



[www.ogel.org](http://www.ogel.org)

ISSN : 1875-418X  
Issue : Vol. 7 - issue 4  
Published : December 2009

#### Terms & Conditions

Registered OGEL users are authorised to download and print one copy of the articles in the OGEL Website for personal, non-commercial use provided all printouts clearly include the name of the author and of OGEL. The work so downloaded must not be modified. **Copies downloaded must not be further circulated.** Each individual wishing to download a copy must first register with the website.

All other use including copying, distribution, retransmission or modification of the information or materials contained herein without the express written consent of OGEL is strictly prohibited. Should the user contravene these conditions OGEL reserve the right to send a bill for the unauthorised use to the person or persons engaging in such unauthorised use. The bill will charge to the unauthorised user a sum which takes into account the copyright fee and administrative costs of identifying and pursuing the unauthorised user.

For more information about the Terms & Conditions visit [www.ogel.org](http://www.ogel.org)

© Copyright OGEL 2009  
OGEL Cover v2.2

# Oil, Gas & Energy Law Intelligence

## The Renewable Energy Sources (RES) sector in Greece by L. Sidiropoulos and E.D. Horiatakis

### About OGEL

**OGEL** (Oil, Gas & Energy Law Intelligence): Focusing on recent developments in the area of oil-gas-energy law, regulation, treaties, judicial and arbitral cases, voluntary guidelines, tax and contracting, including the oil-gas-energy geopolitics.

For full Terms & Conditions and subscription rates, please visit our website at [www.ogel.org](http://www.ogel.org).

### Open to all to read and to contribute

OGEL has become the hub of a global professional and academic network. Therefore we invite all those with an interest in oil-gas-energy law and regulation to contribute. We are looking mainly for short comments on recent developments of broad interest. We would like where possible for such comments to be backed-up by provision of in-depth notes and articles (which we will be published in our 'knowledge bank') and primary legal and regulatory materials.

Please contact us at [info@ogel.org](mailto:info@ogel.org) if you would like to participate in this global network: we are ready to publish relevant and quality contributions with name, photo, and brief biographical description - but we will also accept anonymous ones where there is a good reason. We do not expect contributors to produce long academic articles (though we publish a select number of academic studies either as an advance version or an OGEL-focused republication), but rather concise comments from the author's professional 'workshop'.

OGEL is linked to **OGELFORUM**, a place for discussion, sharing of insights and intelligence, of relevant issues related in a significant way to oil, gas and energy issues: Policy, legislation, contracting, security strategy, climate change related to energy.

## **The Renewable Energy Sources (RES) sector in Greece**

### **A. General outline of the Greek Renewable Energy Sources sector**

#### **Good reasons for investing in Renewable Energy projects in Greece**

The advantages of investing in the Renewable Energy Sources (RES) sector in Greece are numerous, most of which are obvious to those familiar with the country's climatic conditions. This encompasses particularly an average of about 3,000 hours of sunshine per year combined with an excellent wind potential, especially in the Aegean islands and in most of eastern Greece, all of which set the ideal conditions for Greece to develop into one of the fastest growing RES markets in Europe and worldwide.

Also, the development of RES has eventually come within the major energy policies of Greece during the last decade. Accordingly, a series of legal and administrative initiatives providing potential investors with the necessary incentives are intended to promote the realization of RES projects in Greece.

#### **Facts and Figures**

The electricity production from RES has been growing rapidly in Greece in the last years. By July 2009 the installed capacity of electricity generation from RES was about 1.200-1.350 MW, while 5 years earlier this capacity amounted to 455 MW<sup>1</sup>. Approximately 85% of the current installed capacity is generated from wind, albeit electricity production from photovoltaics (PV) is expected to gradually receive a bigger share. Moreover, other RES already used to some degree in Greece for electricity production are hydro, biomass and geothermal.

Despite the rapid increase of the RES generated electricity production, its share in the total electricity production, having not yet exceeded 10% in total, is still not considered satisfactory. A binding target which Greece will eventually have to meet is an 18% share of RES on the final energy consumption by 2020, which is foreseen in the Directive 2009/28/EC<sup>2</sup> on the promotion of the use of energy from RES.

---

<sup>1</sup> Not included here are big hydros. Since no official data is available regarding the actual facts and figures, all data presented in this section result from the combination of several unofficial sources, so that differentiation from the real facts cannot be fully excluded.

<sup>2</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:EN:PDF>

## **Actual situation and tendencies in the Greek market**

At the moment, whereas realization of wind projects is processing more or less normally, an emphasis is placed on speeding up the licensing procedure - and respectively increasing the pace of realization - of PV projects. Apart from this development, a new program<sup>3</sup> was recently launched specifically with regard to the installation of rooftop PV, which introduces a much more simplified procedure than the one in force concerning non domestic PV. New legislative measures have also been put in place aiming to promote the use of geothermal sources for energy production by simplifying the respective licensing process. Other renewable energy sources, such as solar heat, biomass and wave energy are also expected to become in the future a major issue in the Greek energy policy agenda.

## **B. Report on the legal framework for Renewable Energy Sources in Greece**

### **Legislative provisions regulating RES**

Since 1985, when RES were for the first time introduced in the Greek legal reality, the respective legal framework has undergone several changes (Laws 1559/1985, 2244/1994, 2773/1999, 2941/2001 and 3175/2003). Currently, the most significant legislation regulating the production of electricity from RES comprises of Law 3468/2006 “*Generation of Electricity using Renewable Energy Sources and High-Efficiency Cogeneration of Electricity and Heat and Miscellaneous Provisions*”<sup>4</sup> (recently amended by Law 3734/2009<sup>5</sup>), as well as a series of Ministerial Decisions in execution thereof, all of which mainly establish the licensing procedure for RES projects and the conditions to be met by potential investors. Furthermore, an important part of the framework regulating RES is the *Special Framework for Spatial Planning for Renewable Energy Sources* issued by Decision 49828/2008<sup>6</sup>, which establishes specific rules regarding the installation of RES projects, depending on the geographical area where the project is situated.

---

<sup>3</sup> See the full text of the original version of two relevant Ministerial Decisions: [http://www.cres.gr/pvcatalog/FEK\\_1079\\_2009.pdf](http://www.cres.gr/pvcatalog/FEK_1079_2009.pdf) and <http://www.minenv.gr/download/2009/200-07-06.kya.fb.gia.steges.pdf>

<sup>4</sup> See the full text as available in English version: [http://www.ypan.gr/docs/LAW\\_3468-2006\\_RES.doc](http://www.ypan.gr/docs/LAW_3468-2006_RES.doc)

<sup>5</sup> See the full text of the original version: [http://www.rae.gr/downloads/sub2/8\(28-1-09\)\\_3734.pdf](http://www.rae.gr/downloads/sub2/8(28-1-09)_3734.pdf)

<sup>6</sup> See the full text of the original version: [http://www.minenv.gr/download/2008/2008-11-12.kya.gia.xorotaksiko\\_ape.doc](http://www.minenv.gr/download/2008/2008-11-12.kya.gia.xorotaksiko_ape.doc)

## Competent authorities

The main Greek authorities involved in the licensing procedure for RES projects are the Ministry of Development<sup>7</sup> and the Regulatory Authority for Energy (RAE)<sup>8</sup>. RAE is an independent public authority entrusted with the monitoring and control of the functioning of the electricity market, which, among others, formulates proposals to the Minister of Development with regard to the granting of licenses in respect of RES projects and thereafter monitors their implementation progress.

Moreover, a producer of electricity from RES will also have to deal with the Public Power Corporation (PPC, in Greek: DEI)<sup>9</sup> and the Hellenic Transmission System Operator (HTSO, in Greek: DESMIE)<sup>10</sup>. PPC is the operator of the electricity transmission network (i.e. the national grid), which transmits electricity throughout the country. Within the scope of the legal framework for RES, producers of RES-generated electricity will have to apply to PPC, in order to enter into the appropriate interconnection agreements.

HTSO is the operator of the electric power transmission system and its general scope is the operation, maintenance and development of the transmission system throughout the whole country as well as its interconnection with other systems, in order to secure Greece's electric power supply. Among its other duties, HTSO assumed the commercial management of the renewable energy plants of the interconnected system, becoming therefore the contracting party with whom electricity producers have to sign their purchase contracts for RES generated electric power. The sole exemptions to this arrangements concerns autonomous island grids, where purchase contracts are signed with PPC.

## Licensing procedure step by step

Law 3468/2006<sup>11</sup> and the relevant Ministerial Decisions in execution thereof introduce a licensing procedure which varies according to the capacity of the RES plant to be installed:

With regard to **small RES plants** with a maximum capacity of 20 kW, the law foresees a rather simple procedure, according to which no license and no environmental permit (as long as the plant is not installed in an environmentally protected area, an archeological site or a conservation area)

---

<sup>7</sup> [www.ypan.gr](http://www.ypan.gr) . Following the recent change of government in Greece, the Ministry of Development was abolished and its competences with regard to renewable energy sources were assigned to the recently established Ministry of Environment, Energy and Climate Change ([www.minenv.gr](http://www.minenv.gr) ).

<sup>8</sup> [www.rae.gr](http://www.rae.gr)

<sup>9</sup> [www.dei.gr](http://www.dei.gr)

<sup>10</sup> [www.desmie.gr](http://www.desmie.gr)

<sup>11</sup> See Fn. 4 above.

are required; the producers need simply apply to PPC for concluding an interconnection agreement with the utility and then finally sign the Power Purchase Agreement (PPA) with HTSO (or PPC for autonomous island grids). **Medium sized RES plants** are also excluded from the obligation to obtain a license, but in this case the exemption has to be certified by a decision for the exemption from the obligation to obtain a production license, issued by RAE. Which capacities squarely fall under this classification varies, depending on the concrete RES category (e.g. PV: capacities  $>20$  kW and  $\leq 150$  kW, Wind: capacities  $>20$  kW and  $\leq 40$  or  $50$  kW or also none, depending on the region of installation, Geothermal: capacities  $>20$  kW and  $\leq 0,5$  MW, Biomass or Biofuel: capacities  $>20$  kW and  $\leq 100$  kW). Additionally, for capacities of these sizes an environmental permit must also be obtained.

**All larger RES plants** exceeding the aforementioned capacity limits must undergo a more complicated licensing procedure consisting primarily of three basic steps: firstly the acquisition of a Production License (granted for a period of up to 25 years by the Minister of Development, following a non binding opinion from RAE); secondly, the acquisition of an Installation License (in the form of a decision by the Secretary General of the Region in the territory where the plant will be installed, valid for 2 years) and; thirdly, the acquisition of an Operation License (also granted in the form of a decision by the Secretary General, valid for a minimum of 20 years). In order to obtain these licenses one has to provide the authorities with a series of certificates, including an Environmental Impact Study as a precondition for an environmental permit, which must also be obtained.

After the above licensing procedure is completed, producers can finally proceed to the conclusion of the interconnection agreement with the utility (PPC) and the PPA contract with HTSO (or PPC for autonomous island grids). The PPA is valid for 10 years and may unilaterally be extended for 10 more years upon a written declaration of the producer. The prices vary according to the category of the energy source used and they are revised annually by a decision of the Minister of Development following an opinion from RAE. Correspondent to the duration of the PPA, the respective feed-in-tariff (FIT) is then guaranteed for 20 years (10+10).

### **Particular regulations for specific categories of RES, especially for PV**

Although the provisions of Law 3468/2006 and generally of all legislation on RES apply generally to all categories of RES, there are some aspects, where certain categories are regulated in a specific manner. As already remarked, differences do exist as foreseen in the provisions concerning the capacity limits up to which no production license is necessary and also with regard to the prices for the energy produced by each category of RES.

In general it must be noted that there is a legislative tendency to promote the use of this specific energy source, as demonstrated e.g. in the much higher prices to which this energy is sold to HTSO or also by the fact that according to the relevant law only producers of electricity from this source are exempted from the payment of the special RES fee amounting to 3% of the pre-VAT sale price of electricity.

Furthermore, in accordance with an express provision in Law 3468/2006, the Greek Government set a national PV program containing detailed targets for PV deployment in several regions for the period 2007-2010<sup>12</sup>. The initial target of 700 MW was within a relatively small time increased to 840 MW<sup>13</sup> (640 MW for the mainland grid and 200 MW for autonomous island grids). However, the huge demand very soon exceeded the allowed overall capacity. As a result, no further applications for either production licenses or exemption decisions are being accepted (respectively since March 2008 & October 2007). No such restriction exists, however, for PV systems with a capacity of less than (or equal to) 20kW, for which, as mentioned above, neither a production license nor an exemption decision is necessary.

In order to deal with the issues that were raised under the regime of Law 3468/2006, this was amended by Law 3734/2009<sup>14</sup>, according to which all pending applications for the granting of a production license or of an exemption decision must be served by the authorities until 31 December 2009. Thus, the limit of 840 MW foreseen in the first phase of the national PV program was annulled and all applications already filed with RAE will be examined within the above time period solely on the basis of their conformity with the conditions set out.

Concerning the second phase of PV development (after 2010) no decision has yet been made by the Greek Government and therefore no further applications can be filed for the time being. There is, however, a new stipulation in Law 3734/2009 regarding PV systems with a capacity of over 10 MW, according to which such systems will henceforth be subject to public bidding procedures. The conditions and criteria for applications to be filed for granting of production licenses on this basis shall be set forth in a joint Ministerial Decision, which has yet to be issued.

Moreover, Law 3734/2009 introduced a new FIT especially for PV, which is still the highest of all other RES and shall remain unchanged for two years, while a regression of FITs will start as of August 2010. Finally, Law 3734/2009 changed the duration of PPAs especially for PV from 10+10 years

---

<sup>12</sup> See the relevant decision 75/2007 issued by RAE: [http://www.rae.gr/cases/C17/RAE\\_75\\_07.pdf](http://www.rae.gr/cases/C17/RAE_75_07.pdf)

<sup>13</sup> See the relevant decision 193/2007 issued by RAE: [http://www.rae.gr/cases/C17/RAE\\_123\\_07.pdf](http://www.rae.gr/cases/C17/RAE_123_07.pdf)

<sup>14</sup> See Fn. 5 above.

(which still applies to all other RES) to 20 years directly, which respectively means that FITs will be guaranteed for this entire period.

### **Main features of the Special Framework for Spatial Planning for Renewable Energy Sources**

The Special Framework for Spatial Planning for RES (hereinafter “Framework”)<sup>15</sup> introduces criteria regarding the areas of Greece which should be considered as favorable with regard to the realization of RES projects and also establishes concrete rules on the terms and conditions under which the installation of RES plants shall take place, taking into consideration the environmental and aesthetic particularities of the installation area. The Framework includes a specific set of rules for every single category of RES in use (wind, solar, hydro, biomass and biogas) and leaves space open for regulation of other new forms of RES in the future.

Emphasis is placed especially on the spatial planning for the installation of wind parks. Greek territory is divided in 4 zones, consisting of a) the mainland; b) Attica, as a special part of the mainland; c) the inhabited islands, and; d) the offshore area and the non-inhabited islands. Furthermore, the mainland is divided in two categories: a) the wind priority areas (including some regions of northern Greece, parts of the Peloponnese and significant parts of central Greece) and; b) the wind suitability areas (including the rest of the mainland regions). Especially with regard to the wind priority areas the Framework foresees a maximum wind capacity of 6,379 MW (3,190 average wind turbines).

Depending on the zone of installation, the Framework establishes different conditions with regard to the maximum allowed concentration of wind facilities, in terms of a maximum percentage of coverage of each region or also of a maximum number of wind turbines per 1,000 square meters. Additionally, the Framework includes: a) a list of incompatible areas (world cultural heritage areas, archeological sites, national forests, coastal zones etc.), where no installation of wind parks is allowed at all, and b) a list including all allowed distances of the wind parks from a series of facilities and areas.

As regards PV and solar energy in general, the Framework provides for a less detailed regulation. Areas which are barren or of low or medium productivity and which are favorably invisible from frequently visited spots are defined as being of “high priority”. Specifically, in the case of PV, appropriate measures must be taken pursuant to the Framework within the scope of the environmental licensing procedure in order to avoid any visual nuisance. With

---

<sup>15</sup> See Fn. 6 above.

regard to the islands (except Crete and Evia) priority is given to small power plants as in case of plants exempted from the obligation to obtain a production license. A list of absolutely incompatible areas (including world cultural heritage areas, archeological sites etc.) is also provided for this category.

It must be stressed that the provisions of the Framework do not apply to RES plants which are exempted from the obligation to obtain a production license, to RES plants which are defined by law as of “no disturbance” (e.g. PV with a capacity smaller than or equal to 500 kW, wind parks with a capacity smaller than or equal to 20 kW) and to big hydro projects.

### **C. Means of financing business activity in the Greek Renewable Energy Sources market**

#### **The National Development Law**

The main instrument for financing RES investment projects, and which provides substantial public subsidies, is Law 3299/2004, better known as the “National Development Law”<sup>16</sup>.

The National Development Law is the main financial instrument for all sectors of economic activity. As regards the energy sector, the following categories are eligible for incentives:

- Power generation in the form of thermal water or steam
- Production of biofuel or solid fuel emanating from biomass
- Production of biomass from plants for use in energy production
- Co-generation of electricity and heat
- Electricity production from RES, specifically from wind, solar, hydro, geothermal and biomass.

This law provides investment incentives in various forms:

- Cash grants and/or leasing subsidies
- Tax allowance
- Labour cost subsidy for new employment.

Incentives up to 60 % are available in all aforementioned forms, depending on the investment zone<sup>17</sup>.

---

<sup>16</sup> See the full text in original version:

[http://www.mnec.gr/export/sites/mnec/el/nomothesia/law/Documents/3299-2004-261-A-04\\_.pdf](http://www.mnec.gr/export/sites/mnec/el/nomothesia/law/Documents/3299-2004-261-A-04_.pdf) . This law has undergone several amendments, among others by article 37 of Law 3522/2006 and article 3 of Law 3752/2009.

<sup>17</sup> See article 4 of Law 3299/2004 as amended by article 3 of Law 3752/2009.

The territory of Greece is divided into three major investments zones (A, B and C). Benefits increase from zone A to zone C. Zone A is the most developed area, including the areas of Attica and Thessalonica (not including Industrial Zones and the islands of both regions that are included in zone B) and zone C is the least developed area, including mainly the border areas and the islands as well as the Peloponnese.

Following an amendment made by a Ministerial Decision on July 2007<sup>18</sup>, a new level of public subsidy was set in particular for wind and PV investment projects, according to which such projects are eligible for a subsidy covering 20-40% of the project's total investment cost. This percentage varies depending on the zone of realization as well as on the size (personnel and turnover) of the investing company<sup>19</sup>:

<b>Size of investing company</b>	<b>Zone A</b>	<b>Zone B</b>	<b>Zone C</b>	<b>Qualification of the investing company</b>	<b>Minimum Investment Amount in €</b>
Large	20%	30%	40%	Personnel > 250 individuals. Revenues > 50 million €	500.000
Medium	30%	40%	40%	Personnel < 250 individuals. Revenues < 50 million €	250.000
Small	40%	40%	40%	Personnel < 50 individuals. Revenues < 10 million €	150.000
Very Small	40%	40%	40%	Personnel from 0 to 10 individuals. Revenues < 2 million €	100.000

- In order to be eligible for funding, the following parameters should be satisfied:
- Required own capital: at least 25%, while 35% can be granted through loans and the remaining 40% can come as a subsidy by the Greek state.
  - Minimum investment cost: 100,000 - 500,000 (depending on the size of the enterprise)
  - Production license must be available by the time of filing the application.

<sup>18</sup> Ministerial Decision 33019/2007.

<sup>19</sup> The following figures result mainly from the combination of the stipulations of article 4 Law 3299/2004 as amended and article 4 paragraph 2 of Ministerial Decision 33019/2007.

Pursuant to a recent modification of the Development Law<sup>20</sup>, investments in PV projects regarding systems with a capacity exceeding 2 MW will no longer be eligible for a subsidy by virtue of this Law.

### **Regional and EU funded grants**

There are various grants available from time to time from which RES investments can benefit. Grants can be up to 50% of total installed costs.

Considerable public funding for RES projects is mainly expected to derive from the Greek National Strategic Reference Framework (ESPA)<sup>21</sup> under the 4th European Community Support Framework for 2007 to 2013 and the relevant Operational programmes being already gradually in process of implementation by the competent authorities, pursuant to Law No 3614/2007.

*Lazaros Sidiropoulos*  
*Eftychios D. Horiatakis*

---

<sup>20</sup> See article 3 paragraph 2 of Law 3752/2009.

<sup>21</sup> All relevant information can be found at [www.espa.gr](http://www.espa.gr)