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EER - the European Energy Handbook 2012

ISBN 978-0-9555037-4-0



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Introduction

I am delighted to introduce the 2012 edition of “EER - The European Energy Handbook” which will give an in-depth survey of current issues in the energy sector in 41 European jurisdictions.

In addition to the chapters authored by Herbert Smith lawyers, this year, we have contributions from Schoenherr (Albania, Austria, Bulgaria, Croatia, Czech Republic, Hungary, Montenegro, Romania, Serbia, Slovakia and Slovenia); Stibbe (Belgium, Luxembourg and the Netherlands); Karanovic & Nikolic (Bosnia and Herzegovina and the former Yugoslav Republic of Macedonia); Georgiades & Pelides (Cyprus), Kromann Reumert (Denmark); Raidia Leijns & Norcous (Estonia, Latvia and Lithuania); Roschier (Finland); Gleiss Lutz (Germany); Kyriakides Georgopoulos & Daniolos Issias (Greece); BBA// Legal (Iceland); Arthur Cox (Ireland); Studio Legale Legance (Italy); Linkage & Mind LLP (Kazakhstan); Refalo & Zammit Pace Advocates (Malta); Arntzen de Besche Advokatfirma AS (Norway); WKB Wierciński, Kwieciński, Baehr (Poland); Esquivel Advogados (Portugal); Advokatfirman Vinge (Sweden); Homburger (Switzerland); Hergüner Bilgen Özeke (Turkey); and Sayenko Kharenko (Ukraine).

The review includes a summary of each legal and regulatory energy framework and analyses issues such as industry structure, Third Party Access, the framework applying to use of system both at the transmission and distribution levels, market entry, nuclear power and cross border interconnection. Special attention is given to the status of transposition and implementation of the Third Energy Package and the Climate Change Package into national law.

Although most elements of the Third Energy Package and Climate Change Package have now entered into force, they are slow to find their way onto national statute books. The Commission has highlighted its intention to prioritise the implementation the applicable energy market legislation and has commenced numerous infringement proceedings in this respect.

Whilst these packages are not yet fully implemented in all EU member states, further European measures have been announced and or adopted: The European Commission has been busy over the last twelve months and has put forward key initiatives for the European energy market, including in relation to the safety of offshore oil and gas operations, the improved co-ordination of the EU’s external energy policy, and the strengthening of Europe’s energy networks.

As 2012 will also see the coming into force of the unbundling provisions of the Third Energy Package, we can expect further lively debate and changes in the European energy sector in the year ahead.

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January 2012

Energy law in Greece

Recent developments in the Greek energy market

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Introduction

Greece has a liberalised energy market which has evolved in the last decade into an energy hub and represents an important sector of the country's economy. Alliances with major European, American and Asian companies on electricity and gas agreements have positioned Greece as a point of reference in the wider area and the country as a whole, especially northern Greece, has the capability of becoming the basis for large international companies seeking investment opportunities in southeast Europe. The World Bank estimates that, with the establishment of the Energy Community of Southeast Europe, approximately €30 billion will be invested by 2020 in the Greek electricity and natural gas sectors alone.

A number of these projects are linked to wider geopolitical moves and are concerned in part with the relations of the larger world powers. The Greek administration has the opportunity to exercise its influence between these major players, in order to extract benefits while also working towards minimising Greece's dependency on foreign energy.

Law 4001/2011

The second half of 2011 has seen the introduction of Law 4001/2011 in relation to the operation of the Energy Markets of Electricity and Natural Gas, the Research, Production and Distribution Networks for Hydrocarbons (the "Energy Law"). The Energy Law was passed in order to promote adherence to the provisions, and their incorporation in the national legislation, of the New Electricity and New Gas Directives respectively and, as such, it introduces a number of very important structural changes in the relevant markets.

In addition to the unbundling of the incumbent public companies, these changes have increased the powers of the country's regulator ("RAE"). The

responsibilities of the Hellenic Transmission System Operator ("HTSO") and the Public Power Corporation ("PPC") have been unbundled and distributed to new subsidiaries. Taking into consideration the present conditions and the development of the network to accommodate the dramatically increased addition of capacity through RES projects, the unbundling is the first priority of the country's energy policy with an Independent Transmission Operator being identified as the appropriate model to follow.

Project finance

Project finance in the energy sector in Greece is still operating within the confines of the financial crisis and this has caused certain changes to the market. Banks are now lending money on much stricter terms, while changes to the subsidy laws have reduced the rate of investment, and consequently the development, of energy projects. Other changes, such as the streamlined licensing process and rational basis on which banks enter into loan agreements, have helped encourage a more efficient approach in the legislative framework and the lending process.

In light of the above changes, the European Investment Bank ("EIB") has shown a particular interest in investing in large scale energy projects in Greece with a focus on the promotion of sustainable energy sources which will help secure the energy supply. Such projects include providing support for the modernisation of the PPC's network by extending and upgrading the transmission and distribution networks throughout the country, assisting DEPA in enhancing its network (including through the promotion of Liquefied Natural Gas (LNG) and the expansion of the LNG terminal at Revythoussa), and being involved in the construction of a high pressure gas pipeline at the Greek-Turkish border.

Privatisation of energy companies

One of the main tenets of the economic assistance of the IMF/EU towards Greece is the complete liberalisation of the energy market, both in terms of regulation and ownership. As such, the Greek government is planning to privatise its stake in a number of energy companies, including the Public Power Corporation (“PPC”), the Public Gas Company (“DEPA”) and Hellenic Petroleum (“ELPE”). It is also possible that part of the National Natural Gas Transmission System Operator (“DESFA”) will be privatised as part of an unbundling process from DEPA, which currently wholly owns DESFA.

A ministerial committee on privatisation has been convened to examine these issues and, as a first step, the State’s interest in DEPA and ELPE has been assigned to the “Fund for the Utilisation of the Private Property of the State”. The State currently holds a 35% stake in ELPE and a 55% direct stake in DEPA. The stake in DEPA is actually larger as ELPE holds a 35% stake in DEPA, which indirectly increases the State’s interest and links the two privatisation efforts. DEPA is well positioned to play an important role in the region, as natural gas gains a larger market share and, given the interconnection between DEPA and ELPE, it is quite likely that any privatisation decision will involve an investor entering in both companies, in order to avoid dilution of the acquired interest.

Another attractive asset comes in the form of the PPC. As the dominant electricity producer and the operator of the non-interconnected (island) and mid and low-voltage systems, PPC’s position within the Greek energy market is still vital. This, coupled with its relatively low market value (a result of the financial crisis), makes the 51% stake of the Greek State in the PPC a very appealing investment opportunity. It should also be noted that the PPC has one more advantage, in that it holds a 30% option in DEPA; this means that once the privatisation of DEPA will be launched, the PPC will have the option of acquiring up to 30% in DEPA. Whether this option is in fact exercised will help determine the material assets of the PPC and by extension, its market value.

Finally, other investment possibilities in the energy field in Greece may include the sale of a percentage, even possibly a majority percentage, of PPC Renewables, a wholly-owned subsidiary of the PPC which handles all renewables-related issues and project of the PPC, as well as the sale of individual existing units of the PPC. The exact format of the privatisation of the PPC and its assets is expected to be decided by the end of 2011.

Planned energy projects

A project of major prominence and importance which is gaining more traction each day is the “Helios” project. This project, with a planned completion date of 2017, is a massive photovoltaic energy project, spanning 200km², with a budget of €20 billion and a capacity of 2,000-10,000MW. This project aims to achieve a number of goals, including the export of electricity to mainland Europe, the creation of 30,000-60,000 new jobs and the

realisation of the energy goals set for 2020. In addition, as a necessary condition for the materialisation of this project, another important effect is the upgrading of national and international interconnection systems. There are two possible scenarios for how this project will be connected, one scenario has the German grid reaching the Greek grid through Austria and Italy (via an underwater cable), while the second scenario starts in Germany and finds the grid crossing the borders of Austria, Slovenia, Croatia, Serbia and Albania or Former Yugoslav Republic Of Macedonia in order to reach Greece. It goes without saying that the grid systems of any of the related countries will find itself significantly upgraded.

The Helios project has the support of both the Greek and German governments, together with the European Commission, which is likely to play a role in its financing. As such, it is possibly the most important single planned energy project for the time being.

This is not to say, however, that there is a lack of other significant energy projects planned for the near future. The government has instituted a “fast-track” licensing process and has placed it under the control of a special agency named “Invest in Greece S.A.”. The criteria under which a project may be included in the fast-track process include the total value of the investment and the number of new jobs created. It is estimated that approximately 5,000MW, worth a total of €10 billion, could be eligible to be fast-tracked under this process.

A number of projects have already taken advantage of the fast-track process, including groupings of photovoltaic parks totalling 126MW and 131MW, a 100MW hybrid park and a 200MW photovoltaic park developed between the PPC and a private investor. As the fast-track process becomes more popular, the tendency will be to lower the investment threshold required for inclusion in it, therefore, allowing even more projects to receive the benefit of a simplified licensing process.

Hydrocarbon research

Another area where significant activity is currently taking place is in the research, exploration and exploitation of hydrocarbons. While Greece has had legislation concerning these matters for many years (Law 2289/1995), it only recently started taking bigger and bolder steps towards the advancement of hydrocarbons. This is very important because, as only 0.5% of the petroleum used is locally produced, a better balance of imported and locally produced petroleum can signify greater energy independence. All of these activities reside solely with the State’s public sector, but the Minister of Environment, Energy and Climate Change has the power to assign research rights to third parties. However, any further granting of exploration and exploitation rights are likely to be granted through a tender process.

The Energy Law revised Law 2289/1995 in order to further advance developments in this field. To this purpose, a Presidential Decree was issued jointly

by the Ministers of Finance, Regional Development and Competitiveness and of Environment, Energy and Climate Change (“MEECC”) announcing that two months after the revision of Law 2289/1995 passes, a Greek Regulatory Corporation for Hydrocarbons S.A. (“GRECOHY”) will be established as the competent body for all matters relating to hydrocarbons.

In a further announcement, the Deputy Minister of Environment, Energy and Climate Change made known the government’s intention to move forward in the beginning of 2012 with an international invitation to express interest for three areas of Greece – off the coast of Patras, west of Ioannina and in the Katakolo area. The areas have a total estimated reserve capacity of 250-300,000,000 barrels of oil and the process of declaring the winning bidder is expected to take a year, with drilling operations likely to begin in the middle of 2012.

Conclusion

The energy market in Greece has reached a point of maturity in which investments can be considered to be both highly profitable and secure. Despite the current financial crisis, and unlike other sectors of the economy, the energy field continues to experience increasing growth with the full support of the Greek government and of both domestic and foreign private investors. Initiatives taken by the government to ease the regulatory framework and to comply with the European directives on the complete liberalisation of the market, along with the positive reaction of investors to large scale investments opportunities in energy, paint the current Greek energy market picture.

The developments described above are the focal point of a comprehensive energy policy which seeks to promote existing clean energy projects, modernise and expand the energy-related infrastructure, diversify the sources of energy by exploring new energy possibilities through hydrocarbons research and create new job opportunities and new technology innovations.

Overview of the legal and regulatory framework in Greece

A. Electricity

A.1 Industry structure

Greece began the liberalisation of the electricity market in 1999 and subsequently revised the legal framework in order to comply with EU legislation and incentivise private investments and competition. Under current economic conditions and pursuant to the agreement Greece entered into with the IMF and EU on financial assistance, complete market liberalisation has been highly prioritised and is one of the main pillars of the immediate economic model in Greece.

A series of main legislative acts over the past 20 years have shaped the Greek electricity market. These laws¹, with the Energy Law being the most recent addition to the legislative puzzle, along with the Grid Code and a series of secondary legislation in the form of Regulations, Ministerial Decisions and other Administrative Acts, set the electricity market rules (organisation and operation) and the fundamentals and restrictions of the market organisation, whilst they also establish the power exchange.

The government bodies and institutions which oversee and regulate the electricity market are:

- The Regulatory Authority for Energy (“RAE”) is an independent authority that promotes and safeguards the liberalisation of Greece’s electricity and natural gas markets, supervises and monitors the operation of all sectors of the energy market, and advises the competent authorities on compliance with competition rules and consumer protection;
- The Ministry of Environment, Energy and Climate Change (“MEECC”) is principally responsible for the formulation and implementation of Greece’s energy policy in relation to its international and Community obligations;
- The Ministry of Regional Development and Competitiveness, which can indirectly affect energy matters through its monitoring of petroleum product prices and, perhaps more significantly, through its responsibility of administering European Union Cohesion Funds;
- The Public Power Corporation (“PPC”) is Greece’s dominant electricity producer and supplier and owner of the Distribution Network. The PPC is owned by the Greek State (51.12%) and several insurance funds (3.81%), with the remaining percentage (45.07%) held by private investors;
- The Hellenic Distribution Network Operator (“HDNO”) is a wholly owned subsidiary of the PPC which shall be the operator of the Distribution Network and will accordingly be responsible for all activities relating to electricity distribution activities;
- The Independent Transmission Operator (“ITO”) is a wholly owned subsidiary of the PPC which will be the owner and operator of the High-Voltage Transmission System and will accordingly be responsible for its operation, exploitation, development and maintenance. In accordance with the relevant EC Regulations, special provisions have been included in the Energy Law securing the independent and non-discriminatory operation of the ITO;
- The Electricity Market Operator (“EMO”), owned by the Greek State (51%) and the PPC along with the private electricity producers (49%), will be responsible for the operation of the electricity exchange market.

The HDNO, ITO and EMO are entities which are, at the time of writing in November 2011, in the process of being established and may be operational in early 2012.

Under Greek electricity legislation, the development, construction, commissioning and operation of generation facilities is extensively regulated by a number of legislative acts, which provide for three basic licences²:

1. The Electricity Generation Licence is issued by RAE upon its review of the criteria stipulated in the Energy Law and may only be granted to legal entities based within the European Union and/or EU citizens;
2. The Installation Licence, in conjunction with the environmental licensing of the respective facilities, is a prerequisite for every developer seeking to proceed with construction works, enter into an agreement for the connection of the power plant with the Grid and also, in the case of gas-operated power plants, enter into an agreement for the connection of the power plant with the natural gas transmission system; and
3. The Operation Licence, issued following the connection of the power plant with the Grid, the completion of the works and the successful trial operation.

There is an exception in relation to the entire application and development process for offshore wind parks which is currently regulated by a special regime under which the government may grant a concession for those projects under a tender process. The terms of such tenders, and any other related issues, are set out by the MEECC and the Ministry of Economy, Competition and Maritime Affairs. However, due to significant delays in the finalisation of the tender processes, and in an effort to accelerate the licensing of such projects, the above framework is likely to be amended and the licensing process returned to RAE for its review and supervision.

Finally, the ownership along with the transmission and distribution activities of the electricity sector may only be performed with the granting of a respective licence.

A.2 Electricity trading

The operation of the electricity market is based on a mandatory wholesale daily market (the “Pool”) for power exchanges between market participants and on a capacity assurance market. The operation of the Pool is mainly comprised of the Day Ahead Scheduling (“DAS”) and the real time dispatch of generation units. Within the framework of the DAS, all power exchanges between suppliers and generators are settled at a uniform system marginal price (SMP) per dispatch period (SMP in €/MWh/h), which is the bid price of the last generating capacity included in the day ahead schedule. The DAS, thus, results in a uniform price at which all power transactions are settled.

Within the schedule of the market operation, prospective market participants are required to enter into the power exchange contract and the capacity availability contracts. In addition, they are entitled to enter into other bilateral contracts with the EMO which, depending on the nature of each agreement, include Contracts for Ancillary Services, Supplementary System Energy Contracts and Cold Reserve Unit Contracts.

Following the dispatch day, the EMO activates the Imbalances Settlement Procedure which also results in a uniform price at which the EMO settles the relevant charges and credits to the Participants concerned and encourages the availability of generation units.

In its current form, the grid code includes provisions regulating both the operation of the transmission system and the power exchanges. Due to the enactment of the Energy Law, RAE has already placed in public consultation a revised form of the grid code, with the biggest change being that the above two matters are to be the subjects of two new and separate codes. These two new codes generally maintain the provisions of the current grid code and reflect the changes which must be introduced because of the incorporation of the new ITO and EMO.

A.3 Third party access regime

The ITO adopts all necessary measures to ensure the immediate and uninterrupted new connection to the System and use thereof by the users. To this end, the ITO must make a connection offer to the user aimed at the conclusion of a connection agreement by virtue of which the parties thereto commit to perform the agreed-upon system development works.

The cost of implementation and commissioning of the connection extension works, including the costs for land expropriation and any other expenses, are exclusively borne by the applicant, with ownership of the works passing to the ITO.

Upon a decision by RAE, new direct interconnectors may be exempted from providing third party access for a limited period of time.

The annual System cost is allocated by the ITO between all System Users. The charge corresponding to each User is the product of the User’s chargeable capacity

multiplied by the unit charge corresponding to that user. The unit charge for each customer is the product of the annual transmission cost allocated to customers divided by the sum of customers’ chargeable capacities.

A.4 Market entry (supply and generation)

The requirements for market participation in power generation are set out in Section A.1 above. The activity of power supply, however, can only be performed upon the issuance of the relevant supply licence which is granted to companies having the form of sociétés anonymes or limited liability companies, with a capital of no less than €600,000, and with the proper organisational structure and financial capability to safely support the supply activities. These licences, much like the Generation Licences, are only available to legal entities based within the European Union and/or EU citizens, while for holders of supply licences in other countries of the EU, a supply licence shall be granted under a specialised procedure.

A.5 Public service obligations and smart metering

The companies which have the obligation to provide public services to their customers (mainly, power suppliers) must ensure that electricity is made available to the consumers of the non-interconnected islands and the remote microsystems at a pricing level that is (per consumer category) the same as the one applied at the interconnected system. In addition, they must ensure that electricity is provided under a special pricing scheme for large-family consumers and “economically sensitive groups”, as per the relevant legislation, and to further adhere to any other public service obligations which may be introduced in the future.

Although there is currently no smart metering system in place, the provisions of the Energy Law have established the target of providing no less than 80% of electricity customers with such system by 2020.

A.6 Cross-border interconnectors

The Greek Transmission System is interconnected to the north with Bulgaria, FYROM and Albania with a transmission capacity of 600MW; to the west with Italy via an underwater interconnector with a transmission capacity of 500MW; and to the east with Turkey. The northern interconnections are used primarily for the importation of electricity, while the interconnection to Italy is used to export significant quantities of electricity during the winter months.

B. Gas

B.1 Industry structure

The Greek natural gas market in Greece is still in the early stages of development. However, gas demand is projected to increase significantly over the next years, as it progressively gains a more important market share in

power generation, as well as in the industrial, residential and commercial sectors.

Piped natural gas sales from Russia began in 1996 and from Turkey in 2007, while liquefied natural gas (“LNG”) sales from Algeria began in 1999 on the basis of respective long-term supply contracts. Prior to this, the establishment of the high-pressure natural gas transmission system (“NNGTS”) and LNG terminal facilities resulted from a decision by the Greek State in 1992 to modernise its energy industries and diversify the country’s energy sources through the introduction of natural gas.

Until recently, the Greek Natural Gas market was essentially regulated by Law 2364/1995³. This legislation largely conformed to the fundamental EU guidelines in the sector, but the most crucial and significant step towards Natural Gas market liberalisation came with enactment of the Gas Market Law (Law 3428/2005) and the Energy Law which transposed the third EU Energy Package into national legislation replacing certain provisions of the Gas Market Law.

The government bodies and institutions which oversee and regulate the natural gas market are:

- RAE (described in Section A.1 above);
- MEECC (as described in Section A.1 above);
- The Public Gas Company (“DEPA”) is a state-controlled natural gas company vested with the non-exclusive rights to import, export and trade natural gas (to the regional gas distribution companies and large end-users);
- The Independent System Operator (“DESFA”), a wholly owned subsidiary of DEPA, is vested with exclusive authority for the operation of the NNGTS and has the exclusive rights of programming, constructing, owning and exploiting the NNGTS, in addition to the rights of storage (including the management of LNG terminal facilities that constitute part of the NNGTS) and the processing of natural gas. DESFA was granted a single ownership and an operation licence with regard to the NNGTS for an initial period of fifty years.

Upon liberalisation pursuant to the Second EU Gas Directive, DEPA is no longer the only entity active in the sale, purchase, import and export of natural gas. Such activities are now permitted for any party interested without any licensing requirements and the market has subsequently been opened up to new participants. Interest in entering the market is high as Greece offers a unique advantage for those involved in the business of natural gas due to increasing consumption needs, its positioning in the region and its potential as an access point for the needs of southeast and mainland Europe.

The exercise of other natural gas activities within the territory of the Greek State however, pursuant to the gas sector legislation, constitutes a public service and is performed under the supervision and regulation of the MEECC. In general, Greek policy regarding gas related issues focuses on:

- ensuring security and continuity of supply;

- protecting consumers;
- ensuring the promotion of free competition and environmental protection; and
- promoting the implementation of energy-efficient and economical, effective practices by the licencees.

Specifically, the supply and distribution of natural gas to eligible and non-eligible customers, as well as the construction and operation of Independent Natural Gas Transmission Systems, are permitted only to the holders of the respective licences granted by RAE.

B.2 Gas trading

Natural gas supply companies, as well as distribution companies, are entitled to supply customers with natural gas in their respective areas of jurisdiction pursuant to the terms and conditions of their respective supply and distribution licences.

The trading of natural gas takes place between the Suppliers and their Customers through bilateral contracts. Due to the relatively underdeveloped state of the domestic gas market, the completion of financial trades in gas follows the principles that apply to physical trades under natural gas supply contracts. Therefore, the physical delivery of a quantity of natural gas (as certified by DESFA) determines the basis upon which the related financial trades are completed. The Gas Supply Code is expected to set the general framework for the supply of natural gas to eligible customers, as well the general terms and conditions of the natural gas supply contracts.

Physical trades in natural gas are determined on the basis of specific provisions in the NNGTS Operation Code, which sets out a gas trading scheme encompassing weekly scheduling for the resale and transportation of natural gas, the transmission of capacity rights within the system and an imbalances settlement regime. Further conditions are determined by the model transportation contracts and LNG facilities use contracts which give to a gas undertaking access to the national system in order to supply an Eligible Customer.

B.3 Third party access regime to gas transportation networks

DESFA is required to provide system users with access to the NNGTS in the most economic, transparent and direct way for as long as they wish. Access to the System may be refused for certain reasons in which case DESFA must specifically substantiate its reasoning.

Title to the delivered natural gas at a system entry point remains with the shipper, while DESFA obtains custody rights once the gas is delivered to the entry point. Any risk of loss passes to DESFA at the entry point, and returns back to the shipper at the exit point.

The relevant transportation tariffs, according to the NNGTS Operation Code, set out that the shipper is required to pay consideration to DESFA, on a monthly basis, for using the System in accordance with the published NNGTS Tariff Regulations for gas

transportation. The consideration is calculated based on the charge for the capacity transportation reserved by the shipper each year and the charge for the gas quantity transported each year on the shipper's behalf.

B.4 LNG and gas storage

Greece has one LNG import terminal, located west of Athens on the island of Revythoussa, with a total useful capacity of 126,500m³. LNG supplies were historically imported solely by DEPA under a contract with Algeria's Sonatrach. However, the first two privately owned LNG shipments entered the system in the spring of 2010.

LNG is regasified in special installations and then the natural gas is supplied to the NNGTS. In July 2007, DESFA completed an expansion of the infrastructure and an upgrading of the facilities in order to increase gasification capacity.

The MEECC is examining the possibility of international partnerships for the construction of a second LNG terminal in Northern Greece. A private company which holds a licence from the Greek state to drill for oil at Prinos is in the process of converting the depleted South Kavala Gas Field into an underground gas storage facility utilising the existing infrastructure which, according to studies, can store significant quantities of gas sufficient to secure the uninterrupted gas supply in Greece for a period of 90 days.

Furthermore, RAE recently also approved a floating LNG terminal in the northern Aegean, comprising an offshore delivery and regasification station, which will inject the natural gas into the NNGTS through an underwater pipeline.

These projects shall ensure that sufficient natural gas quantities reach the Greek market, while they shall also contribute to the enhancement of the NNGTS.

B.5 Market entry

Subject to the licensing restrictions described above, liberalisation has lifted the entry barriers to the gas market.

B.6 Public service obligations (including smart metering to the extent relevant)

The public service obligations and smart metering initiatives in natural gas are the same as those which apply in electricity, as described in section A.5 above.

B.7 Cross-border interconnectors

Greece is seeking to diversify its natural gas imports by sourcing natural gas from countries such as Iran and Azerbaijan, and is cooperating with several nations that are constructing pipelines. Azeri gas is scheduled to be transported via Turkey through the Turkey-Greece-Italy interconnection gas pipeline (the "ITGI project"). Another similar pipeline project is the Trans Adriatic Pipeline ("TAP"), which is designed to connect with the main line of the NNGTS and provide for the transport of natural

gas from Greece to Italy via Albania.

In addition, there have been agreements on the implementation of the Greek part of the South Stream pipeline as well as on the IGB (Interconnector for Greece-Bulgaria) pipeline. This can potentially be used as a starting pipeline for exporting Arabian LNG from Egypt, Algeria and the Persian Gulf to the Balkans and Central Europe.

C. Climate change and sustainability

C.1 Climate change initiatives

Under the Kyoto Protocol, the EU15 are committed to reduce their carbon emissions by 2012 by 8% compared to the base year, while the EU27 are committed to a 20% reduction by 2020 compared to 1990 levels. In order to adhere to its obligations, Greece has implemented a programme since 2000 which coordinates all private and public sector activities with the aim of limiting greenhouse gases. This aggressive programme has taken measures affecting the household and tertiary sectors; transportation; industry; electricity generation; waste disposal; agriculture; manufacturing processes and more.

C.2 Emission trading

The emission trading system in Greece functions through the national allowance plans ("NAPS"), under which each country distributes its carbon credits allocation to domestic installations (who can also supplement these credits by purchasing EU and international trading credits). If an installation performs well at reducing its carbon emissions, it then has the opportunity to sell its credits for a profit, allowing the system to be more self-contained and to be part of the stock exchange without much government intervention.

The final version of the Greek NAPS, issued in April 2008, set out the total emission rights allocated for Greece for the period 2008 to 2012 at 341,547,710 tonnes of CO₂, all of which were allocated free of charge. A decision was made in early 2011 to auction 10 million unallocated emission rights units ("EUA") with an estimated total value of approximately €200 million. As of early September 2011 a total of five auctions have taken place which have sold a little over 5 million EUAs and which have brought in over €60 million.

From January 2013 a number of changes to the current trading scheme will take place which will include a centralised allocation process by an EU authority to replace the national allocation plans, a decision to auction a greater share of credits (above 60%) rather than allocating them free of charge, and including other greenhouse gases. The proposed goal for the Third Trading Period foresees an overall reduction of greenhouse gases of 21% by 2020 compared to 2005 levels.

C.3 Renewable energy

June 2010 brought the issuance of the New RES Law which streamlined the licensing procedures for RES projects in order to expedite their materialisation. The law exempted a larger field of projects from the need to receive Production Licences and environmental approvals; reduced the timeframe needed for cases where these are required (by merging processes and transferring the task of the issuance of Production Licences from the Ministry to RAE); offered incentives for projects not qualified for subsidies; and permitted RES installations on high productivity lands. Finally; the removal of the own financial capability criterion, which burdened many shareholders and stalled numerous projects, is of great significance.

A RES project must receive a series of licences, which can be classified in the following basic categories:

- 1) The Electricity Generation (or Production) Licence;
- 2) The Environmental Terms Approval (“ETA”);
- 3) The Connection Terms Offer (“CTO”), which becomes binding upon the issuance of the ETA;
- 4) The security of the land rights for the project site;
- 5) The Installation Licence;
- 6) The Connection Works Agreement and the Power Purchase Agreement; and
- 7) The Operation Licence.

As mentioned above, the New RES Law does not require the ETA for all projects. However, in cases where a project is exempt from the ETA, a confirmatory decision on this point must be issued.

Greece has reached 11% energy consumption from RES and the total installed capacity from RES has reached 1,702MW (with 269MW installed in the first eight months of 2011). This increase has mainly been led by photovoltaics (“PVs”), the capacity of which has doubled in the last year, while wind and small hydroelectric capacity also shows significant progress. However, despite these gains in RES production, the national target for the production of power through RES has been set at 20% of the total national energy consumption by 2020, while the New RES Law sets out that the national target for the production of power through RES has been set at 40% of the total national electricity consumption by 2020. This shows that significant efforts must still be made in order to reach these targets.

The aforementioned targets are to be achieved through a mix of measures related to the implementation of policies in the field of energy efficiency and the large penetration of RES technologies, both in electricity production and heat supply. In October 2010, the MEECC issued a Ministerial Decision on the desired ratio of the installed capacity for RES technologies in Greece using two years (2014 and 2020) as landmarks. The provisions of the New RES Law, along with the “fast-tracking” of certain projects, aim to simplify the licensing procedure, rationalise the feed-in-tariff scheme, tackle of specific

barriers locally, and immediately advance certain key projects, all for the advancement of power production by RES and for the attainment of the set targets.

The fast-track process has been used in the past for large scale energy, tourism, industry, advanced technologies and innovation projects which fall under the purview of the investment law. Currently, it is being used as a tool aimed to accelerate large scale investments in Greece, with most of those investments being in RES projects. Within the framework of the fast-track process, a company under the name Invest in Greece S.A., operates as a one-stop-shop for investors and undertakes all of the required procedures and licensing obligations on behalf of the investor.

Another way to promote electricity generation through RES in Greece is through a guaranteed feed-in-tariff (“FIT”). This FIT provides electricity producers from RES a guaranteed selling price for their produced electricity, along with a guaranteed buyer for their production. The selling price can be differentiated depending on whether the RES electricity producers are located on a Greek island or not, on the type of RES technology used and on the time when the application for the power purchase agreement (“PPA”) with the relevant Operator is submitted. In all cases though, this FIT is more than competitive and can balance out the investment costs incurred. RES power plants also enjoy dispatch priority to the Grid. The FIT, however, is limited in time, and is only guaranteed for the duration of the PPA. These agreements have a duration of 20 years and may be extended by agreement between the parties⁴.

Another financial instrument for the promotion of RES in Greece (with the exemption of PVs), is the National Development Law (Law 3299/2004) which covers all private investments in Greece across all sectors of the economy. The National Development Law governs the terms and conditions of direct investment in Greece and provides for incentives, available to both domestic and foreign investors, dependent on the sector and the location of the investment.

Also of note is the central planning structure in relation to future RES production. The EMO is obliged to publish the National Transmission Development Plan (“NTDP”) each year. This plan describes all planned transmission projects under a five year horizon, and also includes an overarching strategic view under a ten year horizon. The planning process takes into consideration existing Production Licences and applications for new licences and, through close collaboration between the EMO and RAE, aim to plan the most suitable transmission projects to accommodate future RES production.

C.4 Biofuel

While initiatives and developments on biofuel market have recently started in Greece, with biodiesel being the only biofuel produced in the country, there is legislation which has been passed in order to harmonise domestic law with EU legislation on biofuels. Such legislation provides

for the need to receive licences in order to perform certain activities. Biofuel distribution is one such activity and in order to receive the relevant licence one must also hold a biofuel production licence (or alternatively valid contracts to purchase biofuels). These licences are only granted to companies established in the form of société anonymes or limited liability companies based within the European Union.

C.5 Energy efficiency

A very successful programme which has been in place for the past year or so, and which promotes energy efficiency in small scale settings, is the “rooftop PV” program. Under the terms of this government-sponsored initiative, domestic consumers of electricity and small business are given the opportunity to install small PV systems (up to 10kWp) on the rooftops of their buildings. The electricity produced is sold to the HDNO and the financial gains from this sale usually offset all investment costs and allows for a profit for the small investor. The success of this program is evidenced by the fact that over 46MW have already been installed, with another 105MW in pending applications.

footnotes

1. These laws are in detail: Law 2773/1999 on the liberalisation of the Electricity Market, Law 3175/2003 which amended Law 2773/1999, the Grid Control and Power Exchange Code for Electricity of May 2005 (the Grid Code), Law 3426/2005 on the Acceleration of Electricity Market Liberalisation, Law 3468/2006 on the Production of Electrical Energy from Renewable Energy Sources, Law 3851/2010 on the Acceleration of the development of RES and the Climate Change (the New RES Law), and finally Law 4001/2011 on the Operation of the Electricity and Natural Gas Energy Markets and for the Research, Production and Transmission Networks for Hydrocarbons and other provisions (the “Energy Law”).
2. Other ancillary requirements prescribed by the general legislation relate to building permits, health and safety legislation, etc. The issuance of these run in parallel and is a prerequisite to the licenses mentioned above.
3. As amended by Laws 2528/1997 and 2992/2002.
4. However, the FIT applicable for the extension of the PPA is likely to be the FIT applicable at the time of extension, and not the one granted at the signing of the original PPA.

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