THE PORTUGUESE RENEWABLE ENERGY MARKET

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"Energy is eternal delight!"¹

I. INTRODUCTION

The Portuguese Electricity Market is an example of the restructuring process moving from a public monopoly situation to a moderate liberalization required for the completion of the European Electricity Market.²

In line with the Kyoto Protocol, in which the developed nations agreed to limit their greenhouse gas emissions, the European Union (EU) is determined to reduce pollution-causing emissions by granting incentives for energy production using 'clean' sources. The concession of incentives is settled through national programs supporting renewable energy production and cogeneration facilities using natural gas. As a result, production of electricity using Renewable Energy Sources (RES) is increasing at a fast pace in Portugal.³

As for Portugal, the governmental goal is to reach 39% of generation capacity from RES from a total output demand of 12,000 to 15,000 MW by 2010.⁴ Although this target will mainly be reached through wind and mini-power, the opportunity exists for developing other applications, such as biomass, solar and wave energy. It is predicted that, in order to achieve the referred purpose, "[t]he total investment will be approximately 5.000 million euro [$4,915,500.00]." ⁵

The Portuguese regime of incentives is based on two major aspects: (1) a subsidized tariff that provides producers using RES with higher remuneration than what the other producers receive, and (2) the obligation on the part of the distribution companies to purchase the power that independent producers using RES place in the grid.

The Portuguese energy consumption, based on oil and black coal,⁶ largely

⁴. Note that "the electricity demand is expected to grow at an annual rate of 3.5%, which corresponds to doubling the consumption within the next 20 years." It also should be noted that "the electricity consumption has grown at an annual rate of 6% over the last 20 years." Lopes & Adnot, supra note 2.
⁵. Vitorino, supra note 3, at 1.
⁶. "Generation is about dominated by black coal that accounts for 54% of total production. The
depends on imports, with a dependence much higher than the EU average. Nevertheless, Portugal remains one of the EU countries that makes more use of its available RES (mainly wind power, biomass and hydropower). Consequently, the Portuguese government has heavily promoted its energy policy based on renewable energies. Its primary intention is to encourage the rational use of energy and energy efficiency. Therefore, regarding the energy policy for the upcoming years, the government has established the following goals: (1) reduction of energy dependence and development of endogenous resources; (2) reduction of dependence on oil and coal and diversification of energy sources; (3) reduction of environmental effects of production and use of energy; (4) reduction of the energy bill; and (5) increase the efficiency of supply. For that purpose, the main priorities have been focused on the substitution of oil in the energy balance, by promoting the introduction of natural gas. In addition, the focus has been on the liberalization of the energy market by opening this former state-owned sector to competition and private investment.

The three major initiatives for pursuing the referred goals (use of RES and energy market development) are the following: (1) the Independent Power Producers (IPP) law, introduced in 1988; (2) the Operational Programme for Economic Development (POE), launched in 2000; and (3) the E4 Programme (Energy Efficiency and Endogenous Energies), launched in 2001, which has substituted the former ENERGIA Programme (1994-1999), both supported by the EU Framework Programmes.

The incentive programs, such as ENERGIA, POE and E4, played an important role in the pursuit of private investment. However, it is unquestionable that the Portuguese restructuring process was initiated with the IPP law, a fundamental step towards the market liberalization.

The IPP law (Decree Law 189/88 of May 27, 1988) sets forth the legal framework for the production of electric energy from renewable sources. Introduced in 1988, the IPP law was further revised (1995, 1999, & 2001), as part of the new legal framework for the electricity sector. It allows for individuals or companies, public or private, to generate electricity from any type of RES and sell it to the grid, as long as: (1) legal, technical, and security
requirements are performed; and (2) the output capacity does not exceed 10 MW of apparent available power.\textsuperscript{14} Generators, distribution companies and customers may either be part of the public electric system (SEP)\textsuperscript{15} or join the independent electric system (SEI).\textsuperscript{16} Renewable generators (with the exception of hydro-electricity generators) are part of SEI but generally sell their generation to the SEP under favorable pricing terms that have been introduced by Decree Law 168/99 of May 18, 1999.\textsuperscript{17} The tariffs paid for the renewable electricity is based on: (1) the avoided cost by the SEP; and (2) the environmental benefits of the use of RES (‘green tariff’ component, guaranteed for the first twelve years of the plant operation).\textsuperscript{18}

II. AUTHORIZATION PROCEDURES

All renewable generation projects are subject to an installation license and an operation license. The authorization procedures are initiated by filing with the Directorate General for Energy (DGE), a formal written request for an installation project. In order to submit the referred filing, the promoter may ask the Public Energy Network Operator (GRP – Gestor da Rede Pública) for technical information. The power plant installation must be initiated within eighteen months as of the day of the authorization license notice. This term may be extended at the request of the generator in case he is not held responsible for the delay, as foreseen hereunder. Likewise, power producers must hold an operation license before they start operating. The power generation must start within six months as of the day of the operation license notice.$^{19}$

The final decision regarding the approval and issuance of the installation license is taken by: (1) the Minister of Economy, for power plants with more than 1 MW, or (2) the DGE Director, for power plants with up to 1 MW. The issue of the Operation License, which occurs after an inspection, is the responsibility of: (1) the Local Department of the Ministry of Economy with jurisdiction on the location of the power plant that have more than 10 MW or (2) the DGE, for power plants with up to 10 MW.$^{20}$


\textsuperscript{15} The Public Electricity System (SEP) has public service obligations. “Its purpose is to fulfill the needs of the consumers, according to the principle of tariffs uniformity.” Lopes & Adnot, supra note 2, at 4.

\textsuperscript{16} The Independent Electricity System (SEI) has no public service obligations. “The SEI has two components: a non-binding subsystem (SENV – Non-binding Electricity System) ruled by market relations, and ‘special’ producers using renewable energies sources or combined heat and power, which are under specific legislation.” Id.

\textsuperscript{17} Vitorino, supra note 3, at 4.

\textsuperscript{18} Id. at 5.

\textsuperscript{19} A time extension regarding each of the referred licenses (installation and operation licenses) can be granted, if all the following conditions are met: (1) filing of the relevant request; (2) the time extension is granted by the same entity authorizing the installation of the power plant (the Minister of Economy or the DGE Director, depending on the available power); and (3) the delay is not attributable to the power generator, namely if the delay is due to a delay in issuing the license. Vitorino, supra note 3, at 4.

\textsuperscript{20} Id. at 5.
III. CONNECTION TO THE PUBLIC GRID

The transmission of power is made through the national grid, which is operated by Rede Eléctrica Nacional (REN) under an exclusive concession granted by the Government. The national grid includes: (1) the Very High Voltage (higher than 110 kV) grid; (2) the connection grid between the Very High Voltage grid and the international grid; (3) the national dispatch facilities; and (4) the rights and assets connected thereto.

It is required that a power plant connected to the grid be connected to the Project Company. The Project Company is required to pay the expenses of the connection whenever the branch line is not shared with other power plants. However, if the branch line is shared, the expenses with the connection will be borne by all generators involved on a pro-rata basis. In the event that a new Independent Power Producer wishes to use an existing branch line, the other users shall be entitled to compensation in accordance to a formula attached to Decree Law 168/99 of May 18, 1999 (amendment of the IPP law).

By the end of 2001, a new regulatory framework was introduced. Decree Law 312/2001 of December 10, 2001 establishes more efficient administrative procedures and ensures equal opportunities, objectivity, and transparency in the decision making process in order to guarantee better access to the grid for procedures under the special regime. This new regulatory framework intends to establish the legal instruments and mechanisms that will allow a better use of RES through more transparent management of the public grid, providing enough capacity to respond adequately to electricity dispatch requests from power producers. Furthermore, the new regulatory framework is a fundamental step towards achieving the ambitious target of 12% of gross consumption from RES by 2010 proposed in Article 5 of Directive 2001/77/EC from September 2001.

IV. OFF TAKE CONTRACT

According to Article 19 of Decree Law 189/88, IPPs are guaranteed that the public grid will acquire all the electricity they produce during the license period. The sale tariffs are paid directly by the SEP distributors and REN, the concessionaire of the national grid.

Sale tariffs for power generated by the power plant shall be the aggregate of: (1) the costs saved by the SEP with the entry into service and operation of the power plant, including: (a) the amount of the saved investment in new power plant electric installations, (b) the amount of the saved costs with transportation, operation and maintenance, including the acquisition of raw materials; and (2)

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21. Rede Eléctrica Nacional, S.A. is a company owned by the state and by Energia de Portugal (EDP), which operates the national grid.
24. Vitorino, supra note 3, at 5.
the environmental benefits generated by the use of endogenous resources.25

The off take obligations are further set forth in Ministerial Order 416/90 of 6 June 1990, which approves the Off Take Contract Agreed Form.26 The Off Take Contract Agreed Form was approved under the provision of Decree Law 189/88, which foresees the celebration of a Power Purchase Agreement (PPA) between the IPP and the public grid operator.27

The execution of a PPA means the availability charge is payable even though the power plant is not capable of being dispatched.28 However, as a general rule, the power purchaser protects itself “by only being obliged to pay the full amount of the availability charge if a minimum or target level of availability is met (e.g. 92%)”.29

Bearing in mind the provisions of the Contract Agreed Form and the Operation Protocol attached to it, PPA’s are to be signed after connection to public grid is complete. These provisions presume that the power plant is able to produce energy and that the IPP holds an operation license. The temporary gap between the beginning of the production and the execution of the PPA may be considered as a serious risk to the IPP.

The counterparty of this contract shall be: (1) Energia de Portugal (EDP)30 if the interconnection tension is equal or lower to 60 kV (distribution line); or (2)
REN if the interconnection tension exceeds 60 kV (transmission line). Although the entities are different, both are public grid operators, and REN is controlled by the Republic—70%—and EDP—30%.

V. FINANCIAL INCENTIVES (POE)

The granting of financial incentives for IPP using RES under the POE regime has created new opportunities for large investments in power generation. Consequently, the applications for licenses to build power plants in Portugal (especially wind farms) have increased at a fast pace in the last years.

Decree Law 70-B/2000 of May 5, 2000 (POE) establishes the concession of financial incentives for several sectors of the economy, including the power industry.\(^{31}\) The financial incentives for power production using RES are set forth in Ministerial Order 198/2001 of March 13, 2001 (MAPE — Regulamento de Execução da Medida de Apoio ao Aproveitamento do Potencial Energético e Racionalização de Consumos), which complements and specifically regulates the aforementioned Decree Law.\(^{32}\)

According to Article 19, the financial incentive under the POE (and consequently under the MAPE) is to be formalized by a contract entered into by and between the beneficiary and the Institute for Support to Small and Medium-Sized Companies and Investment (IAPMEI).\(^{33}\) Additionally, if the contract is not executed within a maximum period of forty days from the day of the receipt of the written notice approving the financial incentive, for reasons attributable to the beneficiary, the approved financial support will be considered null and void.\(^{34}\)

According to Article 20 of MAPE, the beneficiary is obliged to the following obligations: (1) to execute the project in the terms described on the contract; (2) to fulfill the objectives stated in the application; (3) to fulfill all of its legal obligations,\(^{35}\) namely tax and social security obligations; (4) to deliver to the coordinating entity interleave reports and a final report for execution of the project; (5) to deliver the requested information within the time periods set forth by the entity that monitors the project; (6) to inform the coordinating entity of any alteration or occurrence that may jeopardize the assumptions upon which the project was approved; (7) to maintain the legal conditions required in the exercise of the activity, namely those pertaining to licensing; (8) to maintain its situation settled before the IAPMEI; (9) to keep the books organized in accordance with Portuguese law; (10) to maintain an organized file with all the documents evidencing the declarations given under the applications; (11) to allow the DGE or any entity indicated by the DGE access to the sites; (12) to fulfill the rules related to publicity of the grant; and (13) without prior consent of


\(^{33}\) Id.

\(^{34}\) Order 198/2001, supra note 32.

\(^{35}\) This includes, if applicable, environmental obligations.
the Minister of Economy, not to use for other purposes, lease, transfer or, by any other means, grant a security interest over, all or in part, the assets acquired for the execution of the project.\textsuperscript{36}

Payment of the incentive is subject to the fulfillment of the obligations listed above. This means that the IAPMEI may not be required to pay the incentive if the beneficiary is not complying with any of the referred conditions. Payments may also be suspended in the case of delay in the performance of non-pecuniary obligations upon a notification from the DGE. In this case, payments are suspended for the period of time when such delays continue, whereby the incentive paid will bear interest from the date of notification of the non-compliance at a rate corresponding to six months Euribor.\textsuperscript{37}

The IAPMEI may terminate the contract, by means of indication from the DGE and after a favorable opinion from the coordinating entity, in any of the following events: (1) if the beneficiary does not comply with any of the objectives and obligations established in this contract, including the periods concerning the start of the investments realization and its conclusion; (2) if the beneficiary does not comply with legal obligations, namely tax and social security obligations; or (3) if the beneficiary renders false information on the project’s situation or corrupts the data provided in the presentation, appreciation and accompaniment of the investments.\textsuperscript{38} Termination of the contract involves the return of the incentive already received within a period of sixty days as of the date of its notification, to which will be added interest calculated from the date of the incentive’s payment until the latter has been entirely replaced at a rate equal to twice the Euribor rate over six months, applicable at the time of the notification.\textsuperscript{39} Finally note that in case of recovery proceedings by the beneficiary, the IAPMEI may, after a hearing of the DGE, suspend its contractual obligations until a final decision has been reached.\textsuperscript{40}

VI. THE LIBERALIZATION OF THE EUROPEAN MARKET AND THE FUTURE OF THE PORTUGUESE ELECTRICITY MARKET

Directive 96/92/EC (Directive) adopted by the Council of Ministers on December 19, 1996, and entered into force on February 19, 1997, sets forth the common rules of the European electricity internal market, regulating its generation,\textsuperscript{41} transmission,\textsuperscript{42} and distribution\textsuperscript{43} within the EU countries. Member

\textsuperscript{36} Order 198/2001, \textit{supra} note 32.

\textsuperscript{37} Euribor (Euro Interbank Offered Rate) is the rate at which euro interbank term deposits within the euro zone are offered by one prime bank to another prime bank.


\textsuperscript{39} \textit{Id}.

\textsuperscript{40} POE, \textit{supra} note 38.

\textsuperscript{41} According to the Article 4 of the Directive, “[f]or the construction of new generating capacity, Member States may choose between an authorization [p]rocedure and/or a tendering procedure.” The tendering procedure is defined in Article 2 as the “procedure through which planned additional requirements and replacement capacity are covered by supplies from new or existing generating capacity.” According to Article 4, “[a]uthorization and tendering [procedures] must be conducted in accordance with

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2002] RENEWABLE ENERGY 501
states had two years to accept the Directive even though some exceptions were granted (Belgium, Ireland, and Greece). The Directive changed the former procedure where production is monopolized. By introducing competition, the Directive aims for the increase of efficiency, which is intended to lead to lower prices. The lower prices for electricity should result in lower production prices for the European industry, which in turn can be translated into lower prices for products.

Other than generation, transmission and distribution of electricity, the Directive also regulates the unbundling of accounts and third party access. Member States are given discretion, so long as the different choices lead to equivalent economic results. This means that the Directive does not impose a single rigid new market structure, but sets out minimum conditions for the implementation of a transparent, competitive and efficient European market.

As for the unbundling, in order to avoid discrimination, cross-subsidization, and distortion of competition, the Directive establishes that integrated electricity undertakings must, in their internal accounting, keep separate accounts for: (1) their generation, transmission, and distribution activities, in case of a vertically integrated undertaking; and (2) their electricity activities and non-electricity activities, in case of a horizontally integrated undertaking.

Chapter VII sets forth the organization of access to the system. According to its contents, member states can choose between negotiated or regulated third party access (article 17) or the single buyer procedure (article 18). It is generally considered that the regulated third party access system based on published prices is the best procedure in order to achieve a most effective competitive market, mainly for two reasons: (1) it ensures that discrimination against

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42. Per Article 2, transmission “shall mean the transport of electricity on the high-voltage interconnected system with a view to its delivery to final customers or distributors.” Chapter IV concentrates on the technical issues, including dispatching, for the Transmission System Operator (TSO), which is responsible for dispatching the generating installations in its area and for determining the use of interconnectors with other systems. Article 8 states the criteria for the dispatching “must be objective, published and applied in a non-discriminatory manner. . . .” Id.

43. In Article 2, the distribution is defined as “the transport of electricity on medium-voltage and low-voltage distribution systems with a view to its delivery to customers.” Chapter V concentrates on the technical requirements for the Distribution System Operator (DSO). According to Article 10, a DSO shall be designated to be “responsible for operating, ensuring the maintenance of and, if necessary, developing the distribution system in a given area and its interconnectors with other systems.” The DSO is responsible for maintaining “a secure, reliable and efficient electricity distribution system in its area, with due regard for the environment.” Note that a Member State may require the DSO, “when dispatching generating installations, to give priority to generating installations using renewable energy sources or waste or producing combined heat and power.” Council Directive 96/92/EC, supra note 41.

44. Article 2 states that a vertically integrated undertaking “shall mean an undertaking performing two or more of the functions of generation, transmission and distribution of electricity.” The article additionally declares that a horizontally integrated undertaking “shall mean an undertaking performing at least one of the functions of generation for sale, or transmission or distribution of electricity, and another non-electricity activity.” Id.

45. Portugal has adopted such option.
competitors cannot take place; and (2) it ensures that companies can plan future electricity purchases with advance knowledge of transparent tariffs.

As for the renewable energy sources, the European Parliament and the Council of the European Union adopted Directive 2001/77/EC on September 27, 2001, which purpose is “to promote an increase in the contribution of renewable energy sources to electricity production in the internal market for electricity and to create a basis for a future Community framework thereof” (Article 1).46

According to Article 3 of the RES Directive, member states are required to adopt and publish two reports: (1) one report (every five years) setting national indicative targets for future consumption of electricity produced from RES in terms of a percentage of electricity consumption for the next ten years, as well as outlining the measures taken or planned, at the national level, to achieve those targets; and (2) another report (every two years) that shall include an analysis of success in meeting the national indicative targets.47

Most important of all, Article 6 of the RES Directive establishes that Member States shall: (1) reduce the regulatory and non-regulatory barriers to the increase in electricity production from RES; (2) streamline and expedite procedures at the appropriate administrative level; and (3) ensure that the rules are objective, transparent and non-discriminatory, and take fully into account the particularities of the various RES technologies.48 In one word, the RES Directive aims for the creation of a single, liberalized and transparent European market, which is able to update and accelerate the production of electricity using RES.

Member states are opening their markets at different speeds, a predictable event. As for Portugal, the Government has undergone a major restructuring in the last years in order to fulfil its international obligations and the aforementioned Directives. Such restructuring led to the final goal of creating an integrated market with its only neighbour, Spain, by creating the Iberian Electricity Market (IBELM).49 The first step towards that goal was taken when the Spanish and Portuguese Administrations signed a collaboration protocol on November 14, 2001. "According to the [aforementioned] . . . the [IBELM] . . . will be developed along two complementary lines: [1] bilateral trading contracts to be freely entered into by agents, [and] [2] trading organised through the Iberian Market Operator, a new entity whose capital should be open to companies from both countries."49

Bearing in mind all the aforesaid, and coupled with the efforts made in the last years by the Portuguese Government in order to achieve the ultimate goal of opening the market to the world, we may conclude that the future of the

47. Id.
49. The IBELM will start operating on January 1, 2003, guaranteeing that the Iberian Peninsula will become an integrated electricity market that will interact homogeneously with the rest of the European Union through the interconnections between Spain and France. Comisión Nacional de Energía, Iberian Electricity Market 1 (2001), available at http://www.cne.es/pdf/cne28_02.pdf.
Portuguese Electricity Market, being for the moment undefined, will certainly guarantee the best opportunities for investment.