with 53 bids received. Of these, approximately 50% were for wind projects and 48% were for solar PV and CSP. The 28 preferred bidders were announced on 7 December 2011, with projects comprising a total of 1,275MW of installed capacity. Phase 1 Preferred Bidders were initially required to finalise all of their contractual arrangements by 22 May 2012, although this date was extended and the final date for financial close was 16 November 2012.

The 'not to exceed' price cap for each technology that bidders were required to bid against for Phase 1 is set out below.

Technology	Commercial Energy Rate (ZAR)
Onshore wind	1,150/Mwh
Solar PV	2,850/Mwh
Solar CSP	2.850/Mwh
Biomass	1,070/Mwh
Biogas	800/Mwh
Landfill gas	840/Mwh
Small hydro	1030/Mwh

The Phase 1 projects will be delivered at a tariff of ZAR 1.14kWh for wind, ZAR 2.76/kWh for solar PV and ZAR 2.69/kWh for CSP. The competitive bid process under the RE IPP Programme has resulted in reduced tariff prices bid for Phase 2 projects, and this downward trend of tariff pricing is expected to continue in Phase 3 and subsequent Phases.

The Phase 2 bid submission date was 5 March 2012 and 19 Preferred Bidders were announced on 21 May 2012. Preferred Bidders were initially required to reach financial close by December 2012, but the date for Financial Close for Phase 2 was extended to 18-28 March 2013. The bid submission date for Phase 3 was also extended from 1 October 2012 to 7 May 2013, and with the financial close date for Phase 3 to be confirmed.

On 29 October 2012, the DOE announced that it intended to procure an additional 3,200MW of renewable energy capacity between 2017 and 2020, in addition to the 3,725 MW currently being procured to 2016 under the RE IPP Programme. It is generally understood that this additional capacity will be added to allocation available in the later Phases of the RE IPP Programme. Given that 2,460MW has been allocated during Phase 1 and 2 of the RE IPP Programme, this additional amount means that a total of 4,360MW of capacity remains for allocation during Phases 3 to 5.

Contractual structure for projects under the RE IPP Programme

Preferred bidders under the RE IPP Programme are required to enter into the following (non-negotiable) documents in order to reach financial close:

- a PPA with Eskom;
- an Implementation Agreement (**IA**) with the DOE;
- a Transmission Agreement or Distribution Agreement with Eskom (depending on which network the Facility will connect to); and
- a Direct Agreements,

(together **the Project Documents**).

The DOE has issued a number of clarifications in the form of Briefing Notes to the versions of the Project Documents released with the RFP and the RFP documentation itself. These clarifications have related to a range of issues, including definitions such as 'Contracted Capacity' used in the Project Documents. Uncertainty still remains in relation to some issues despite the Briefing Notes, such as the role of, and contractual arrangements relating to, the Independent Engineer in the testing regime established by the Project Documents.

Key project finance issues and 'lessons learned' under the RE IPP Programme to date

Under the non-negotiable RE IPP Programme Project Documents, the project company is entitled to relief in respect of a number of narrowly defined circumstances, including in respect of Force Majeure, Compensation Events (breaches by Eskom of its PPA obligations), System Events (delays in connecting the facility to the grid and grid unavailability) and Unforeseeable Conduct (broadly equivalent to change in law risks). To minimise exposure to risk, lenders require project companies to ensure that their contracts 'pass through' all relevant obligations to contractors and to ensure that contractors' entitlements to extensions of time or costs are 'back to back' with and limited to the project company's limited entitlements under the Project Documents. Where a pass-through of obligations to contractors is not possible, project companies have looked to insurance or other sponsor support methods to mitigate risks under the Project Documents to the satisfaction of lenders. Forms of sponsor support utilised have included equity subscription agreements (base and standby equity), completion guarantees of whole or part of the debt until commercial operation of the facility, bank guarantees to support completion guarantees and cost overrun guarantees.

Lenders have also paid particular attention to aligning, and minimising any gaps between, the provisions of the Project Documents and the EPC and O&M contracts regarding a range of issues including site risk, the exclusion of special or consequential loss and dispute resolution processes. The Project Documents also contain specific obligations in relation to Corrupt Acts (as defined under the *Prevention and Combating of Corrupt Activities Act 2004*) and Economic Development Obligations. Lenders' pass through requirements have included exceptions from any cap on liability of a contractor under an EPC or O&M contract for committing Corrupt Acts or failing to comply with Economic Development Obligations.

Financial market concerns regarding 'Eurozone' issues have resulted in Lenders paying close attention to the form of guarantee and the credit worthiness of the party providing guarantees under the Project Documents and other contracts. Similar concerns, coupled with a reduction in international demand due to uncertain government policies and increasing debt levels, have also resulted in recent downgrades to the credit ratings of a number of solar and wind equipment manufacturers.

OBSERVATIONS ON PROJECT FINANCING FOR PHASE 1 OF THE RE IPP PROGRAMME

The total debt funded section of the Phase 1 projects at financial close reached just under US$3 billion. Debt financing of the RE IPP Programme has been dominated to date by domestic financiers and lenders. This is due in part to foreign exchange protection regarding the South African Rand, thereby limiting the involvement of international lenders which are used to more flexibility.

A number of the domestic lenders have provided debt finance to multiple projects under Phase 1 and Phase 2. The large volume of projects under the RE IPP Programme has meant that many lenders have accepted risk across multiple projects, which has contributed to a more conservative approach to passing-through or mitigating the risks in the Project Documents than might otherwise be expected.

Equity capital has been contributed by investors from a range of locations including Italy, Germany, Spain, US, UK and Australia, along with domestic investors. In many projects equity investors have played an additional role in the project, such as EPC contractor or O&M contractor.

Development finance institutions such as Development Bank of Southern Africa and Industrial Development Corporation have also involved in many projects under the RE IPP Programme as lenders, financial advisers or equity investors.

It is anticipated that more international investors, developers, contractors and manufacturers will be involved in Phase 3 and future rounds of the RE IPP Programme. This is partly due to the increased certainty regarding the RE IPP Programme following the successful completion of the Phase 1 financial close process. The high levels of expertise in Europe, combined with the parlous state of solar and wind markets in that region, is also expected to result in further interest from a range of participants.

FUTURE CHALLENGES

Meeting and maintaining the Economic Development Obligations will present an ongoing challenge for developers and investors in the RE IPP Programme. The DOE has declared that requirements for local content in each project will be increased with each successive bid phase. This will make it increasingly challenging to establish projects in areas of low population density or lacking the requisite skills and industry to satisfy these local content requirements.

For further commentary regarding the RE IPP Programme the key contracts used visit: http://www.dlapiper.com/australia/epc-contracts-renewable-energy-south-africa/

Attracting more international companies may also be increasingly difficult given the mandated local ownership requirements for the project company. For example, for Phase 1 a 12% minimum (with a target of 30%) of the shareholding of a project company was required to be held by black South African individuals or enterprises. These local ownership levels, as well as job creation, management control and other economic development requirements will increase in future Phases.

Ambitious procurement and construction deadlines, combined with a large number of projects also have the potential to stretch sub-contractor resources that satisfy both the local content and local ownership thresholds required under the Economic Development Obligations in the Implementation Agreement.

A matter that has the potential to create issues in future is the mismatch between the dispute resolution process mandated under the Project Documents (which provides for litigation in South Africa) and the accepted commercial practices of many international contractors (who will often refuse to accept domestic litigation and instead require international arbitration). As a result, many construction and operating and maintenance contracts (and related major subcontracts) provide for dispute resolution by international arbitration, rather than by litigation as under the Project Documents. This has the potential to create delays in the dispute resolution process and possible issues relating to the consolidation of claims.

There are concerns about the ability of Eskom to deliver the works necessary to connect project facilities to the grid and for project companies to meet the timing obligations under the Project Documents where project companies have elected for Eskom to undertake these works. This risk may be mitigated to some extent by the ability of the project company to engage contractors to perform self-build or own-build works under standard form agreements with Eskom. However, the mismatching of some elements of risk and some key terminology (such as the definition of force majeure) between the standard form agreements provided by Eskom and the Project Documents has the potential to create future challenges.

Despite these challenges, bid numbers and competition to enter the RE IPP Programme continues to grow, indicating increased interest and confidence, with Phase 2 receiving 79 bids compared to 53 bids received in Phase 1. The recent announcement by the DOE regarding the additional 3,200 MW to be allocated to Phases 3, 4 and 5 demonstrates the South African Government's commitment to the RE IPP Programme and, in turn, to a transformational investment to take an international leadership position for the diversification of its energy capacity to provide for more than 20% renewable energy by 2030.

TARIFFS KICK-START JAPANESE RENEWABLES

HOW DOES JAPAN'S FEED-IN TARIFF ARRANGEMENTS FOR RENEWABLE ENERGY COMPARE?

An overall analysis, progress to date, challenges ahead as well as some comparisons drawn against the more mature German and the very active South African models.[1]

Authors

Stephen Webb – Partner and Head of Renewable Energy & Climate Change, Asia Pacific

Damian McNair – Partner and Head of Finance & Projects, Asia Pacific

Alison Dodd – Senior Associate, Finance & Projects

Celeste Koravos – Solicitor, Finance & Projects

In 2010 renewable energy accounted for 4% of Japan's total energy consumption, with 3% from hydro, with only 1% generated from other renewable sources such as solar PV and urban biomass. Japan's historically low levels of investment in renewable energy have been influenced by a range of factors. These include a heavy reliance on nuclear and fossil fuel sources, unfavourable geography for renewable energy (including extremely deep water in coastal regions constraining the development of offshore wind facilities) and a high concentration of vertical integration in its energy market creating challenging conditions for new entrants. Recent events, most notably the Fukushima nuclear disaster in March 2011, have sparked widespread debate about Japan's future energy mix, creating an impetus for Japan's Diet to take aggressive measures to encourage the development of renewable energy sources. The centrepiece of these measures is the recently-introduced feed-in tariff (**FIT**) for renewable energy generation.

[1] For a copy of DLA Piper's detailed Renewable Energy in the Asia Pacific publication, which includes an up-to-date country tariff comparison table, please email lee.hale@dlapiper.com

Administered by the Ministry of Economy, Trade and Industry (**METI**), the FIT is implemented under the *Act on Special Measures Concerning New Energy Use by Operators of Electric Utilities* (**the Act**) which took effect on 1 July 2012. Under the FIT, Japanese electricity utilities are obliged to enter into power purchase agreements (**PPAs**) with developers of accredited facilities to purchase the electricity generated by their facilities for a fixed price and fixed period, and to provide grid connection and grid feed-in to those facilities. Solar PV, wind, small and medium scale hydro (less than 3MW), geothermal and a range of biomass technologies are eligible to be accredited and to access the FIT. Electricity utilities are required to purchase all electricity generated by accredited facilities, as no thresholds are set in respect of the scheme. The costs of energy generated from renewable sources (effectively the cost of the FIT scheme) is transferred to electricity consumers as a nationwide surcharge based on a unit price per kWh of electricity consumed.

Power generators are required to enter into PPAs with electric utilities. A model PPA has been prepared by METI but it is able to be negotiated and amended by parties. The Act requires that all PPAs are consistent with the Act, governed by the law of Japan, written in Japanese and provide for disputes to be exclusively determined by Japanese courts.

The duration and rate of the fixed feed-in tariffs vary by technology type and size, and is set out in **Table 1**.

Source	Solar PV		Wind		Geothermal		Hydroelectric			Biomass				
Capacity	< 10 kW	≥ 10 kW	< 20 kW	≥ 20 kW	< 15 MW	≥ 15 MW	< 200 kW	200 kW – 1MW	1MW – 3MW	Biogas	Unused wood combustion	Wood combustion	Other waste combustion	Recycled wood combustion
Tariff (inc. tax) per kWh (Yen)	38	37.8	57.75	23.10	42.00	27.30	35.70	30.45	25.20	40.95	33.60	25.20	17.85	13.65
Duration (years)	10	20	20	20	15	15	20	20	20	20	20	20	20	20

Table 1: Tariffs set under the Japanese FIT for FY2013.

The Act requires that rates and the period of the FIT available for new installations (i.e. for which PPAs are yet to be signed) are reviewed each financial year. The review is performed by an independent committee which is also required to consult with a range of relevant Ministers before making its determination. It must also take into account factors such as power generation cost, profit to be received by developers, service life and the requirement under the Act to provide a premium price for the first three years of the scheme. As part of the FY 2013 review, the feed-in tariff for solar PV was lowered by 10% from JPY 42 to JPY 37.8 for systems larger than 10kW, reportedly due to factors such as reductions in installation equipment and installation costs. The other tariffs remained the same. This is consistent with the usual FIT approach as has been seen more recently in Malaysia and Thailand.

The Act requires METI to encourage large-scale renewable energy development during the first three years of the Japanese FIT, including by "giving special consideration to the profits of renewable energy suppliers". The internal rates of return (**IRR**) for projects specified by the METI vary, being 6.0% for solar PV greater than 10kW; 7% for hydro up to 3MW; 8% for wind greater than 20kW and 13% for geothermal. METI's IRR calculations are based on factors such as equipment and input costs of each technology and are somewhat difficult to reconcile with the current high published tariffs.

Implementation of Japanese FIT

The generous pricing and long-term duration of the tariffs available under the Japanese FIT already appear to have provided a strong incentive for investment – at least at the development and approval stage to date. Reflecting this level of interest, it has been reported that total clean energy investment in Japan in 2012 (excluding R&D) was more than US$16 billion, representing an increase of more than 73% from 2011[2]. METI reports that the renewable energy generation capacity of facilities commencing operation from 1 April 2012 to 30 February 2013 at 1.66GW, with solar PV accounting for 1.56GW. It has also been reported that in the first month of the FIT, more than 33,000 companies and individuals registered to sell renewable energy, with solar PV comprising more than three-quarters of the registered capacity.

In addition to demonstrating an overall increase in renewable energy development, these statistics also emphasise the dominance of solar PV in the FIT and the broader renewable energy market in Japan. This is also indicated by the entrance of companies from outside the traditional energy industry into the solar PV market, such as the proposed development of 10 solar farms with total capacity of 192.2MW by Softbank, the 23MW solar plant proposed by Mitsui Fudosan, and the installation of solar panels at up to 2,000 locations by convenience store giant Lawson.

[2] United Nations Environment Program, Global Trends in Renewable Energy Investment 2013', June 2013.

Factors contributing to the dominance of solar PV include reduced development times and regulatory approval processes (compared with other technologies such as wind and geothermal) and falling supply costs. The Japanese solar PV industry has also received support from existing policy mechanisms such as the feed-in tariff introduced in November 2009 for smaller scale solar PV facilities of less than 500kW. There is, however, government encouragement of other renewable energy sources, such as the floating wind turbine experiment near Fukushima, in response to Japan's significant deep water offshore wind potential.

The government in June 2013 reiterated its enthusiasm for clean energy investment, in Prime Minister Abe's third arrow of "Abenomics". This policy is set to spur JPY 30 trillion investment in the electricity industry, through deregulation, encouragement of innovation and reduction of time for environmental assessments (criticised as a hurdle to wind farm development) of renewable energy projects. It is yet to be seen how this will play out, with the Upper House in June 2013 rejecting the passage of a bill to reform the Electric Utility Industry Law.

Comparison with international FIT

The key aspect of the Japanese FIT noted by commentators is the generous prices that it provides. A comparison of the 2013 Japanese FIT prices against prices offered under similar schemes in other jurisdictions is set out in **Table 2**.

			
Jurisdiction	**Onshore wind**	**Solar PV**	**Hydro**
Japan (FIT, 2013) per kWh	(greater than 20kW) JPY 23.10 EUR 0.1785	(greater than 10kW) JPY 37.8 EUR 0.292	(greater than 1MW but less than 3MW) JPY 25.20 EUR 0.1948
South Africa (REIPPP, Phase 1 as bid 2012) per kWh	ZAR 1.14 EUR 0.00867	ZAR 2.76 EUR 0.210	(up to 10MW) ZAR 1.03 EUR 0.0783
Germany (FIT, as at 1 April 2013) per kWh	Onshore EUR 0.0893 for 5 years, then EUR 0.0487 Offshore EUR 0.15 for 12 years, then EUR 0.035	Installed at or on a building, range from: 0 to 10kW: EUR 0.1592 10 to 40kW: EUR 0.1510 40kW to 1MW: EUR 13.47 1MW to 10MW: EUR 11.02 Ground mounted: up to 10MW: EUR 11.02 (with decreases of up to 1.8% per month expected to occur from May 2013 until the end of October 2013)	Range from: up to 500kW: EUR 0.127 500kW to 2MW: EUR 0.083 2MW to 5MW: EUR 0.063 5MW to 10MW: EUR 0.055 10MW to 20MW: EUR 0.053 20MW to 50MW: EUR 0.042 Above 50MW: EUR 0.034

Table 2: Comparison of Japanese FIT levels with other jurisdictions
(Exchange rates as at 9 August 2013, 1 EUR = 129.359 JPY; 1 EUR = 13.1543 ZAR)

As Table 2 indicates, the current rates available under the Japanese FIT are substantially higher than those offered under the feed-in tariff available in the mature German market or under the more recent Renewable Energy IPP Programme (**REIPP Programme**) in South Africa, discussed below. For example, the rates for large wind farms available under the Japanese FIT are almost double those currently available in Germany or South Africa, and the rates for small to medium hydro in Japan are more than double those in South Africa and triple those in Germany.

Some commentators have expressed concern that Japan's high level of government borrowings relative to GDP could mean that there will be a political imperative for tariffs to be reduced. Comparisons have been made to the reduction over

time (and particularly in the last two years) of previously agreed feed-in tariffs and other previously available subsidies for renewable energy in countries such as Spain. However, other commentators have also pointed out that the structure of Japan's FIT is closer to that of Germany's, where the cost of providing the FIT is paid for out of surcharges paid by energy users, in contrast with countries such as Spain where the cost is allocated within and paid for from the government budget. On this basis, Japan's FIT is said to be more sustainable in the long-term as a user-based charge rather than a government-funded mechanism. However, given that the surcharge in respect of Japan's FIT is levied based on electricity consumption, the political effect of high costs being borne by influential industries that consume large amounts of electricity (such as manufacturing) will be interesting although it is recognised that significant investment is required and nuclear is no longer favourable. In some countries (Australia being one at present) any government policy which places upward pressure on electricity is extremely sensitive with voters.

In addition to broader economic factors, as noted above the prices set under the Japanese FIT will also reflect changes within the renewable energy industry. For example, if the steep downward trend in the cost of solar PV panels continues, it could be expected that the tariff price for solar PV under the Japanese FIT could be further reduced significantly in 2014, although it would be likely to remain higher than prices set in other more mature markets such as Germany.

Despite the comparatively high tariffs offered, some commentators have criticised other aspects of the Japanese FIT, noting that the Act provides no obligations on electricity utilities to provide priority access to renewable energy or to expand the grid to connect renewable energy facilities. Electricity utilities also have the ability to refuse grid connection to renewable energy when renewable energy may "unreasonably harm the profit" of electricity utilities. It will be interesting to see how these issues play out in such a highly concentrated and vertically integrated power sector, where the 10 major electricity utilities own more than 90% of generation capacity and almost all of the grid (transmission and distribution) systems, thereby dominating the retail market. These arrangements can be compared with those applying in Germany under the German Renewable Energy Act, where grid system operators are required to connect renewable energy facilities as a priority and to strengthen and expand their grid systems to guarantee the purchase of renewable energy electricity.

Comparison with the South African REIPP programme

South Africa predicts that electricity consumption will increase from 260 TWh in 2010 to 454 TWh in 2030, requiring a capacity of 85.24GW by 2030. with 42% of the new installed capacity to be sourced from renewable energy. It was initially proposed that this renewable energy capacity would be procured under a feed-in tariff to be known as the Renewable Energy Feed-In Tariff Programme (**REFIT Programme**). Concerns were raised that the REFIT Programme would not meet the requirement under the South African Constitution that public procurement must be competitive and cost-effective. In July 2011, the Department of Energy (**DOE**) announced that it would no longer proceed with the REFIT Programme and that it would instead procure the additional capacity under a price-competitive tender programme now known as the REIPP Programme.

The REIPP Programme incorporates solar PV, concentrated thermal solar power, onshore wind, small hydro, biomass, biogas and landfill gas. It is comprised of a competitive bid process with five rounds (phases), bids to construct and operate renewable energy projects selected on price and non-price criteria. Bidders must bid the price (tariff) that will be payable by the state-owned energy market operator (**Eskom**) pursuant to a PPA, where the price bid must not exceed the price cap specified for the relevant technology for the relevant bid phase. The "not to exceed" caps and the prices as bid by bidders for phase 1 of the REIPP Programme are set out in **Table 3**.

Technology	"Not to Exceed" (per kWh)		Phase 1 prices as bid (per kWh)	
	ZAR	EUR	ZAR	EUR
Onshore Wind	1.15	0.0874	1.14	0.0867
Solar PV	2.85	0.217	2.76	0.210
Concentrated Solar Power	2.85	0.217	2.69	0.204
Biomass	1.07	0.0813	n/a	n/a
Biogas	0.80	0.061	n/a	n/a
Landfill gas	0.84	0.064	n/a	n/a
Small Hydro	1.03	0.0783	n/a	n/a

Table 3: "Not to exceed" caps and prices as bid under phase 1 of the REIPP Programme. (Exchange rates as at 9 August 2013, 1 EUR = 13.1543 ZAR)

Phase 1 of the REIPP Programme attracted 53 bids. 28 preferred bidders were announced for projects comprising 1,275MW of installed capacity and were required to reach financial close by November 2012. The competitive bid process under the REIPP Programme has resulted in reduced tariff prices bid for phase 2 projects, and this downward trend of tariff pricing is expected to continue in phase 3 and subsequent phases. At time of writing, the bid submission date for phase 3 is expected to be in August 2013, with financial close expected to occur in July 2014.

In addition to the competitive bid process, the design of the REIPP also differs from the Japanese FIT in a number of other respects. Firstly, the amount of energy eligible to be installed and produced under the REIPP is subject to an overall cap and an approximate cap for each technology, whereas no caps are set (at least formally as yet) under the Japanese FIT. Secondly, the duration of the PPA available is the same for all technologies under the REIPP Programme (20 years) but differs by technology under the Japanese FIT and ranges between 10 – 20 years. Thirdly, the PPA under the REIPP Programme is non-negotiable, whereas the model form PPA released by the METI may be amended. Finally (but among other issues), there is a strong focus on and requirements for local content, ownership and investment as key non-price criteria for selecting bids under the REIPP Programme. This reflects the differing socio-economic positions of South Africa and Japan, with the latter placing minimal restrictions on foreign investment other than requirements to comply with the *Foreign Exchange and Foreign Trade Act*. It is interesting to note that the major US$109 billion renewable energy procurement program in the Kingdom of Saudi Arabia is also planned to be based on competitive bids with local content requirements.

CONCLUSION

Almost 1 year into its operation, the Japanese FIT appears to provide an excellent example of the effectiveness of a well-designed feed-in tariff scheme to kick-start investment in renewable energy by providing developers with a generous and legally-enforceable right to be paid specified returns over a sufficiently long period. It has certainly achieved the initial desired effect with interest and activity high (including from international developers – some of whom have been busy in South Africa and are now re-focusing on the Asian market). The next two years should see significant developments coming to market. It will, however, remain to be seen how long the buoyancy of the Japanese FIT can continue in the face of changing conditions in the global economy and renewable energy sector.

For further information please contact:

AUSTRALIA

Stephen Webb
Partner and Head of Renewable Energy & Climate Change, Asia Pacific
T +61 7 3246 4208
stephen.webb@dlapiper.com

Damian McNair
Head of Finance & Projects, Asia Pacific
T +61 3 9274 5379
damian.mcnair@dlapiper.com

Tony Holland
Head of Banking & Finance, Asia Pacific
T +61 3 9274 5588
tony.holland@dlapiper.com

Bill Glover
Partner
T +61 3 9274 5255
bill.glover@dlapiper.com

Carrie Follas
Partner and Head of Forestry Group Asia Pacific
T +61 2 9286 8175
carrie.follas@dlapiper.com

THAILAND

Supreedee Nimitkul
Partner
T +66 2686 3585
supreedee.nimitkul@dlapiper.com

JAPAN

Koji Ishikawa
Partner
T +81 3 4550 2825
koji.ishikawa@dlapiper.com

HONG KONG

Carolyn Dong
Partner & Head of Energy, China
T +852 2103 0505 / **T** +8610 6561 1788
carolyn.dong@dlapiper.com

Robert Caldwell
Partner
T +852 2103 0536
robert.caldwell@dlapiper.com

Heng Loong Cheong
Partner
T +852 2103 0610
hengloong.cheong@dlapiper.com

Jolyon Ellwood-Russell
Partner
T +852 2103 0516
jolyon.ellwood-russell@dlapiper.com

SOUTH KOREA

Daniel Lee
Partner
T +82 2 6270 8899
daniel.lee@dlapiper.com

CHINA

Nicolas Groffman
Partner
T +8610 6561 1788
nicolas.groffman@dlapiper.com

Kewu Li
Associate
T +8160 6561 1788
kewu.li@dlapiper.com

www.dlapiper.com