



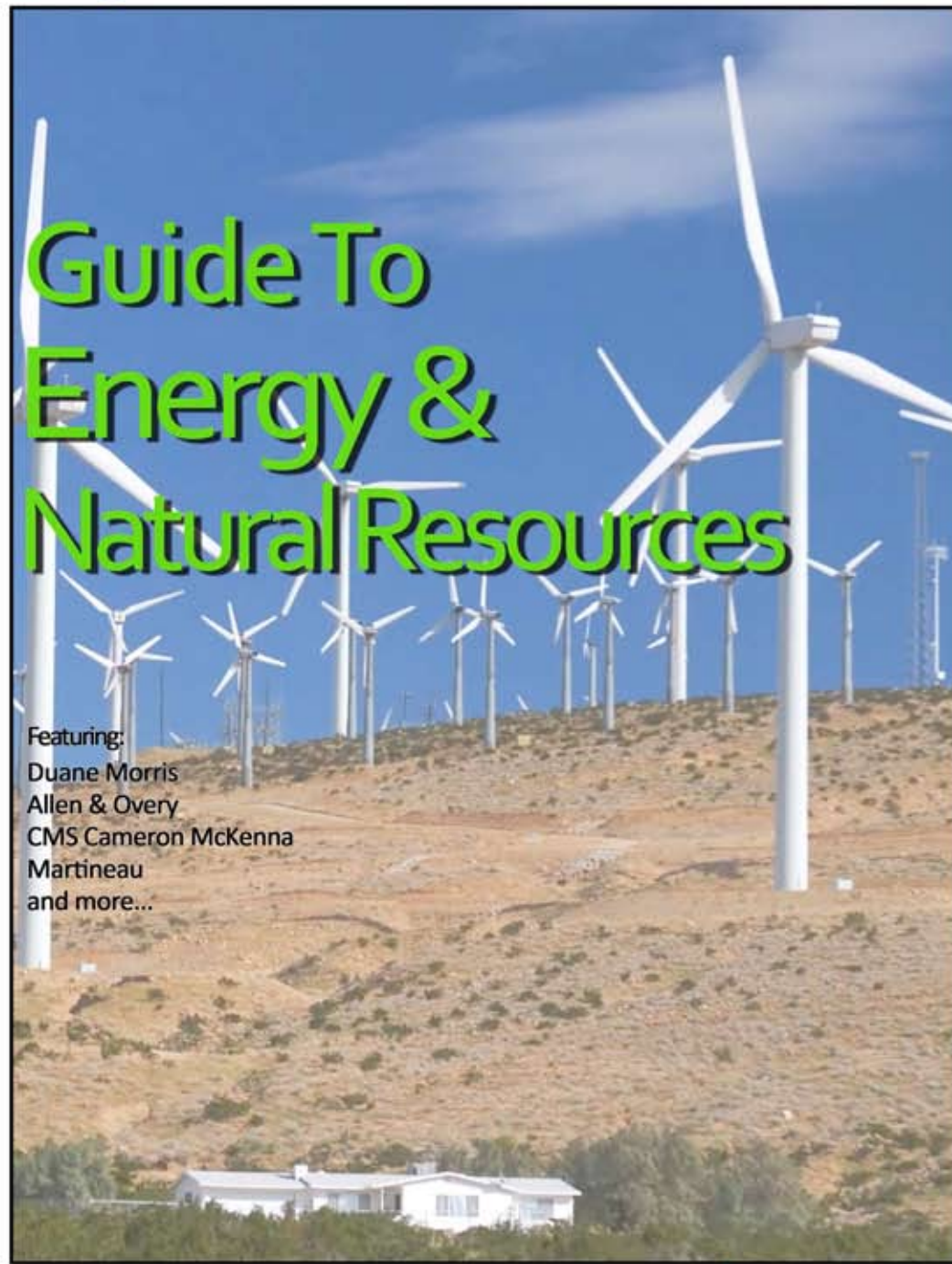
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Energy & Natural Resources

June 2011



Guide To Energy & Natural Resources

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Introduction

By Jake Powers

2010 was quite a year for the Energy industry and one that will stay in the memory of many. We witnessed major headlines across the globe that at times filled us with optimism; unfortunately the periods of productivity were joined by disaster. In April we were hit with the BP oil spill in the Gulf of Mexico; it flowed relentlessly for three months and has become the largest accidental marine oil spill in the history of the petroleum industry. In July, China overtook the U.S. to become the number one energy consumer in the world. Coal powered their economy and generated over 80%¹ of China's electricity.

In July, construction commenced in California on the world's largest wind project, the 1,550 MW Alta Wind Energy Centre. This project highlighting the importance wind energy will have in the coming years. More positive news followed in September when Petrobras, a Brazilian oil company set an all time record with a public offering of shares valued at U.S. \$67 billion.

This year (2011) started with President Obama pledging his support to clean energy technologies with a target to double the share of electricity from clean energy sources by 2035. But in March another disaster hit when an explosion occurred at the Fukushima Nuclear Power Plant, the event triggered by a 9.0 magnitude earthquake.

Statistics

Global energy consumption in 2010 reached a record high of 12,852 Mtoe², a growth of over 5% in comparison to 2009. It has been suggested this increase was a product of two principal reasons; Industrialised countries that experienced decreases in energy demand in 2009 recovered in 2010 with oil, gas, coal and electricity following a similar trend. Secondly, China and India both continued their augmented demand for energy. China, the U.S. and India consumed 2,493, 2,249 and 692 Mtoe respectively².

Global 2010 figures:

* Oil demand hit 88.3 million barrels a day in the third quarter of 2010.

The developing world led with gasoline demand rising 8% in China and 11% in India³

* Coal consumption was 4,558,273,000 billion short tons a year, with China consuming over 1,310,000,000 billion short tons²

* Natural Gas consumption hit 3,321 bcm (billion cubic meters) which was a 7.7% increase on 2009. The U.S. was the number one consumer with 682bcm, followed by Russia with 460bcm and China with 112 bcm²

* Electricity consumption rose to 18,330 TWh which was a 6% increase on 2009. The U.S. was the biggest consumer with 3,901 TWh, China was second with 3,625 TWh and Japan third with 964 TWh²

* Nuclear power provides about 14% of the world's electricity, almost 24% of electricity in OECD countries, and 34% in the EU. An interesting thing to note is that its use is increasing⁶.

* Renewable energy investment was U.S. \$1.4 trillion and is set to increase to \$5.1 trillion by 2020. Currently 13% of the world's energy is provided via renewable resources with this percentage predicted to improve given the investment into the sector⁵

Forecasts

The U.S. Energy Information Administration has forecasted world oil consumption to rise by 1.7 million barrels per day to 88.43 million bpd this year, increasing the monthly estimate by 300,000 bpd which was predicted in May. There is also little support for the suggestion that energy consumption will slow down in the near future, this furthered by new projects being green lit at a frequent rate.

Currently electricity demand is increasing twice as fast as overall energy use and is likely to rise 76% by 2030⁶. Over the next twenty years the world will need a greatly increased energy supply, especially in cleanly-generated electricity.

Given the level of investment into areas such as renewable energy and no sign of China or India's energy demands slowing, 2011 could be another record year with bigger things to come...

1 - http://www.nationmaster.com/graph/ene_coa_con-energy-coal-consumption

2 - <http://yearbook.enerdata.net/natural-gas-consumption-in-the-world-2010.html#/2010-energy-consumption-data.html>

3 - http://money.cnn.com/2010/12/10/news/economy/oil_demand_prices/index.htm

4 - <http://www.world-nuclear.org/info/inf16.html>

5 - <http://www.hvnplus.co.uk/news/global-renewable-energy-sector-to-grow/8615264.article>

6 - <http://www.world-nuclear.org/info/inf16.html>



1 - May 2011 - Nigeria signs agreements with foreign energy partners to help meet its expanding power sector

2 - April 2011 - U.S. power generator Exelon purchases renewable energy producer Constellation Energy.

3 - March 2011 - An explosion occurs at the Fukushima I Nuclear Power Plant after damages caused by an 9-magnitude earthquake.

4 - March 2011 - Gazprom acquires the giant Kovykta gas field.

5 - February 2011 - President Obama supports clean energy technologies and aims to double the share of electricity from clean energy sources by 2035.

6 - December 2010 - Turkmenistan, Afghanistan, Pakistan and India sign an intergovernmental agreement on the Trans-Afghanistan Pipeline.

7 - September 2010 - Brazilian oil company Petrobras sets the all times record in a public offering selling new shares worth US\$67 billion.

8 - July 2010 - Construction of the world's largest wind project, the 1,550 MW Alta Wind Energy Centre in California, starts



9 - July 2010 - China overtakes the US to become the world's biggest energy consumer

10 - June 2010 - Shareholders of XTO Energy approve a merger with ExxonMobil.

11 - June 2010 - The first natural gas liquefaction plant in South America, Peru LNG, is inaugurated.

12 - June 2010 - The Abu Dhabi Future Energy Company cooperates with Spain's Abengoa Solar and France's Total S.A. to build the Shams solar power station, the largest solar power station in the world.

13 - May 2010 - Acquisition of Nord Pool by NASDAQ OMX is approved.

14 - April 2010 - BP oil spill in the Gulf of Mexico, becomes the largest ever accidental marine oil spill in history.

Energy – Where Is the Vision?

By Sheila Slocum Hollis

The energy industry is one of the most sophisticated, heavily capitalized, and technologically advanced industries in human history. Now, as an absolute essential component to our survival and progress, it continues to be confounded and challenged by natural disasters, man-made disasters, brutal partisan and regional politics, overall economic conditions and persistent international disputes. The past 18 months alone have left the industry reeling from an unprecedented economic downturn and financial chaos, continuing wars in the Middle East, the Gulf oil spill, a major coal mine disaster and the still unfolding Fukushima crisis.

How do we prepare for the next step? Do we consult the methane-inhaling Oracles at Delphi? Do we deal the Tarot cards? Do we look to the stars? Do we read the tea leaves or examine goat entrails? Sometimes it seems we need to do all of these things to have a glimpse as to what the next challenge will be for the energy industry.

Never has the need for strong, smart, energy supply and delivery systems been more urgent. All areas of the industry -- oil, gas, nuclear, coal, and renewables -- are faced with technical challenges and operate in a political environment unsurpassed for fractiousness. Huge financial and physical consequences are around every corner. The system still pits one segment of the industry against the other—coal vs. nuclear; natural gas vs. wind; solar vs. other renewables. All of the energy wars are being waged at a time when the world needs to develop, replace, modernize and expand the energy infrastructure while addressing a monumental series of environmental problems. At the epicenter of the debate for at least the past fifteen years is the issue of controlling greenhouse gases. And, to complicate the issue further, concerns regarding greenhouse gas emissions must be simultaneously weighed against safety and sitting concerns for nuclear, natural gas and certain renewables.

Thus, it is a schizophrenic time for the energy world. This moment in history cries out for bold action, but there is confusion and division. So, where do we turn and upon whom may we rely? Presidents, Nobel laureates, princes and priests do not have facile solutions. The industry, the environment and consumers were dealt stunning blows in recent times—but what core principles may we look to moving forward? I would suggest the following:

Safety and security:

Without these fundamentals in place, few reasoned decisions on energy policy can be made. Deep dives on safety in the nuclear, oil and gas, and coal industries must not be a short-term reaction to recent events, but an essential, ongoing commitment by the industry and those who oversee it. There must be buy-in by boards, shareholders and consumers, who ultimately will bear substantial financial responsibility for assuring a safe and secure energy industry. An essential component of this element is a true commitment to reducing greenhouse gas emissions.



Access to energy:

Energy availability is becoming a human rights issue. Supplying energy to disadvantaged sectors of the population is critical to social and economic welfare. Reliability, just and reasonable charges, and non-discriminatory practices are bedrock principles that should be invigorated and applied.

Immediate attention to environmental concerns:

We must give prime importance to environmental issues, taking into consideration needs for employment, costs of implementation, equality of impacts, and feasibility. We should pick the low-hanging fruits—green building, retrofits, and a return to the old notion of conservation. Expansion of “clean” energy (as defined in a rational manner) should be pursued as rapidly as possible.

Commitment to research and development:

This must occur across the spectrum of energy supply choices. Improvement in existing extraction, transportation, and utilization, including “smart grid”, are necessary. Instead of decrying our existing energy options, the industries must find approaches that allow a full slate of possibilities, with enough flexibility to provide energy for all our needs, at manageable prices and with reasonable returns.

Passion for progress:

The desire to create innovative solutions and seize future opportunity should be preached from every energy pulpit. It is time to embrace all the good that has been accomplished by energy industries, and address the sins of the past, while building a new energy world for generations to come.

Sheila Slocum Hollis is chair of the Washington, D.C. office of Duane Morris LLP and serves on the firm's Executive Committee and Partners' Board. She was the founding managing partner of the firm's Washington office and it's Energy, Environment and Resources practice.

Ms. Hollis specializes in domestic and international energy and environmental matters, representing governmental bodies and the energy industry in some of the most groundbreaking issues of the day. She is recognized by Chambers Guide (2008-present) and is AV® Preeminent™ Peer Review Rated by Martindale-Hubbell. Recognized by the National Law Journal as one of the nation's top energy lawyers, and by various organizations for her expertise in oil, gas, and electric law issues, she was the first woman President of the Energy Bar and was Chair of the American Bar Association's Section of Environment, Energy and Resources.

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Sorting through the politics and environmental legal issues associated with wind energy developments in the United States

By Steven Miano

Something seems terribly awry with the siting and development process for wind energy projects in the U.S. Wind projects are, by and large, construction projects. They require the construction of access roads and small pads on which turbines are erected. Wind projects involve little or no water use, few if any chemicals, and virtually no waste disposal. Moreover, few if any greenhouse gases are released in the construction process and none are released during operation. Yet, despite their relative simplicity, wind projects in the U.S. can take many years to permit. By contrast, and by way of example, Marcellus Shale gas development projects in certain eastern U.S. states can be permitted in as few as six months. This is the case despite the fact that such gas drilling projects involve the construction of access roads, the construction of 5-10 acre well pads and waste lagoons, the withdrawal of millions of gallons of water from nearby resources, the injection deep into the ground of millions of gallons of water containing unreported chemicals, and the management and disposal of millions of gallons of contaminated return flow wastewater. Such projects also release greenhouse gases into the environment.

To be sure, the development of Marcellus shale is necessary to meet the U.S. appetite for energy. Moreover, there is a great deal of misinformation and hype surrounding some of the environmental and health effects of Marcellus shale projects. However, even the unimpassioned observer recognizes the broader environmental footprint inherent in oil and gas projects when compared to wind projects. Why then is there such a divide in the regulatory/permitting processes? The answer has a great deal to do with money and politics.

Money and Politics

Money and politics are often inseparably intertwined. Unquestionably, the traditional energy sector commands significant political access in Washington. Such access was instrumental in the enactment of the Energy Policy Act of 2005. Portions of this law broadened existing exclusions from key federal environmental laws for oil and gas drilling projects, including the Clean Water Act's construction stormwater permitting program, the Safe Drinking Water Act's underground injection control program, and the National Environmental Policy Act's (NEPA) review process (for which a rebuttable presumption in favor of exempting oil and gas projects was created). No such exemptions are applicable to wind projects.

Money can also influence general public opinion, which in turn influences politics. For example, Marcellus gas projects typically pay significant leasing fees and royalties to landowners in exchange for the right to drill. Landowners can be paid many thousands of dollars per acre for an initial lease. Marcellus projects also generate economic benefits to many local communities through the job creation, and development of local infrastructure necessary to support the industry. These economic benefits translate into broad political support for the industry within these communities.



Even those who are negatively affected are less likely to protest. By contrast, wind projects provide relatively modest lease payments and royalties. This is due to tighter profit margins resulting from the lengthy permitting process, expenses associated with the transmission of power from remote locations, and the temporal variability of the wind resource itself. Community objections to wind projects can be significant and tend to focus on visual aesthetics, concerns about turbine noise, and effect on local birds and bats. Studies undertaken by wind energy groups show that wind projects actually result in far fewer bird/bat deaths than traditional power generating operations. One critical difference however, is that deaths from wind farms are quite obvious. Deaths from other power sources are not.

Legal Issues in Wind Project Permitting

Wind projects are subject to very extensive permitting processes at both the federal and state level. Applicable laws vary depending on whether the project is land based or off shore. Land based projects require the construction of temporary and permanent access roads, small pad sites that house wind turbines, and linear transmission lines. Targeted tree removal is part of the process. Because land based wind farms are built in locations with the best wind resource, typically along remote ridge lines, construction invariably involves crossing small streams and wetlands. As a result, state and federal wetlands and stormwater permits must be obtained. State permitting programs will usually trigger reviews of state protected species. In cases involving federal action (e.g., federal wetlands permits and federally funded projects), NEPA review is triggered, including Environmental Assessments and, if necessary, Environmental Impact Statements. Should your project be located in an area containing federal listed endangered species, the federal Endangered Species Act will trigger impact studies, impact minimization and incidental take permits (allowing the incidental killing of a listed species). Should your project potentially impact migratory birds, review under the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act will be triggered.

Offshore wind projects trigger reviews and approvals under additional laws, including the Submerged Lands Act, the Rivers and Harbors Act, and the Marine Mammals Protection Act.

Both land based and offshore wind projects require significant coordination among many state and federal permitting agencies. A wind project triggering ESA and NEPA reviews can take 4 or 5 years to permit, even without litigation.

Conclusions

Wind energy has the potential to contribute significantly to power generation in the U.S and to reduce greenhouse gas emissions in the process. However, the permitting process assures disproportionate treatment of wind projects compared to oil and gas projects, which translates into vastly higher costs for permitting wind farms. It is incumbent on state legislatures and Congress to level the playing field for wind projects.

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A Great Time to Invest in Canadian Electricity Projects

By Andrew J. Roman

In 2008, singer Kenny Chesney had a big hit with his recording of “Everybody Wants to Go to Heaven” (but nobody wants to die). We can all smile at the humorous contradiction in the title of the song, yet our attitudes in other areas of our lives may be equally irrational. An excellent illustration of irrational hope is found in public attitudes towards electricity. Everyone wants their electricity to be reliable and “green” – that is like going to heaven. But nobody wants to pay for electricity that is costly (green power) – that is like dying.

Much of the Western world’s power generation is approaching the end of its useful life and will need to be replaced, just to maintain the present level of supply; and there is also a need for expansion. In many European countries the price of electricity has been considerably higher than in North America, so their economies have adapted to such prices, but North American prices, traditionally relatively low, are rising, and are poised to rise more rapidly. This is partly because of historical underinvestment in generation capacity, which now needs to be corrected, and, more recently, partly because of large government subsidies for high cost, small-scale hydroelectric, wind and solar projects. As these projects are constructed and connected to the grid, their much higher cost per kilowatt-hour will be injected into electricity pricing. Sticker shock in electricity is coming to North America.

Nuclear power has no greenhouse gas emissions, and so it might be classified as green power, yet opposition to it from environmentalists is probably the most aggressive of any form of power generation. That may be why Germany is planning to phase out its nuclear generation. The serious incident at the Fukushima Daiichi nuclear power plant in Japan on March 11 of this year has made it more difficult to attract investment for nuclear generation everywhere. Hydroelectric generation is also green, but the large dams frequently required to generate it have serious environmental consequences, are risky if constructed in earthquake areas, and often require long and costly transmission lines to bring the power to market. Coal, which is abundant, inexpensive and capable of having very low emissions with current technology, faces such strong popular objections that it is being phased out entirely in Ontario, Canada’s largest province. Even wind generators are frequently opposed by local residents on grounds of noisiness and “visual pollution”. Only solar panels seem to have no strong opposition (at least, not yet), but solar power is far too expensive and intermittent to form the majority of any nation’s generating capacity.



Canada still has large undeveloped hydroelectric resources, good wind power sites on both the Atlantic and the Pacific coasts and at certain inland locations, and government support for wind and solar power projects. As well, the regulatory approval processes for environmental and licensing approvals have been streamlined, both federally and in the major provinces. The time required to obtain regulatory approvals, and the difficulty in overcoming local objection to any new power generation are less severe in much of Canada than they are in much of the US, with its strong constitutional protection of property rights. A shorter interval between capital investment and the beginning of revenue receipt reduces project financing costs and increases profitability.

Much of the nuclear capacity in Canada is owned by the Ontario government corporation Ontario Power Generation. Some of these generators are aging and need to be replaced, preferably with public-private partnerships in joint ventures. New nuclear generation in many countries receives some government support, and Canada is no exception. Even in Alberta, with abundant coal, and in Quebec, with abundant hydro capacity, new nuclear power stations are being actively considered.

Canada is well-positioned to be part of the US power supply solution. Most Canadian provinces are inter connected with US electricity grids, and frequently, export power to the US. As US demand grows, Canadian generation, located close to the US border, is likely to provide an even larger share of the US supply. Canadian generating capacity must also expand to meet Canada’s growing domestic needs. Provincial governments that own large generating capacity (like British Columbia, Ontario and Quebec) are increasingly turning to private power generation to make their markets more competitive, thereby allowing private rather than public debt to finance this capacity expansion.

Canada’s banks, insurance companies and investment dealers have all survived the recession well, and, unlike US financial institutions, needed no government bailouts or loans. They continue to lend to financially strong borrowers. Several of these financial institutions have specialized units that focus on the electricity industry. With readily-available debt capital, there are excellent investment opportunities for both domestic and foreign investors.

An investment in the Canadian electricity industry does not guarantee financial heaven. Nor is it likely to be a leading cause of death. However, the level of risk in the Canadian energy investment environment, compared to some other jurisdictions, is relatively low, and there are good returns to be obtained.

Andrew J. Roman is a Partner at Miller Thomson LLP in Toronto. Andrew has over thirty years experience in all aspects of electricity law and policy in Canada, and with all forms of electricity generation and transmission and distribution. He has worked on electricity files related to compliance with electricity legislation, regulatory approvals and financing. Mr. Roman has advised clients from outside of Canada on proposed investments in the electricity industry in Canada.

Mr. Roman is a frequent conference speaker or chair at energy conferences. He has been a seasonal lecturer at four law schools and, in 1998, held the visiting Chair of Natural Resources Law at the University of Calgary.

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Recent developments in the Canadian renewable energy sector

By Chad Eggerman, Energy Lawyer at WMCZ Lawyers - Mediators

Recent international attention has focused on the province of Ontario's successful and pioneering feed-in-tariff (FIT) program which was North America's first comprehensive guaranteed pricing structure for renewable electricity production. However, developers have been recently turning their attention to opportunities in the Western Canadian provinces of British Columbia, Alberta, Saskatchewan and Manitoba.



British Columbia, the westernmost province, has significant hydro resources and there are considerable opportunities for run-of-river projects which are being developed. Recently, BC Hydro, the third largest utility in Canada has revised its Standing Offer Program (BC SOP) for smaller-scale renewable energy projects. Important changes in the BC SOP include increasing the maximum project size to 15 MW and increasing the program's fixed prices by 14-29%. The price increase varies from \$12 CAD/MWh to \$22 CAD/MWh (all prices are current as of June 23, 2011) depending on the region, with the price increases being greater for those regions further away from the Lower Mainland (greater Vancouver area). These regions benefit from a reduced cost estimate for transmitting energy to the Lower Mainland load centre. Peak pricing is \$103.69 CAD/MWh in the Lower Mainland area with a low of \$94.86 CAD/MWh in the Peace Region. There will be no differential pricing based on technology. BC Hydro estimates that the new pricing will attract a cumulative total of approximately 1,000 gigawatt hours (GWh) per year of energy over two years under the BC SOP.

The BC SOP does not have a quota or cap on development. British Columbia has announced plans to introduce an Ontario-style feed-in-tariff in late 2011 which is expected to further increase the pace of development in the province.

The province of Alberta, east of British Columbia, is a merchant market, unlike the rest of the Western Canadian provinces. This market provides many opportunities for developers with experience in such markets. There are a number of wind energy projects in operation and being developed, the most recent of which is the 300 MW Blackspring Ridge I Wind Project which is scheduled to be commissioned in 2012-13. An interesting trend in Alberta, which has considerable oil and gas reserves, is the move by oil and gas companies into renewables. For example, the Canadian energy company Suncor has been investing in wind power for a number of years and continues to increase the pace of investment. Suncor currently owns 147 MW of generation and has another 108 MW under development, including the 88 MW Wintering Hills project located near Drumheller, approximately 125 kilometres northeast of the city of Calgary. This project will be commissioned in 2012 and is owned jointly by Suncor and Teck Resources, a Canadian mining company.

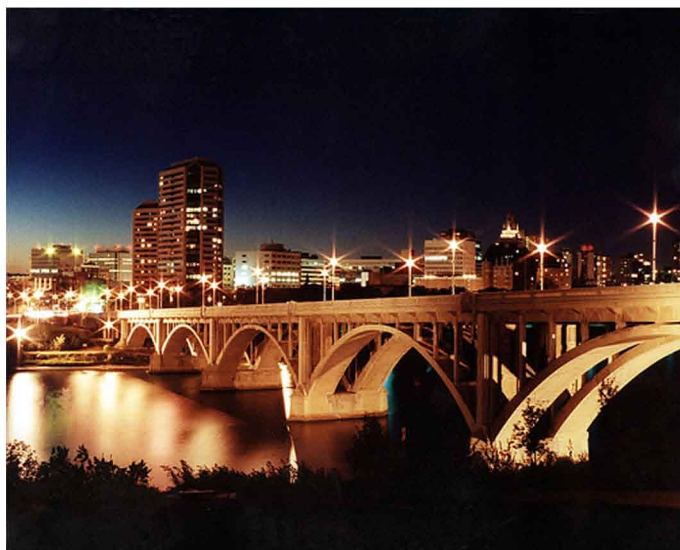
The province of Saskatchewan has been getting the most attention recently as developers are starting to realize the vast potential. Saskatchewan has the best annual photovoltaic (PV) potential in Canada with the Southern part of the province potentially having up to 1400 kWh/kW. The PV potential in Saskatchewan far exceeds that in Ontario where 400 MW of solar PV has been already awarded contracts under the Ontario FIT. Saskatchewan also boasts the best onshore wind regime in Canada and significant biomass resources. SaskPower, the provincially-owned utility, has been working with independent power producers (IPPs) to take advantage of the abundant wind, solar PV and biomass natural resource in the province. SaskPower issued an RFP in 2010 for 175 MW of wind power. The winner will be announced in 2011. SaskPower also has an annual lottery program called the Green Options Partners Program which provides power purchase agreements (PPAs) to IPPs for 50 MW of renewable energy generation each year. The Southern half of the province which is largely flat agricultural farmland has an excellent wind resource and developed transmission. Many anticipate that Saskatchewan will emerge as the Canadian leader in wind energy in the future.

SaskPower and various First Nations groups in Saskatchewan have recently established the First Nations Power Authority (FNPA) to assist the province's First Nations advance their power generation projects by providing for a more streamlined process to help move their projects forward. Supported by various First Nations with existing or imminent power projects, the FNPA will be a non-profit, membership-based corporation. It is expected the FNPA will provide the framework for the first utility-scale community projects in the province. It is believed that up to 400 MW of new generation has been reserved for First Nations renewable energy projects in Saskatchewan. European biomass developers have already entered the market in Saskatchewan and are forming partnerships with First Nations in order to develop biomass projects in the heavily forested Saskatchewan North.

Saskatoon Light & Power, an independent electric utility in the City of Saskatoon, Saskatchewan is also working on a very innovative proposal for a Green Energy Park at the landfill in the City of Saskatoon. The plans include a number of renewable and low impact electrical generation facilities, including a Tall Wind Turbine, Landfill Gas Power Generation Facility, Turboexpander Power Generation Facility and potential to add fuel cells, heat recovery and solar power generation in the future. Subject to city council approval, it is anticipated the utility-scale wind turbine project will move forward in fall 2011.

Manitoba Hydro, the provincial utility in the province of Manitoba, is emerging as a hydroelectric superpower, taking advantage of their significant hydro resources and proximity to large markets in the U.S. Manitoba Hydro is developing many innovative hydro projects such as the 200 MW Wuskwatim project. The Wuskwatim project is pioneering as it is being developed as an equity partnership between Nisichawayasihk Cree Nation and Manitoba Hydro. This is the first time Manitoba Hydro has entered into an equity partnership with a First Nations community on a generation project of this size. If successful, it is expected that the Wuskwatim project will be a model for other First Nations renewable energy projects in Western Canada. The Wuskwatim project is scheduled for completion in 2012 at a cost of \$1.3 billion CAD.

In June, 2011 Manitoba Hydro and Minnesota Power signed a 250 MW Power Purchase Agreement which includes a unique provision whereby Minnesota Power can transmit electricity generated from their wind farms in the U.S. state of North Dakota to the Canadian province of Manitoba where it will be “stored” in Manitoba Hydro’s hydroelectric reserves. When Minnesota Power transmits electricity northward to Manitoba, Manitoba Hydro will absorb it into its system – in essence storing the wind power, using the Manitoba system as a rechargeable battery. Minnesota Power will complete the second phase of its 82 MW Bison 1 Wind Energy Center in fall 2011 and recently announced its intent to build Bison II, an additional 105 MW, \$170 million USD wind farm in North Dakota. Manitoba Hydro plans to construct two new hydroelectric stations on the upper Nelson River near Hudson Bay: the Keeyask and the Conawapa installations. The new hydro facilities would add another 1930 MW of electricity to the Manitoba Hydro system.



Given the abundance of renewable natural resources, sparse population, well-developed existing transmission and reliable regulatory processes, development of renewable energy projects in Western Canada is expected to continue to increase in the future.

WMCZ provides legal services from offices in Saskatoon, Canada, including structuring, risk assessment, construction, assistance in obtaining capital and contractual arrangements for all energy undertakings.

Chad Eggerman has experience in renewable energy projects and represents both domestic and international developers of renewable energy ventures in Saskatchewan, Canada and the United States. Chad can provide advice to developers and investors in wind, solar (PV), hydro, biomass, biogas, carbon capture and ethanol projects in Canada. Chad also provides advice to those involved with carbon trading - including aggregators and emitters.

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For further information see www.RenewableEnergyLawyer.ca and www.wmcz.com.



Mexico's oil & gas market: promising prospects

By Rogelio López-Velarde and Jorge Jiménez

E&P: A multiplying effect of gradual opening

For decades, Mexico's oil and gas upstream industry has been living out of shallow water mega-fields in the Gulf of Mexico, which used to produce, at very low costs and relatively simple geological challenges, vast amounts of hydrocarbons. As the Cantarell mega-field started to decline 5 years ago the long-awaited reform to the Mexican energy sector became more urgent. With considerable political discussion, Mexico was able to pass an energy reform back in 2009 that only now is seeing its first major developments materializing. For the first time in Mexico's E&P recent history, Petróleos Mexicanos, commonly known as Pemex – Mexico's national oil company – is changing in business structures and paradigms, and has launched, through its E&P arm Pemex-Exploración y Producción, the first round of contracts where contractors will work on incentive-based and production-level oriented structures. For the first time in decades, Pemex will be awarding, as soon as this coming August, 25-year long term contracts where the contractor will be paid for production on a per barrel fee basis (plus a partial reimbursement of expenses incurred in evaluation, development and production), with broad liberty for contractor's operation on its designated sector (with only general oversight from Pemex). In the past, the upstream business in Mexico was oriented towards piece-meal contracts for specific services (drilling, fracturing, seismic, cementing, well completion), where contractors were paid by Pemex on unit prices based on work completed. Whether or not a well was productive, a dry well or due to drilling techniques its production was not optimal or was not relevant. No alignment of interests existed.

Pemex is implementing this new model of awarding blocks, on a first stage, in mature fields that had been abandoned or with very low production for many years. Contractors will take over current operations, will be required to satisfy a minimum investment level in evaluation in the first two years, followed by production commitments for further stages and are expected to drastically increase production in these blocks. Following the first round of the Carrizo, Santuario and Magallanes blocks in the State of Tabasco, in the South Region of Mexico, Pemex will launch the second round as soon as fall of this year, and is expected to award more than 20 blocks by the end of 2012. The new structure is expected to revolutionize not only the manner of doing business with Pemex, but the upstream industry as a whole, whereas now the oilfield service companies, drillers and service providers in general will have several reputable operators to provide services to in Mexico, as opposed to a rigid one-client, unit-price based market subject to rigid government procurement rules. One may expect this scheme, if successful, to set up ground for more innovative schemes and additional steps in the near future for offshore work, and ultimately, for deepwater exploration and production.

Downstream: A boost to development for natural gas

On the other side, the downstream natural gas industry is also warming up considerably. Two components play a role in the growth equation:

(1) On one hand, following its IPP program success, in the last few years Mexico's vertically-integrated power utility – CFE – anchored the development of three LNG terminals: Altamira, Costa Azul and Manzanillo. CFE structured long-term, take or pay contracts successfully built and operating under proven project finance structures.



With the financial community already comfortable with CFE risk and contractual structures, CFE will now continue to grow its foothold in the gas industry by anchoring development of three major gas pipelines. The Chihuahua Pipeline (a 30 inch, 385 kilometers line from the US border), and the Tamazunchale-Sauz Pipeline (a 30 inch 200kms line from San Luis Potosí to Queretaro) are expected to join in the upcoming weeks and months, respectively, but both within 2011, the already launched Morelos Pipeline, a 30 inch 160 kilometers pipeline running a route from the state of Morelos to the states of Puebla and Tlaxcala. The project is divided in two stages. The transportation pipelines will all be anchored with long-term, take or pay Transportation Services Agreements, fully bankable on a project finance basis. CFE's experience in managing risks between contractor and CFE is expected to successfully allow their construction, operation and finance, and are likely to attract relevant players industry-wide.

(2) Mexico's federal Energy Regulatory Commission (Comisión Reguladora de Energía) (known by its acronym as the CRE), which regulates the provision of natural gas transportation, storage and distribution services, as well as the supply of domestically-produced natural gas by Pemex (the so-called first hand sales) has recently approved a new model of transportation rate which includes a roll-in component for new pipelines being integrated to the National Pipeline System (Sistema Nacional de Gasoductos). This change is aimed at facilitating and fostering the financing and anchoring of new transportation lines (for looping and covering additional areas) in many routes where current pipeline capacity is at its peak. Coupled with that, the CRE is finally driving Pemex to exit a long transition that will force pipeline users to independently reserve transportation capacity and purchase the gas supply through different contracts. Transition mechanisms include a first round of allocation of capacity based on historical consumption of existing users (the so-called vested transportation rights or DATs), followed by an open season to allocate spare capacity, if any. One may expect that following such allocation, potential shippers demanding additional capacity will start to look and push for development of additional pipeline capacity.

López Velarde, Heftye y Soria, S.C. is widely considered by firm ranking services, international law firms and industry players as the undisputed leader in legal services in the energy industry in Mexico. LVHS expertise and hands-on experience in successfully implementing projects in the sector involve not only a leading-edge practice on the regulatory side (permitting, government procurement), but also contractual structuring and negotiation, labor structures, real estate issues and highly specialized project finance packages with the domestic and international lending community. Its practice covers the full range from upstream oil and gas, to downstream services and power.

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Mexico's renewable energy market

By Edmond Grieger



Considered one of the largest economies in Latin America and located in a privileged geographical location to expand and support the exploitation of renewable energy, Mexico plays a big role in the sustainable development of the region, however, most energy is actually obtained from fossil fuels and therefore a big task is still ahead of the country in this sector.

Business opportunities are currently arising from renewable energy projects, primarily from wind, solar, biomass and biofuels. In this regard, expectations of further opening on this market in the face of worldwide demand are growing every day.

In accordance with the most recent information published by the Federal Commission for Energy Regulation (CRE), around 76% of the energy in Mexico is generated from fossil fuels; the second most important source is the hydroelectric with 19%, whereas only 3% is produced from renewable sources and 2% from nuclear plants.

The energy legal framework has experienced several important modifications in the past few years and has provided a clearer legal background for foreign and national investors looking towards this expanding green business in the country. The renewable energy framework is found in the Political Constitution of the United Mexican States, the Law for the Public Service of Electrical Energy (1975), and more recently with the Law for Sustainable Exploitation of Energy (2008) and its Regulations (2009), as well as the Law for the Exploitation of Renewable Energy and Financing of Energy Transition (2008) and its Regulations (2009).

Due to international and national environmental policies, several national strategies and programs have been published by the federal government to set the objectives to be achieved by the state in the short, medium and long run in order to reduce greenhouse gas emissions and increase the capacity of generating energy from renewable resources.

The Special Program for Climate Change (2009 – 2012) provides for a long term vision by reducing green house gas emissions in 50% for 2050, with respect to 2000 emissions. On the other hand, the National Energy Strategy (2010) sets objectives for 2024, where natural gas exploitation should range in 94% and the capacity of renewable energy in 35%.



As mentioned before, there are also short term objectives set forth by the National Strategy for Energy Transition and Exploitation of Renewables (2011). The goals for 2012 are to reduce fossil fuel generation by 4.75% and increase generation from renewable energy by 3.95%.

In connection with the roles played by the government in this sector, we could divide them into policy setting, which is carried out by the Federal Ministry of Energy (SENER), and policy implementation by the CRE and the Federal Electricity Commission (CFE).

The applicable legal framework provides that the rendering of energy services to the population is considered a state monopoly executed through the CFE, though the private sector is allowed to carry out activities, regarding self-supply, cogeneration, small scale generation (up to 30 MW), medium scale generation (up to 500 KW), big scale generation (more than 500 KW), as well as energy export and import.

The most popular trend in this market is to develop renewable energy projects under a self-supply or cogeneration scheme, where joint ventures are incorporated between investors and developers, and the beneficiaries of such schemes are included as minority shareholders of such joint venture schemes. The beneficiaries are usually local government bodies, such as municipalities, governmental buildings, states, as well as a wide branch of companies in the private sector.

To illustrate an example of these schemes, we could mention the BENLESA renewable energy project in the northern State of Nuevo León, which is considered the first renewable energy project in Mexico and Latin America using the biogas from a landfill as fuel.

BENLESA is the result of a joint venture between the private company Bioeléctrica de Monterrey, S. A. de C. V. and the government of the State of Nuevo León. The electric power generated at BENLESA is destined to about thirteen associated public entities, such as municipalities, Monterrey City Metro Station and other public buildings. The BENLESA biogas plant was opened in September 2003. The plant's current generation capacity is 7 MW, and it has recently modified its cogeneration permit to expand its generation capacity up to 12.72 MW.

Provided in the country's renewable regulations, we have several mechanisms to promote foreign and national investment in renewable energy, such as renewable portfolio standards included in the aforesaid national policy; net metering methods and specific models for grid interconnection agreements with the CFE; tax instruments consisting in benefits for the purchase and import of equipment to be used for the generation of renewable energy; as well as a financial instruments such as the National Fund for the Energy Transition and Sustainable Exploitation of Energy.

Another important incentive is the initiative between the Mexican Government, the World Bank and the Global Environment Facility (GEF). The initiative will be supported by a donation of up to USD\$70 Million (in two phases) and aims to compensate for the differences that exist between conventional electricity generation costs and generation utilizing renewable sources.

These instruments, already existing in Mexico, show the efforts the Government is making to develop a market for renewable energy. However, it is uncertain that these measures are sufficient to attract the private investment necessary to reach the renewable energy capacity targets established. On the other hand, we also have several barriers affecting this market, for instance the obligation of the CFE to find the lowest price for the purchase of energy, the deficiency of infrastructure for grid connections, the scarcity of financial mechanisms and other economic incentives for this market.

In spite of the fact that there are still some barriers to investment in the branch, the Mexican renewable market is a fast developing sector which is being significantly supported by the federal government. In this regard, there are several actions to be implemented in order to offer more incentives, as well as to provide the adequate infrastructure and financing mechanisms to boost investments in this rising market.

Edmond Grieger is a senior associate at Von Wobeser y Sierra, S.C., and specialises in environmental and energy law. He provides legal counsel on environmental and energy matters and disputes and has successfully represented national and international clients. He obtained his law degree from the Universidad Anáhuac and a Masters in Law (LL.M.) specialising in environmental and energy law at the Johannes Gutenberg Universität Mainz, Germany. He is a member of the Mexican Bar Association, the Environment and Energy Committee of the ICC, and the Environment and Energy Law Commissions of the IBA.

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Renewable energy projects and legal framework in Honduras

By J. Humberto Medina-Alva

The environment

As privileged as it is with the planet's finest natural reserves, Central America has passed many laws geared to the protection and sustainability of its environment, balancing its efforts toward ensuring economic growth for the region.

Honduras' current monthly energy consumption reaches the 1,200 mw. Energy production is based on thermal source (75%) and hydroelectric means (25%). Lately, other renewable sources, such as biomass, have emerged as alternatives to the actual setup.

The latter increment in oil prices have affected the country's energy matrix in a negative way and have brought upon final users the burden of a higher price for the energy they consume. As a response, the Government and private investors have realized that the current matrix could be reduced to more renewable sources, which in turn will provide energy at a lower cost. Therefore they are seeking for the development, construction and operation of renewable projects to take advantage of renewable energy.



The projects

Recently the National Congress approved more than 40 energy generation contracts with renewable resources, which include hydroelectric, geothermal, and biomass generation projects as well as cogeneration initiatives. It is expected that in the next 5 years the projects will produce some 700 mw of renewable energy and the country will benefit through different levels of installed capacity.

In general, the projects will be undertaken in the next 20 years and will be located in different zones of Honduras like Intibucá, Comayagua, Cortés, Yoro, Santa Bárbara, La Paz, Copan, Atlántida, Olancho, Ocotepeque, Francisco Morazán and Choluteca.

More recently twenty-six projects regarding renewable energy were presented during "Honduras is Open for Business", an international forum, which took place last May in San Pedro Sula, Honduras, focusing on diverse sectors such as energy, infrastructure, agri-business, forestry, maquila services and tourism. These projects represent a total amount of US\$2.663.091.566.00 million dollars. Among those projects are hydroelectric, biomass, hydropower, energy crops and bio-fuel projects.

Many of the mentioned projects are being executed and others are on their way, pending obtaining environmental licenses and other special permits to operate.

Regarding wind energy there is a project located at Cerro de Hula, Francisco Morazán, Honduras, which aims to produce 100 mw and is expected to be the biggest wind energy facility in Latin America. The zone is well known for having periods of strong winds so it has favorable conditions for the development of the plant.

The project represents an investment of US \$130M that will bring great benefits for the country, as well as for the neighboring communities.

Regarding hydroelectric, the Department of Olancho will host three projects to be constructed in the Patuca River named Patuca I, II and III, which will produce 524 mw with an estimated total investment of US\$1,200M.

The above-mentioned projects will reactivate the construction sector in the country employing not only foreign but local workers, which means that a lot of families will benefit from these developments.

On the other hand biomass projects are also under execution, serving as an example the San Andrés Mine project, located in the department of Copán, expected to produce 10 MW of power.

The recent laws

Within the structure of the National Investment Promotion Program, Honduras has defined a new Legal and Institutional framework to attract and protect investments.

By means of this program the country offers domestic and foreign investors a package of laws among which we find "The Law for the Promotion and Protection of Investment" and the "Public Private Partnership Law".

The Law for the Promotion and Protection of Investment the State declares the promotion of investment as a primary concern; it creates mechanisms providing different tax incentives, it grants full guarantees to property rights in the country and enables arbitration as an alternative method for conflicts resolution.

On the other hand, the new Law on Promotion of Public Private Partnership (PPP), adopted in August 2010, allows public-private participation in the implementation, development and administration of public works and services.

In line with the reform of the country's legal framework the past year the country has adopted the following: i. The Secured Transactions Law, with the consequent establishment of the Register of Security Interests and by which a large number of assets may be pledged as collateral for loans; ii. The law for the Strengthening of the Income and Fiscal Equity, which reformed taxes on income and sales; iii. The National Hourly Employment Law, which establishes special working shift arrangements with limited time for work or services.

Honduras has really taken a big step charting a new legal framework for local and foreign investments.



The country is willing to carry out through the domestic and foreign private investment the great social transformation that the country needs to overcome the lack of development that so far has characterized the country.

We believe that this first major step in the country's modern history, requires a true follow up, in order to take full advantage of the momentum and that the present and future governments must show through deeds, not words, their unconditional support for this initiative towards a better country for the benefit of all its inhabitants.

J. Humberto Medina-Alva is a presiding partner at CENTRAL LAW Honduras-Medina, Rosenthal & Fernández and serves as head of the Corporate Practice Team among other practices such as banking, foreign investment, intellectual property, public private partnerships and real estate law.

Mr. Medina-Alva has handled cases regarding the execution of DR–CAFTA free trade agreement, the subscription of contracts with the Government; structured loans for developers and constructors involving millions of dollars, and has been counsel to investors for energy projects regarding the legal framework and due diligences. His peers who resumed him as “a brilliant lawyer and an absolute pleasure to work with as a counterpart” have recognized Mr. Medina-Alva’s achievements throughout his career. He is ranked as one of the best lawyers in Honduras according to Chambers & Partners and IFLR international rankings.

Most recently, he has been elected as Vice President of the Honduran American Chamber of Commerce (AmCham); Vice President of the Official Spanish Chamber of Commerce in Honduras and is the Current Chairman at CENTRAL LAW a law firm consolidated in Central America and Dominican Republic.

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Economical and political environment in Ecuador

By Ec. Juan Felipe Bustamante



Bustamante & Bustamante
LAW FIRM

Economical Environment in Ecuador

During the last decade, Ecuador has seen its economic environment strongly influenced by the financial and economic crisis of 1998-1999, and consequently by the process of currency convertibility through which the country crossed.

The adoption of the United States dollar as the legal currency in January of 2000 removed the monetary exchange risk and stabilized the expectations of the economic agents. Between the years 2000 and 2004, the actual GDP grew at an average rate slightly over 4 percent. Nevertheless, there exists an important difference between the performance of the oil related GDP and that of the non-oil related. While the oil related GDP increased at an actual average rate of almost 10 percent per year between 2000 and 2004, the non-oil related GDP did so at a rate of 3,3 percent.

The economic history in Ecuador has a direct correlation with the trajectory followed by the production and sale of crude oil. During the last four decades, oil has been the economy's main pillar. The substantial increase in the oil's sale price during the last 10 years has been of great support to the currency exchange measure implemented by former president Mahuad.

During the last decade, Ecuadorians have been able to enjoy a stable economy with one of the lowest inflation rates in Latin America. Due to the economic stability and mainly because of Ecuadorians' confidence in the new currency, the US Dollar, we have been able to access credit, and mainly consumer credit which before dollarization was practically inexistent due to the constant change in the political and economical environment.



While dollarization has brought to Ecuador countless benefits, it is undisputable that the dollar has depleted Ecuador's competitive capacity towards neighboring and South American countries. The trade balance in the latter years has evidenced a commercial surplus, which does not illustrate Ecuador's economic reality. Ecuador is currently a country highly dependent on its imports. Should we remove from the equation the high volume of current-market-price oil export, we will recognize that Ecuador's trade balance has quite an important commercial deficit.

The macro economical crisis of recent years and the evident currency depreciation and loss of purchasing power displayed by the dollar, are all unfavorable aspects for the local economy. The lack of a monetary policy in Ecuador, as well as the dilated state budget that Correa's regime has maintained, are some of the reasons explaining the unfavorable economic measures which have been taken in recent years. With no doubt Ecuador requires a strong dollar in order to become more competitive.

Following the most recent negotiation of the oil contracts, as a result of which the Ecuadorian government is the largest beneficiary; a strong investment on behalf of such oil companies will be required in order to comply with the contracts and consequently bring the oil production to the expected levels, which amount to a production of approximately 20% to 30% higher than the current production.

Political Environment in Ecuador

With the electoral victory of Ec. Rafael Correa Delgado in October 2006, Ecuador experienced a change among the general guidelines of its policy. During the last 25 years of democratic stability in Ecuador, the political activity took place

--by means of a regime of parties in which the center-right through the Social Christian Party, the popular democracy, the leftist democracy over the coastal populism of Abdalá Bucaram Ortiz, and the Marxism of the Ecuadorian popular democratic movement (MPD) prevailed.

The economy revolved around the predominant Latin American thesis of the social market economy; private investment was favored, the government's size was reduced and many public services and government institutions were privatized, however, regrettably, there was a lack of interconnection among the circles of power and the immense majorities, which were claiming for a greater public partaking through guilds and social movements.

The economy is today of public nature, and investments revolve around macro projects, however, during the year 2010, the president Correa has accommodated his economical policy in an effort to attract investment capitals into the country. For such purpose he has issued a project for a production code, which has now become national law, and in which, although the employment sector has been benefited with an outline of salaries, an incentive tax-related and production package that clearly create the conditions for private investment projects nationwide, is contained. His mining policy is technical and the last political steps given by the president, such as avoiding that his group "Alianza Pais" gains an ideological scheme to follow should it become a political party, preferring that this group continues to be a movement that responds to his personal initiatives, lead us to think that the government is more inclined to a fascism or personal regimen, than to a socialist structure.

During the year 2011 the country should rely on clear taxation rules in labor matters and those in charge of the industrial sector should implement new promotion policies that follow the guidelines of the new production code.

As for the constitutional regime existing in the country since 2008, it is clear that a change in the public organization of the Ecuadorian government took place, along with a greater concern for the citizens' rights. Constitutional justice is thus developing with relative success in the country. Concerning the guarantees that businessmen have for the exercise of their activities, the Ecuadorian government has taken care to regulate competition among business in similar activities, with a competition law currently being discussed prior to its issuance probably in the next 90 days. With respect to consumers' guarantees and rights, while a consumer defense law has been in force since 1990, with its respective amendments, the structure of public organizations which work to take care of consumers' requirements is still artisanal since the public defender and further authorities do not count with the necessary technical, bureaucratic, administrative and legal elements to provide the user with a better service.

Ecuador Central Bank (2001)

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We have been firm and consistent in our belief that hard work, dedication and perseverance reap results. Given the professional integrity that has characterized the law firm of Bustamante & Bustamante, we enjoy a well-deserved reputation at home and abroad. Juan Felipe Bustamante can be contacted on +593 2256 2680 ext 364 or by email at jfbustamante@bustamante.com.ec



Renewable Energy Snapshot

Wind Power

In 2010, the global cumulative capacity (GW) reached an all time high of 194.4. Globally, the long-term technical potential of wind energy is believed to be five times total current global energy production, or 40 times current electricity demand.



Hydropower

Hydropower is one the world's oldest and fastest growing renewable energy sources. As the world's largest affordable renewable energy source, hydropower currently accounts for about 18 percent of the total world electricity supply.



Solar Energy

The amount of solar energy reaching the surface of the planet is so vast that in one year it is about twice as much as will ever be obtained from all of the Earth's non-renewable resources of coal, oil, natural gas, and mined uranium combined. In 2010, added capacity brought cumulative, global solar PV power to nearly 40 GW, up 70 percent from nearly 23 GW in 2009.



Biomass

Biomass is a primary source of energy for close to 2.4 billion people in developing countries. The International Energy Agency predicts that the percentage of biomass energy in the total global energy mix is likely to rise from 10 to 30 per cent by 2050.



Biofuel

A report from Automotive World finds that the biofuels sector is set to double its 2009 size by 2015, with ethanol production alone set to rise by 40 per cent during this period and according to the International Energy Agency, biofuels have the potential to meet more than a quarter of world demand for transportation fuels by 2050.



Geothermal energy

A total of 10,900 megawatts of capacity installed worldwide generate enough renewable electricity to meet the needs of more than 6 million US homes. Geothermal power has grown at just 3 percent annually over the last decade, but the pace is set to pick up substantially, with close to 9,000 megawatts of new capacity projected for 2015. Some 350 projects are under development in dozens of countries.



Recent issues and trends in oil and gas M&A

By John Geraghty

Despite a number of headwinds (including Middle East unrest and an uncertain economic recovery) M&A activity in the oil and gas sector has been relatively robust. Deal activity has been driven by strong demand from China, India and Korea in particular. In a competitive M&A environment having a good understanding of market practice and new developments is key. In this article, I outline a number of issues and trends in oil and gas M&A (focusing on asset transactions rather than corporate takeovers).



Auctions remain the prevailing method by which assets are brought to market, which indicates strong demand. Sellers are attracted to the auction process because it gives them meaningful insight into the market value of their assets and creates competitive tension which in turn enhances value. Buyers naturally seek to obtain negotiating exclusivity, but this is uncommon, and if given it is later in the auction process and is not usually accompanied by cost cover. However, recent examples of negotiating exclusivity have been found in the downstream, where the M&A market dynamics have tilted in favour of buyers.

Asset swaps and share consideration remain uncommon; accordingly cash is the predominant form of consideration. Financing conditions (whether equity or debt) are a rarity, particularly in the upstream. If a potential buyer needs to raise acquisition finance then in order to remain competitive it will need to demonstrate funding certainty. Arranging funding adds to the legal complexity of the transaction, especially in the cross-border context where lenders will often need to familiarise themselves with foreign legal regimes. The increased deal complexity increases execution risk and has the potential to elongate the M&A process, which puts the financed buyer at a distinct disadvantage. Vendor financing (where a buyer's payment obligation is merely deferred, rather than being contingent on other events) is not a regular feature of oil and gas M&A, although Essar's recent acquisition of Shell's Stanlow refinery involved vendor financing, which illustrates the current downstream M&A market favouring buyers.

Understandably the economic climate has seen sellers seeking greater deal certainty. This has resulted in an increase in the payment of deposits at signing, typically being forfeited if completion does not occur due to buyer default. When given, a 10% deposit is the norm, although we have seen examples in excess of 25%.

Consideration which is contingent on future events or performance has also featured recently, including in the Reliance Industries/BP deal which provided for future performance payments of up to US\$1.8 billion depending on successful exploration and development of commercial discoveries.

Perenco's acquisition of BP's Wytch Farm assets included a US\$55m contingent consideration payable on submission of the Beacon field development plan and oil prices. When negotiating such provisions parties need to take care to ensure that the payment trigger events are clear and not capable of being gamed or frustrated by the paying party and that the parties have access to the information they require in order to protect their respective positions.

Material adverse change ("MAC") clauses have become more common in recent years but would not, at least in English law deals, be regarded as market standard. In a competitive M&A market buyers could be putting themselves at a disadvantage by insisting on a MAC clause as it undermines deal certainty. If buyers need the protection of a MAC clause they would be well advised to try and tailor it specifically to the important aspects of their deal and to set a clear materiality level. When interpreting general MAC clauses the courts have stated that a party seeking to invoke one will need to clear a high hurdle and that will involve demonstrating a significant and long lasting adverse event.

The UK Bribery Act (which comes into force on 1 July), and in particular the new corporate offence of 'failing to prevent bribery' has also impacted M&A in the oil and gas sector. Corporates are paying closer attention than ever to bribery and corruption issues in due diligence and in relation to warranty protection. Where parties are entering into joint ventures, terms dealing with implementing best practice anti-bribery procedures and training are receiving a lot of attention.

As global demand for oil and gas continues unabated, companies in the sector are engaged in a keenly contested cross-border battle for access to reserves. Having the ability execute cross-border deals robustly and efficiently by understanding current market practice constitutes a competitive advantage and may be the edge a buyer needs to secure an asset.

Allen & Overy is a leading global law firm with 36 offices in 26 countries. John Geraghty is a corporate partner with Allen & Overy and is based in London. John focuses on M&A and joint ventures in the energy sector. Mr Geraghty can be contacted on +44 203 088 4004 or by email at john.geraghty@allenover.com.



Private equity in the energy market

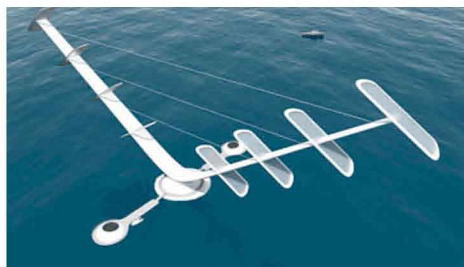
By Kavita Patel

Corporate finance has a huge part to play in the success of the UK energy market not least because bank funding can be difficult to obtain for renewable projects – it is common knowledge that major UK banks have shown a reluctance to be involved in this market. Combined with the fact that there are very exciting profits available, Martineau's city-facing Corporate Finance team has seen a significant rise in the number of investors looking at this market. Infrastructure funding and private equity are significant contributing factors in launching a project and keeping it in operation.

A number of our clients have been investing in green technology for many years, but it's only been recently that the popularity of renewables has really taken off. The main attraction currently is solar projects, although the announcement of the Government's fast track review of feed-in tariffs caused concerns for some, who pulled out of the market. Others remained but we were acting under immense pressure to bring those deals to a financial close. UK investors in venture capital trusts currently receive income tax relief and tax free dividends on their investment and the Government has pledged to keep these levels until April 2012 but it will be interesting to see what happens post April 2012 when we enter a new tax year.

Despite planning difficulties that can often arise, the most favoured renewable technology previously for private investors was wind farms. These are considered to be one of the most mature – and therefore reliable – technologies and Martineau's industry-leading Energy team has a wealth of experience in advising clients in this area.

It's our significant expertise in the environmental and technology sectors which enables us to give clients commercial and practical advice. Several of the firm's current clients can see real opportunities in this market and are now developing funds for renewable projects as a result. We've been involved in a significant number of VCT funds in recent years, a number of which are looking to invest in renewable energy projects – a clear indication of where good returns on investment can be expected.



Other areas we're seeing a growing interest in include hydroelectric power projects and waste-to-energy – the latter being of interest to the more innovative and forward-thinking investors. We've also been working for two years on a biomass project which is just coming to completion now. These are all examples of renewable projects, which together can help the UK meet its 2020 renewable energy programme targets – there's an obvious need for alternative technologies and there is increasing pressure on developers.

The risk-return profile for these projects is generally good. The main risk associated with projects of this nature is gaining accreditation for the site build but using tried and tested technology often negates this risk and projects should see very good returns.

The legal process around these deals can be complex, especially as they're usually multi-project deals. Generally we're dealing with funding and commercial structures, including due diligence on commercial contracts. There are often challenges which need to be carefully project managed – that project manager needs to ensure all the threads are pulled together to form the perfect legal framework, working together with lawyers of many different specialisms.

For example, at Martineau, the Corporate Finance team adopts a cross-team strategy, working closely with other lawyers who have in-depth knowledge and expertise in their field, which means clients have all the resources they need under one roof.

We project manage, working closely with the Energy team led by senior partner, Andrew Whitehead – a renowned specialist in his field – who will look at agreements relating to the supply of energy on projects. Martineau's construction lawyers look at construction contracts and commissioning of the plant; specialist commercial lawyers consider the contracts pertaining to the plant operations when it's built, while property lawyers deal with landowners and site leases. They ensure that land does belong to sellers, that there are no restrictions in place when that land is sold and investigate access rights and planning permissions. Planning lawyers also deal with objections – which aren't as prevalent for solar projects as these can be easily screened. Wind farms and hydroelectric power cause more objections due to their scale and sheer size as they're often in rural areas, which are then threatened by the presence of turbines or power plants, with associated noise and traffic issues. This can make planning a very difficult area indeed. Furthermore, the Localism Bill is expected to make it even harder for projects to pass through planning.

Long term, however, we believe prospects for the sector are very strong. Despite the government sending confusing signals about the importance it places on renewable energy, we have many schemes on our books, funded in a variety of ways and we're confident we shall see more of these in the future.

Kavita is a partner and head of corporate finance at law firm, Martineau. She specialises in private equity and corporate finance transactions including the establishment of investment funds, public and private fund raising, venture capital and private equity investments, takeover, mergers and reconstructions.

Kavita has secured an impressive portfolio of work from London for Martineau. Her recent work includes venture capital investments in the environmental infrastructure sector including renewables and solar energy.

Kavita sits on both the VCT Forum and VCT Technical Committee of the AIC and is a member of the EIS Association. Kavita can be contacted on 0800 763 1645 or by email at kavita.patel@martineau-uk.com



By Garrett Monaghan

The Global Green Interchange (the “Interchange”) is a multi-sector initiative aimed at developing and implementing a cohesive strategy to position Ireland as a world-class centre and supportive culture for green finance and enterprise.

Arthur Cox has been a committed founding member of the Interchange since it emerged from a workshop on the future of Ireland's International Financial Services Centre (IFSC), which led to its inclusion in the Irish Government's High Level Action Group on Green Enterprise Report in late 2009.

Ireland has an established body of world class experience and expertise in inter-related financial sectors including project finance, treasury, funds, equipment leasing, insurance and securitisation. The Interchange aims to combine these existing strengths with the wider expertise in Irish industry and education within renewables, research and green enterprise.

Context

It is important to set the global context:

- The greenhouse gas and related targets allocated to Ireland and other Member States under the EU Climate Change Package have precipitated massive investment in energy and related infrastructure.

- The magnitude of the capital investment required to support new technologies, renewable energy generation, energy efficiency and ultimately to constrain carbon emissions has arguably masked the true potential size of the international Green Economy.

- Global expenditure on low-carbon energy has been estimated as having exceeded \$243 billion in 2010, a 30% increase on 2009; moreover “green bonds” are forecast as being the only viable option to fill most of a €2.9 trillion (\$3.9 trillion) capital hole required to build low-carbon infrastructure in Europe from 2011-2020.

Ireland - a centre for Green Finance and Enterprise

The Interchange will build on the established body of multi-disciplinary experience and expertise

including: project finance, treasury, funds, equipment leasing, insurance and securitisation in addition to creating new concepts centred around green finance and carbon management.

Ireland has produced several companies that have won international recognition as pioneers in the development, construction and operation of renewable energy projects. The initiative believes that Ireland's financial services sector can replicate the success of indigenous green enterprises and be part of a vibrant indigenous green enterprise sector.

Some key aspects of the initiative are set out below.

1 - Carbon: In response to widely-held concerns on the transparency of the carbon markets and the absence of an international carbon price, the Interchange has identified areas where Ireland can take a lead in harmonising disparate forms of carbon credits that currently exist. A key objective of these mechanisms is to improve “fungibility” between the voluntary and compliant carbon credits and allowances.

2 - Project Finance: Ireland has an experienced project finance community with exceptional credentials in the financing of international and domestic projects. Broadly, the (long established) project finance and the emerging “carbon” finance models are increasingly influencing and merging with each other. Ireland has the necessary expertise, experience and legislative framework to take a central role in developing innovative project financing structures that can be applied domestically and internationally.

3 - Bonds: As emphasised by the European Investment Bank's “Europe 2020 Project Bond Initiative”, the scale of the investment required to reach European renewable energy targets alone is driving the emergence of “climate bonds” and other new financial and insurance products. Such products need to cater for the specific (and evolving) characteristics and complexities of green projects. Ireland is an established centre in international capital markets with proven financial, legal and tax expertise and infrastructure; Ireland can play a central role in devising and issuing robust and innovative “green” financial products.

4 - Funds / Private Equity: Key strengths of the Irish funds sector include expertise in fund domicile, servicing and administration; the availability of the UCITS (Undertakings for Collective Investment in Transferable Securities) framework for investment funds; a highly skilled and experienced workforce (12,000+ skilled employees); and critical mass, with over 10,000 funds under management. Ireland is an leading international funds centre and the Interchange offers an opportunity to create the optimal conditions to combine an existing proven industry with new challenges presented by the transition to a low carbon economy.

5 - Securitisation: Carbon credits are a recognised commodity capable of being securitised on a tax efficient basis under existing Irish legislation. Section 110 of the Taxes Consolidation Act 1997 affords favourable tax treatment to special purpose vehicles established in Ireland for use in securitisation transactions. In the Finance Act 2011, a new definition of “carbon offsets” replaces “greenhouse gas emissions allowance”. This expands the class of assets that can be held by a Section 110 Company to include carbon offsets issued under voluntary schemes as well as those issued under compulsory schemes.

[1] The Climate Change Package targets, at a European level, a 20% reduction in greenhouse gases by 2020 compared to 1990 levels, 20% reduction in energy consumption through improved energy efficiency and 20% of energy consumed in 2020 to come from renewable sources.

[2] Bloomberg New Energy Finance

[3] Barclays Capital / Accenture “Carbon Capital” 2010

[4] http://ec.europa.eu/economy_finance/consultation/index_en.htm

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The memorandum of understanding of the assistance plan between EU-IMF-ECB and Portugal and the Renewables Sector

By Mónica Cameiro Pacheco

The memorandum of understanding (MoU) signed by Portugal, the International Monetary Fund (IMF) and the European Union and the European Central Bank (ECB) on 3 May as part of the bailout package, commits the Portuguese government to “assess in a report the possibility of agreeing a renegotiation of the contracts in view of a lower feed-in tariff”. This applies to the existing contracts.



The MoU also commits the government to “revise downward” the feed-in-tariffs for new contracts and ensure that the tariffs do not over compensate producers for their costs and continue to provide an incentive to reduce costs further, through disgressive tariffs and develop alternative mechanisms for more mature technologies, such as feed-in premiums.

Portugal must report on its progress in the third quarter of every year.

Two more commitments in RES chapter are established:

- Decisions on future investments, in particular in less mature technologies, will be based on a rigorous analysis in terms of its costs and consequences for energy prices.

- Reduction on delays and uncertainty surrounding planning and certification procedures and improvement of the transparency of administrative requirements and charges for RES producers (in line with Article 13 and 14 of EU Directive 2009/28/EC).

I read a comment on these measures somewhere which concluded that “renewable energy is for rich countries that have money to burn”. This is a big misunderstanding of the importance of RES on climate change and reveals ignorance in respect of the country reality.

Portugal doesn't have natural gas, coal or oil and its dependence on external energy is around 85%. The use of alternative renewable sources of energy to produce electricity in 2010 has saved more than 500 M€ in imported coal and natural gas alone.



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However, reduction of our external dependence on energy was not the only reason for Portugal to support private investments on RES. Portugal, as a member of the European Union, has to comply with the ambitious objectives set by the Union on climate/energy to be reached by 2020. Portugal has seen its contribution of the renewable sources growing from 20.4 %, in 2005, to 31% in 2020, the fifth highest within the EU.

To get to this objective of 31% Portugal has to achieve 60% for the production of electricity coming from renewable sources.

Incorporation of renewable energy sources in the gross consumption of electricity for Directive 2001/77/CE purposed was 39% in 2010, but a value of 45.6% was achieved.

RES showed the strongest growth reaching an electricity generation of about 24.8 TWh in November 2010 (Portugal needs around 50 TWh, and in 2020 around 60 TWh)

A stable policy framework stimulated continuous growth of RES in the electricity sector in Portugal. Since the first Decree-law that approved the regulation of the electric energy generation business by using renewable resources, the succeeding Portuguese Governments have undergone a major restructuring of the regulatory framework regarding pricing terms, by changing the tariffs mechanism in accordance with certain principles that reflect the environmental benefits of the use of RES.

Along the years, several changes into the tariffs regime were introduced, namely on different pricing conditions according with the renewable source used in the production and the term settled for the green tariff component.

Currently, the sole instrument in force for supporting market deployment of RES technologies is a feed-in tariff mechanism, as an incentive-on-production. Incentives on investment are currently suspended.

Tariffs paid for renewable electricity are based on (i) the cost avoided by the Public Electric System with the entry into service of the power plant, including (a) the investment avoided with new power plants; and (b) the transportation, operation and maintenance cost, including the acquisition of raw materials and (ii) The environmental benefits of the use of RES ('green tariff' component).

Renegotiating support contracts for renewable energy projects may not be easy since investors have made their investment plans considering the revenues from tariffs and their duration. Renegotiations do not depend only on the good will of the promoters but also of the banks since most of the projects were financed through project finance structures. Refinancing such projects within the current finance circumstances will not be an easy task.

A revision of the feed-in tariffs for new contracts lowering the tariffs for RES shall assess all aspects of the tariff, including levels, administration and technology eligibility. A revision has already happened in Spain, Germany and Italy and shall be seen as a necessary measure, especially in respect of mature technologies but it shall look simultaneously to the licensing procedure since Portugal has a long and bureaucratic procedure and it is the country where promoters pay more for interconnection.



The revision will lead through a change in the law and, certainly, it will not occur immediately. Government shall listen to promoters on such a revision to avoid bringing investments in the RES sector to a halt.

This revision shall also not ignore that most of the electricity comes from wind projects and projects which have granted capacity or are in a licensing procedure or under construction, as well as the ones that have entered into operation in 2009, have a tariff lower than 70€/MWh (minus 2.5% which is paid to the municipalities) which is the lowest tariff in Europe (being the guaranteed period also the lowest – 11 to 15 years).

Although, in the current situation of the country it is an obligation, not only of the government but also of all the citizens, to commit with all that is necessary for recovery, we shall not forget that feed-in-tariffs have promoted rapid expansion of RES in Portugal. Portugal may not be a rich country but it is rich in endogenous resources (sun, wind, water) and its contribution for low-carbon electricity generation should not be diminished.

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Mónica has been heavily involved with work in the energy sector including projects on a project finance regime. She is also involved in innovative renewable energy projects with a highlight on wind, water, biomass, waves and solar photovoltaic energy.

She is recognized by the main international directories as a leader in her field. RPA partner since 2007, Mónica has a strong and well known professional career as a lawyer.

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How to approach Hungarian renewable energy market according to forthcoming regulatory changes



DR. ATTILA LENGYEL LAW FIRM

By Dr. Attila Lengyel

E&P: A multiplying effect of gradual opening

Renewable energy strategy and regulation are undergoing tremendous changes in Hungary. The government classified renewable energy as a key priority for economic development, and the Hungarian Renewable Energy Action Plan finalized at the end of year 2010 laid ambitious targets: by 2020 14.65 % of Hungarian energy consumption must come from renewable sources. However, certain regulatory sources concerning renewable must be promptly reconsidered to achieve the tremendous potential for success.

Renewable Energy Action Plan

Hungary satisfied its obligation to provide the Renewable Energy Action Plan to the European Union, which is a key document of the effective development of renewable energy.

The REAP defines that renewable energy used in electricity, heating, cooling and transportation is 55.25 PJ. The government seeing great potential in renewable energy sector decided on higher growth of the sector for 2020 than the respective EU directive on renewable energy sources, which defines 13%. Thus 14.65% was fixed by the government in this key, obligatory document as target to be reached, equal to 120.57 PJ.

For implementing this ambitious target, the REAP defined a long list of regulatory tasks to be executed in the coming year. A few of these tasks - administrative process, electricity grid access, feed-in tariff and gas grid access - considered the key ones for boosting growth in the renewable energy sector, will now be examined in turn.

Administrative process

There is a general consensus amongst Hungarian market players, as well as the competent public administration, that one of the key priorities is to simplify and shorten the administrative process for establishing a renewable energy plant.

Building a biogas plant or a wind energy farm is a cumbersome process in Hungary, requiring approvals from a smorgasbord of environmental authorities, building authorities, competent electricity distribution companies and finally the Hungarian Energy Office (from 0.5 MW capacity in the latter case). Furthermore in case of wind energy - as a consequence of limited technical conditions of the national electricity network - potential investors must also participate in a tender process for obtaining the right to establish a wind farm according to the effective Electricity Act (Act 86 of 2007).

After being commissioned by the Hungarian Energy Office to examine the licensing process in all renewable energy fields, it was found that the processes are unnecessarily time consuming, mainly due to the delay of specialized authorities in providing approvals. The number of main authorities, specialized authorities and public utility companies that may contribute to the administrative process could, in some cases, reach up to 35 different agencies and public utility companies, so it may be beneficial to minimize the number of such entities to avoid repeated and unnecessary examination of a certain renewable project.



It is recommended that (i) "closed" deadline system for agencies should be stipulated in the state administration, (ii) the number of specialized authorities and public utility companies which may be drawn into the environmental and building authority license process should be minimized significantly.

As the Government is open for simplification and shortening the administrative process and the respective legislative concept has been prepared by us and supported by the sector, the above recommendations may be realized by the end of 2011, thus the investors interested in renewable energy may face up to a more transparent and smoother procedure.

Electricity Grid Access

A further - always challenging - phase of establishment of a renewable energy plant is the access to the electricity grid. In Hungary, the process of applying for electricity grid access from electricity distribution companies is not regulated by legal regulation thoroughly but instead by the Rules of Distribution Companies, so while certain binding licenses (e.g. environmental license, building license) are pre-conditions for concluding the connection contract with the electricity distribution companies, the relevant legal regulations have no such provision.

It is strongly initiated that all the material conditions of concluding connection contracts with the electricity distributor companies (e.g. minimum content of the distributor company's offer, process deadlines, preconditions of concluding connection contract) should be outlined in a legal regulation.

According to our knowledge, the respective legislation is under preparation by the Hungarian public administration.

Feed-in Tariff System

In Hungary a feed-in tariff system (FTS) was introduced by Governmental Decree 389/2007 (XII.23) in the field of electricity production on 1 January 2008. However, the scheme has not been addressed to heat production and clean biogas injection into the natural gas grid.

The FTS is automatically adjusted annually based on the last published yearly consumer price index. The Hungarian Energy Office on a "project-by-project" basis defines the volume of electricity subject to the feed-in tariff, and the duration of application of the tariff. The tariff is paid by electricity trading companies and can be passed on to electricity customers.

Unfortunately, though, the tariffs are too flat, which hampers their effectiveness and proves to be a regulatory anomaly. Furthermore, the fossil based co-generation plants may obtain and receive such feed-in tariff at present, which perverts the original aim of the system.

In order to establish an effective and transparent FTS it is recommended that a) fossil based co-generation plants should be eliminated from the system b) differentiated tariffs will be introduced, c) certain incentives should be incorporated into the system (e.g. incentive for processing waste) d) obligatory duration of application of FTS should be defined by legal regulation.

Recently, the Government decided this spring that fossil based co-generation plants are eliminated from FTS system as from 1 July 2011.

The government also reviews the present FTS system and has definite intention to introduce FTS II, according to the above recommendations as from 1 January 2012, which may establish real option for providing priority to renewable energy sector.

Gas Grid Access

Bio methane production is in progressing phase even in the European Union. Governmental Decree No. 19/2009 (I.30.) implementing the Natural Gas Act introduced conditions for inserting clean biogas (biomethane) into Hungary's natural gas infrastructure. In practice, the decree considers the biogas producer as a natural gas producer and so the operator of the biogas plant has to meet strict conditions inter alia the operation of volume measure and quality control; securing connection pressure; and operating a technological system that provides real time data to natural gas distributors.

While the conditions are well-defined in the decree, and only a few minor adjustments are necessary, the FTS for injecting biogas into the national gas grid has not been prepared and now there is an opportunity for such regulation element to be introduced. Nevertheless, it is important to note that the first pilot project injecting biogas (biomethane) into the natural gas network is under way in Hungary.



Conclusion

Hungary's renewable energy sector is developing rapidly. The government realizes the potential of this sector both to address climate protection concerns and also to promote a clean environment. Thus a reliable, transparent renewable energy regulation is expected by the end of 2011, with significant renewable energy development likely to follow in Hungary in the next few years.



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In the field of energy law - as a key focus - the law firm represents major trading and distribution companies in court proceedings, and providing legal advices regarding contractual, licensing and pricing issues. Furthermore the law firm regularly participates in regulatory projects in the field of energy law.

The law firm is one of the "pioneer" law firms in the field of renewable energy in Hungary since 2008. Currently the law firm is involved in a project provided by the public administration, which deals with simplification and fastening of the administrative process of renewable energy plants. Furthermore it represents investors in the area of biomass, biogas, wind and photovoltaic.

The law firm is a member of the Hungarian Biogas Association and the Hungarian Wind Energy Association since early 2009. The leading partner of the law firm, dr. Attila Lengyel was appointed as Member of the Board of the Hungarian Biogas Association in April 2010 and responsible primarily for regulatory area.

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The Bulgarian energy strategy to 2020 and the investment opportunities in the energy sector

By Kostadin Sirleshtov, Borislava Pokrass & Pavlin Stoyanoff

Introduction

The energy sector has always been a main priority of the Bulgarian Government. The Bulgarian Energy Strategy to 2020 (the "Energy Strategy"), a fundamental document of the national energy policy, was brought into force on 1 June 2011 and will, to a great extent, determine the investment opportunities in the Bulgarian energy sector.

Sustainable energy development is a cornerstone of the energy policy, related to the following long-term quantitative goals:

- greenhouse gas emissions to be reduced by 20% (compared to 1990's rates);
- renewable energy sources to account for 16% of total energy usage and 10 % share in transport usage; and
- energy efficiency to be improved by 20%.

The Energy Strategy aims to overcome the main challenges currently faced by the Bulgarian energy sector, namely:

- high per capita energy usage in Bulgaria: currently 89% higher than the average EU rate, the aim is to reduce it to 50%;
- Bulgaria's dependency on imported energy sources: most of the energy sources are imported (natural and crude oil, and nuclear fuel are almost entirely imported from the Russian Federation); and
- the need for eco-friendly development.

The main priorities are:

- guaranteeing the safety of the energy supplies;
- achieving renewable energy sources targets;
- increasing energy efficiency;
- developing the competitive energy market;
- meeting energy demands and protecting consumers' interests.

-In this context, in all fields of the energy sector, new public private partnerships are expected and indeed have been encouraged by granting more power in this respect to local governmental authorities.



A general feature of the Bulgarian energy sector is the need for modernisation. This brings opportunities for new investment and an increase in market share as a result of innovation. At the same time, the Energy Strategy emphasises the need for both development of green power plants and the rehabilitation of the existing ones.

The development of the internal energy market is a main political priority of the Bulgarian Government. Its principles include: free choice of end supplier; fair prices; clean energy; and free access to the electricity and gas grids. To this end, energy interconnections with neighbouring countries are to be improved and cross-border trade increased.

The Energy Strategy focuses on the following industries:

Coal Industry

The coal potential of the state will be used to its maximum. The state will support the utilisation of coal power plants subject, however, to their renovation and technological improvement to reach minimum ecological standards. Schedules will be prepared for modernisation or closure of existing coal power plants that are not compliant with environmental legislation. Part of the income from the trade of emission units will be used for the introduction of pure coal technologies. The state will support the construction of plants with the technology to capture and preserve carbon dioxide.

Thermal

The Energy Strategy provides for the development of centralised heating systems through the modernisation and financial stabilisation of heat-supply companies. The privatisation of state-owned local central heating companies will be an investment opportunity.

Renewable

The New Renewable Energy Act, adopted in May 2011 ("RES") sets forth the supporting mechanisms in the renewable energy sector.

Both the state and local authorities will support private initiatives which increase the energy efficiency of public and private buildings using photovoltaic installations, biomass, thermal or geothermal heating systems, and maximum utilisation of hydro energy sources in Bulgaria (mainly rivers) by the construction of hydro energy complexes. Special attention is paid to the development potential of marketing electrical vehicles that are powered by energy from renewable sources.

Nuclear

Despite the uneasy global attitude towards nuclear energy, the Bulgarian government has retained a positive attitude towards the nuclear energy sector in the Energy Strategy. The aim is to install at least 2,000 MWt of new nuclear production capacity. In this context, the opportunities are: (i) the construction of the green field Belene Nuclear Power Plant; or (ii) investment in new blocks in the existing Kozlodui Nuclear Power Plant. At the same time, the life of the existing two blocks of Kozlodui Nuclear Power Plant will be maintained as long as possible.

The construction of new nuclear waste storages facilities (mainly for waste of low to middling radioactivity) is also an imminent necessity. Bulgaria should also diversify its supply of nuclear combustible.

Oil and gas

Upstream: Bulgaria aims to decrease its high dependency on Russian supply. At an upstream level, this means that domestic capabilities must be explored (gas is currently being produced off-shore in the Black Sea). New tenders to grant exploration rights both onshore and offshore in relation to oil, conventional and shale gas are to be launched.

Midstream and downstream: One of the main aims of the Energy Strategy is to diversify supply sources: the most significant projects include the Nabucco, South Stream gas pipelines and Burgas to Alexandroupoli oil pipeline.

In addition to these large-scale projects, the construction of new liquid natural gas terminals (for delivery of liquefied gas from Azerbaijan through the Black Sea) and compressed natural gas terminals (supplied with compressed gas from Qatar, Oman and Nigeria) is a great opportunity for investment.

Extremely high importance is given to the construction of regional gas transportation interconnections with Turkey, Greece, Romania, and Serbia. Such interconnections will enable Bulgaria to participate in broader gas markets, including delivering gas inter alia from Turkmenistan, Iraq, and Egypt.

Gas storage operation is another priority for the country, where such opportunities already exist.

At the end supply level, currently only 1.5% of the Bulgarian households are supplied with natural gas. The aim is to increase this number to 30% by 2020. In 2011 a programme to connect households to the gas network will be adopted, which will also specify the various investment opportunities available.

Electricity

The Bulgarian electricity grid requires both renovation and construction of new grid capacity. Although currently operated by natural monopolists, the electricity grid's improvement offers broad investment and collaboration opportunities.

The Energy Strategy pays a special attention to the improvement of the interconnections with the neighbouring countries. Bulgaria's aim is to be a main exporter of electricity in the region, with a target of at least 1,500 MWt export capacity by 2020. The electricity market in Bulgaria was fully liberalised as of 1 July 2007. The next significant step is the government's aim to launch the energy exchange by the end of 2011. Although this may be too optimistic a timescale, this aim has nevertheless been articulated and is likely to be achieved in the near future.

Energy efficiency

Energy efficiency is seen as the cheapest and most efficient way to improve the entire energy sector. The Energy Efficiency Law was adopted in Bulgaria in 2008 and in 2011 a specific Energy Efficiency Strategy will be adopted by the Bulgarian Parliament, with an emphasis on the energy efficiency of residential and public buildings, transport and industry. Financing opportunities include EU operative programmes, resources from the sale of emission units, the International Fund "Kozlodui" and so on.

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Kostadin graduated with a LL.M from the Sofia University Faculty of Law in 2000 and is pursuing a Ph.D. in Private International Law in a Sofia University joint program with Sasakawa Foundation Japan. Kostadin also has a diploma from Cambridge University in EU Law and Contemporary English Law (2000). He has been a member of the Bulgarian Bar Association since 1999. Kostadin can be contacted on +359 2921 9942 or by email at kostadin.sirleshtov@cms-cmck.com

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Despite increasing economic uncertainty across the globe, Australia remains a land of opportunity for offshore investment particularly in the energy and resources sector. It's important that investors are aware that the sector currently faces the prospect of new taxes at the federal level and a likely increase of royalty imposts at the state level.

The reasons behind these new imposts are complex and their final form is difficult to predict, although the fact that there will be new taxes seems almost assured.

Australia has experienced a protracted boom in resources and energy exports largely attributable to the expansion of the Asian economies, most notably China. At the same time, local investment in energy production has failed to keep pace and the cost of domestic energy production is rising rapidly due to a heavy reliance on antiquated, carbon emission inefficient coal fired power stations.

A Tax on Carbon

Australia is currently governed by the Labor Party in a minority, centre-left Federal Government governing with the support of the Greens Party and a range of Independents. The Government has announced its intention to impose an economy-wide tax on carbon. It is advised by a multi political party committee which includes the Greens and Independents, but not the major opposition Liberal Party which oppose any form of tax on carbon.

The Government has indicated it initially wishes to bring in a low impact tax which will rise over time and has foreshadowed rebates to the tax payers most likely to be adversely affected by rising energy costs. It is under pressure to protect highly unionised industries (such as steel making) which are traditional supporters of the Labor Party. The Greens are looking for a greater impact from a carbon tax and less protection for big emitters of CO₂. Ultimately, given the effects of the Government's previous back downs on a cap and trade scheme and the popularity of the opposition's stance against any tax, it is likely the Government and the Greens will agree on a relatively low impact tax.

On 7 June 2011, the Australian Treasurer Wayne Swan stated that, based on treasury estimates, a \$20* per tonne carbon tax would not have a long term impact on jobs in the economy. Even under a \$20 per tonne carbon price the treasurer said that employment will increase by 1.6 million jobs and income will be \$8000 per person higher by 2020. He argued that tax would only have a slight bearing on Australia's bottom line with the real national impact per person being just .01% annually.

The multi party climate change commission referred to above have not yet settled on a starting price for the carbon tax but a range of options have been modelled. The Government's key climate advisor, Professor Ross Garnaut, has recommended a starting price of \$26 per tonne, compared to the European Union's \$23 per tonne.

Professor Garnaut is the Government's primary advisor on climate change and released his final update to the 2008 climate change review on 31 May 2011. His report states that an initial carbon tax of \$26 a tonne would raise about \$11.5 billion in the 2012/13 financial year.

He has made recommendations on how revenue from the carbon tax should be spent – 10% for innovation, 55% for households and 35% for industry. Revenue from carbon permits are foreshadowed to pay for \$3 billion a year on new clean technology and \$1 billion set aside to help workers and communities affected by the shift away from the coal fired power industry. Garnaut says that the bulk of the revenue should go to households to compensate for higher priced energy while compensation to business would eventually be cut to 25% of revenue when a floating carbon price kicks in under an emissions trading regime to be implemented at a later date.

Following the release of the report, the Climate Change Minister Greg Combet stated that the proposed breakdowns of proceeds from the carbon tax were Professor Garnaut's opinion and did not reflect the Government's position as to how the carbon tax revenue would be distributed.

It therefore remains unclear how much of the report will be adopted and there will be considerable political negotiating before final details of the carbon tax legislation are revealed as scheduled in July 2011.

MRRT AND PRRT

In addition to a carbon tax, the Federal Government has devised the Minerals Resources Rent Tax ("MRRT") and an extension of the offshore Petroleum Resources Rent Tax ("PRRT") to include onshore oil and gas projects. Draft MRRT legislation was released for public comment on 10 June 2011 with a closing date for submissions of 14 July. It is intended the MRRT will commence on 1 July 2011 and be restricted to iron and coal projects.

The MRRT is intended to be levied at a rate of 30% of the operating margin, which is calculated from an organisation's revenue less operating and investments costs and less the MRRT allowance and an extraction allowance. The purpose of the extraction allowance is to focus the tax on the value of the resource being extracted rather than the value of mining expertise.

Under the MRRT there will be an immediate write off, rather than depreciation over a number of years, of new investments costs. Unutilised losses can be carried forward at the government long term bond rate plus 7%. There will be transferability for deductions which will allow minerals companies to deduct expenses that flow from investments in the construction phase of any particular project to offset the MRRT liability from projects in the production phase.

Importantly, the MRRT will also provide a full credit for state royalties paid by the tax payer in respect to a mining project. As outlined below, this is likely to result in state royalties increasing as the MRRT is implemented.

It is intended that the MRRT will apply a tax point close to the point of extraction of iron or coal as it is intended that only the value of the resource be taxed and not the value added by the expertise of particular miners.

In addition to the MRRT, the Federal Government proposes to extend the Petroleum Resources Rent Tax ("PRRT") which it currently exacts on offshore oil and gas projects to onshore projects at a rate of 40%. According to the Government, there are a range of uplift allowances for unutilised and capital write offs and immediate expensing is available for all expenditure. All state and federal resources taxes will be credited against current and future PRRT liabilities. The Government intends releasing PRRT draft legislation for public consultation and comment in the middle of 2011.



State Royalties

What can be seen from the draft MRRT legislation is that there will be credit given to iron and coal companies for royalties paid at a state level. The Western Australian State Government has already increased royalties and it is likely that other states will follow suit. The Federal Government has foreshadowed reducing federal payments to the states in other areas after losing returns under the MRRT to state royalties. This is a matter that obviously has some way to go, but the implications of new taxes and the interaction between a carbon tax, MRRT, PRRT and state royalties is something that all investors in oil and gas, iron and coal projects in Australia need to be fully aware of and follow closely.

* All figures quoted in the article are in Australian Dollars.



Piper Alderman is recognised in Australia as a leading legal advisor to the energy and resources sector. Our clients operate across the full range of areas within the industry – from oil, gas and minerals to renewables such as wind and wave – throughout Australia and across the globe.

Our experience has been built from many years working on some of the region's most significant and often pioneering projects. This track record enables our national team to provide our clients with legal services which take into account the unique risks and rewards of the sector, offering advice on corporate and commercial transactions, licensing, regulatory, employment, environmental, native title and dispute resolution.

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Oil and Gas in Ghana: Legal issues

By Kojo Bentsi-Enchill

Challenges from Oil Discovery

The oil discovery poses enormous challenges to Ghana. The maritime boundary with Ivory Coast has to be settled. The Petroleum Exploration and Production Law provides for unitization but there is no mechanism for cross-border unitization. The Ghana National Petroleum Corporation ("GNPC") has been both a regulator and an operator. This dual role is rich in potential for conflicts of interest and possible misuse of regulatory powers to promote valid national operational ambitions.

The regulatory structure has seen little development consisting largely in ad hoc evolution of petroleum agreements and in regulatory notices on local content and on registration of oil service companies, rather than in formal legislation.

A host of other regulatory institutions and agencies face specific challenges in their respective sectors, for example, the Environmental Protection Agency ("EPA"), the Internal Revenue Service ("IRS"), the Navy, the Ghana Maritime Authority, the Fisheries Commission, the Banking and Insurance industries..

Moving Forward

Some legislative answers are beginning to emerge in the face of these challenges.

Legislative Developments

Key legislative developments include the National Petroleum Commission Act, 2011, the Petroleum Revenue Management Act, 2011 and the Petroleum Exploration and Development Bill.

National Petroleum Commission Act, 2011 – this was rushed through as a bi-product of parliamentary consideration of the Petroleum Revenue Management Bill and the Petroleum Exploration Production Bill. Effective with the enactment of this Act, the GNPC ceases its regulatory and advisory function and is supposed to wrap up this function within six months. However the Act has not received presidential assent and is rumored to have been withdrawn for further amendments. A seismic shift is nevertheless portended in the regulatory structure.

The Petroleum Revenue Management Act, 2011, Act 815 ("PRMA") – this act provides for the collection, allocation and management of upstream petroleum revenue. The new measure overrides any contrary provisions in any existing law, regulation or agreement. Such retroactivity in respect of a fiscal matter is in fact permitted by the Constitution of Ghana.

The Act defines petroleum revenue to include royalties from oil and gas, additional oil entitlements, surface rentals, receipts from petroleum operations and from sale or export of petroleum. Receipts from government's direct or indirect participation in petroleum operations also count as petroleum revenue.

The revenue also includes corporate income tax receipts from upstream and midstream petroleum companies and the NOC's corporate income tax, royalties, dividends, and any other dues. Any other direct or indirect revenue from petroleum, e.g. capital gains tax from sale of interests in petroleum agreements also forms part of the petroleum revenue.

All petroleum revenue is supposed to go directly and promptly into the Petroleum Holding Fund at the Bank of Ghana. Petroleum revenue has to be paid by direct transfer into the Petroleum Holding Fund. The revenue from the holding fund has



to be transferred into 3 funds: (1) The Consolidated Fund, (2) The Ghana Petroleum Funds (Heritage & Stabilization Fund) and (3) Exceptional deductions.

An important exception is petroleum revenue that will be money to settle Ghana's equity financing costs, and also cash or barrels of oil ceded to NOC from the carried or participating interest of the Republic in petroleum operations, The amounts and the uses of such monies are subject to Parliamentary control and review.

Implications of Structuring Securities

If all petroleum revenue other than the portion diverted to the national oil company has to be paid into the Petroleum Holding Fund, then the space for creating securities over Ghana's participating interest in the Jubilee Field and other blocks is to that extent constrained. It is now unlawful to create security structures that have implications contrary to the new statutory waterfall.

-The Act prohibits the use of the fund as collateral for debts, guarantees, commitments or other liabilities of any entity, the use of it as credit and loans to the government and public enterprises, private sector entities and prohibits any borrowing against it. It cannot also be used for extra budgetary uses and cannot also be statutorily earmarked other than to the Petroleum Holding Fund for any consideration.

-However as a limited and temporary exception, security may however be created over the Annual Budgeting Support Amount for a period of ten years after the commencement of the PRMA. Such security can only be created after the petroleum revenue has been transferred from the Petroleum Holding Fund into the Consolidated Fund and from the Consolidated Fund into specific collection accounts or debt service accounts established by the Bank of Ghana upon the instructions of the Ministry of Finance. Until the petroleum revenue hits the specific security account, a lender is reliant on the government's contractual promises rather than upon any enforceable security interests.

Transparency

A freedom of information legislation has been meandering through the legislative process for several years. In one stroke the PRMA portends a revolution in the provision of information to the public. The Act requires the publication of receipts and payments in national media and mandates a public oversight committee and auditor general reports. Confidential information which would significantly prejudice performance of Ghana Petroleum Funds, mislead through incomplete analysis, affect the functioning of government significantly, or disclose confidential communication, prejudice significantly conduct of official market operations or cause improper gains or advantages is exempt from publication. However the right to withhold confidential information is subject to providing justification, and to principles of transparency and right of access to information. The public will be granted access to otherwise classified information when the reasons no longer hold and after the passage of five years. If these measures are faithfully implemented and respect, the oil age will lead to a new information age in Ghana.

Bentsi-Enchill, Letsa & Ankamah (BE&LA) is a private partnership, incorporated under the laws of the Republic of Ghana. The practice was started by Kojo Bentsi-Enchill as a sole practitioner with 2 associates in 1988, and was incorporated in 1990 when he was joined by Divine Kweku Letsa. Ace Anan Ankamah was elected to the partnership in October 2000. The Firm now has 5 partners (with Seth Asante and Rosa Kudoadzi having been elected as partners in 2003), 3 Senior Associates, 6 Associates and 7 Junior Associates.

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