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Greece

RENEWABLE ENERGY

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This country-specific Q&A provides an overview of renewable energy laws and regulations applicable in Greece.

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GREECE

RENEWABLE ENERGY



1. Does your jurisdiction have an established renewable energy industry? What are the main types and sizes of current and planned renewable energy projects? What are the current production levels?

The electricity production from renewable sources in Greece is a fully liberalized market and there are no legal and real entrance barriers to the relevant market; therefore, the Greek RES market is highly fragmented.

According to official data of the regulatory key players of the Greek market (RAE, IPTO), the national electricity production from RES power plants in the System has been steadily increasing in recent years. In particular, the contribution of RES and HECHP power plants to the energy balance (excluding the allocated Hydropower Plants and HECHP) from 3.87% in 2008 has risen and remains above 20% from 2018 onwards, while in 2020 it exceeded 27%. It is also significant that during April 2023, 51.3% of the total energy production in the Greek territory came from RES. During May 2023 54% of the energy consumed within the Greek territory was covered from RES.

2. What are your country's net zero/carbon reduction targets? Are they law or an aspiration?

The targets for the reduction of carbon emissions are set by a comprehensive legal framework, in conjunction with the corresponding policies adopted and implemented by the EU. In this context, the Hellenic Republic has adopted a National Energy and Climate Plan (NECP or ESEK as per its Greek acronym), which constitutes a Strategic Plan for the Greek Government on climate and energy issues and presents a detailed roadmap for the achievement of specific energy and climate goals by the year 2030 (e.g. participation of RES in gross final energy consumption at least 30%, participation of RES in gross final electricity consumption at least 55%, participation

of RES for heating and cooling needs to exceed 30%)

Following the REPowerEU Plan and the ongoing Energy Market disruption, the NECP is under revision, aiming to achieve higher and more ambitious goals and further accelerate the complete dependence on fossil fuels.

In parallel, the Hellenic Republic has also adopted the first "National Climate Law" (Law 4936/2022), which establishes measures and policies to adapt the country to climate change and ensure the path of decarbonisation by the year 2050 and, among others, prohibits the production of electricity from solid fossil fuels from 31.12.2028.

The above indicative legislative initiative constitute a general framework that enables progressively the adoption of individual PaM to further promote the increasing development and installation of RES in the Greek Market.

3. Is there a legal definition of 'renewable energy' in your jurisdiction?

Law 3468/2006, adopted in order to transpose relevant EU legislation (Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018) into national law contains a definition of "renewable energy", which refers to energy from renewable non-fossil sources, namely wind, solar, geothermal, and environmental energy, tide, wave and other miscellaneous ocean energy forms, biomass, hydropower, landfill gas, sewage treatment plant gas and biogases.

4. Who are the key political and regulatory influencers for renewables industry in your jurisdiction and who are the key private sector players that are driving the green renewable energy transition in your jurisdiction?

As in every EU Member-State, the competent Ministry of Energy, and the Regulatory Authority for Energy (RAE as per its Greek acronym, recently renamed to the Regulatory Authority for Energy, Waste and Water (RAAEY)) play a key role in the drawing and adoption of national energy policies and specify the measures and strategies to meet the energy needs and achieve the national goals of climate neutrality by 2050.

Particularly, RE is an independent administrative authority and member of the Agency for the Cooperation of Energy Regulators (ACER), empowered, among else, to monitor the licensing procedure of RES' projects, the operation of all sectors of the Energy Market, to provide advice to the competent state bodies, and adopt regulatory measures towards the full liberalisation of the electricity and Natural Gas Markets.

The following entities also play an important role in the licensing process for RES projects, although they are not formally market regulators:

- Renewable Energy Sources Operator & Guarantees of Origin (DAPEEP S.A.), which is responsible for renewable Energy Markets of Greece's National Interconnected System (Transmission System and Distribution Network of Mainland and Interconnected Islands) and manages the Guarantees of Origin (GOs) of electricity from RES and Combined Heat and Power Units (CHP).
- Independent Power Transmission Operator (IPTO) and Hellenic Electricity Distribution Network Operator (HEDNO), which are responsible for the interconnection of RES plants. IPTO is responsible for the interconnection of RES plants with a capacity of more than 8 MW and HEDNO is responsible for the interconnection of plants with a capacity of less than 8 MW to the Interconnected Distribution Network or for the interconnection of RES plants of any capacity with the network of the Non-Interconnected Islands. In addition, HEDNO is responsible for paying RES producers for the network of Non-Interconnected Islands and the low voltage network.

Long-established market players, such as Terna Energy, EDF Renewables, Enel Green Power, PPC Renewables S.A., Ellaktor, Total Eren, Iberdrola, Mytilineos Holdings, Intrakat, as well as a great number of market newcomers such as Lightsource BP, Macquarie Group Limited, 547 Energy, Akuo Energy, Abo Wind, Copenhagen Infrastructure Partners, BayWa r.e., OX2, and many others, including Hellenic Petroleum and

Motor Oil Hellas, the two major national oil refining and petroleum products trading groups, can be included among the key players.

Due to the considerable potential of the RES market in Greece, there is a constantly increasing interest for both domestic and foreign investments for the development and construction of all RES technologies. As an indicative example, Valorem, an international company active in several countries in the development and production of renewable energy has recently proceeded with the development of a 27 MW wind farm in northern Greece, its first project developed in Greece.

5. What are the approaches businesses are taking to access renewable energy? Are some solutions easier to implement than others?

The business planning for the development of RES projects and the relevant approach cannot be defined in a general scale but is subjective and depends on several factors such as risk-appetite e.t.c., investor's business plan and policy.

To this end, the potential of securing a long term power purchase contract through state subsidies is crucial, while other investors opt for the (relatively recent) conclusion of Power Purchase Agreements (PPAs) with private off-takers through bilateral negotiations either within the framework of the energy financial market or over-the-counter (OTC).

6. Has the business approach noticeably changed in the last year in its engagement with renewable energy? If it has why is this (e.g. because of ESG, Paris Agreement, price spikes, political or regulatory change)?

A combination and whole range of factors, such as, indicatively, the ongoing decarbonization procedure, the ambitious climate goals set both at a European and national level, the adoption of the Target Model, the coupling with EU energy markets, the strategic position and special natural characteristics of Greece, the ability to conclude bilaterally PPAs at advantageous terms and the simplification and acceleration of the RES projects' licensing procedure, has produced new impetus and has already led to the boom in (both domestic and foreign) investment interest at RES field.

Apart from specific energy policies, the Hellenic Republic has also adopted pro-investment PaM related to the

simplification of process of incorporation and organisation of businesses and the reduction on taxation of dividends.

7. How visible and mature are discussions in business around reducing carbon emissions; and how much support is being given from a political and regulatory perspective to this area (including energy efficiency)?

The transition to a climate-neutral economy by 2050 concerns both societies and businesses worldwide. Therefore, more and more Greek companies have committed to zero carbon emissions by 2050 at the latest according to the SBTi (Science Based Targets initiative). SBTi is a global initiative that motivates businesses to contribute to the fight against climate change by reducing greenhouse gas emissions.

The ambitious targets set by the NECP, concerning the use of RES in gross final energy consumption, as well as the new National Climate Law which, among, else prohibits the production of electricity from solid fossil fuels from 31.12.2028 have also affected the approach business take towards energy production.

In that regard, it is important to note that companies traditional active in other energy sectors or in other business sectors whatsoever, have, in the last years taken an acute interest on RES energy. As an indicative example, Motor Oil Group, traditionally active in the oil sector, has proceeded, through its affiliate Motor Oil Renewable Energy (MORE), to the acquisition and development of a significant pipeline of both operating (800 MW) and under construction and development (2.3 GW) RES projects.

8. How are rights to explore/set up or transfer renewable energy projects, such as solar or wind farms, granted? How do these differ based on the source of energy, i.e. solar, wind (on and offshore), nuclear, carbon capture, hydrogen, CHP, hydropower, geothermal and biomass?

The development, construction, grid connection, commissioning and commercial operation of RES projects in Greece is regulated by several laws, most of them primarily adopted in order to transpose relevant EU legislation into national legal order.

Indicatively, Laws 2244/1994, 2773/1999, 3468/2006,

3734/2009, 3851/2010, 4001/2011, 4203/2013, 4254/2014, 4342/2015, 4414/2016 and 4685/2020 have played a pivotal role in the evolution of the national legal framework for renewables in Greece during the last 25 years, while in July 2022, a new law, i.e. Law 4951/2022, was adopted with an aim to further simplify and accelerate the permit-granting process in line with the relevant provisions set out under RED II.

Moreover, a number of secondary legislative acts, mainly in the form of ministerial decisions and decisions of RAE, have also been adopted in order to regulate in more detailed way various issues relating to the development, construction and commercial operation of renewable energy projects, such as environmental, spatial planning, building and operational issues

On a high-level approach:

- Law 4685/2020 regulates the first phase of the licensing procedure required for typical scale projects (up to the issuance of a Producer's Certificate) providing for simplified, digital and automated procedures, enabling the acceleration of the process.
- Law 4951/2022 consists the second licensing phase following the issuance of a Producer's Certificate and till the granting of an Operation License.
- Law 4414/2016, which has been adopted in compliance with the EU Guidelines on State aid for climate, environmental protection and energy, sets the support scheme under which RES projects operate through long-term operating contracts or through direct participation to the energy market.

Briefly, the key licences required by the relevant regulatory framework are (a) Producer's Certificate, (b) Environmental Terms Approval Decision, (c) Installation Licence, and (d) Operation Licence.

There are no significant differences in the licensing of RES projects compared to the technology used each time. Regarding the production of electricity using geothermal energy, it is noted that in addition to the above statutory legislation, special provisions of Law 4602/2019 for the exploration, exploitation and management of the country's geothermal potential also apply. According to the above legislation, the Greek State retains ownership of the geothermal potential, while the rights of search, exploration and exploitation can be leased to legal entities through public tenders.

9. Is the government directly involved with

the renewables industry? Is there a government-owned renewables company or are there plans for one?

There is no renewables company in which the Greek State participates directly or is owned directly by the Greek State.

The electricity production from renewable sources in Greece is a fully liberalised market and there are no legal and real entrance barriers to the relevant market. Due to the extensive intensity of RES projects either under development or construction, the RES market is highly fragmented.

10. What are the government's plans and strategies in terms of the renewables industry? Please also provide a brief overview of key legislation and regulation in the renewable energy sector, including any anticipated legislative proposals?

As already stated (see answer under 2) the Hellenic Republic has adopted an ambitious National Energy and Climate Plan (NECP), as well as the first "National Climate Law" (Law 4936/2022).

Apart from the above and in view of achieving the above targets as well as in the context of the gradual and complete de-dependence on carbon dioxide activities, the Greek State has also adopted Law 4872/2021 pertaining to the just transition of the Region of western Macedonia and the Municipality of Megalopolis that depend on the extraction, exploitation and use of lignite. Such just transition takes place through the economic diversification of the productive base of those regions, while facilities are provided for the development and acceleration of the licensing of RES projects in the areas directly affected by the de-carbonization.

Moreover, on 16.06.2023 RAE proceeded with the publication of notice in respect of the first bidding procedure for the granting of investment and operating aid to energy storage plants.

Regarding the key legislation and regulation in the renewable energy sector please refer to answer above under 8.

11. Are there any government incentive schemes promoting renewable energy (direct or indirect)? For example, are there

any special tax deductions or subsidies offered? Equally, are there any disincentives?

The main incentive to promote the increase of use of RES sources is the fact that RES projects enjoy a special support scheme, under which the RES projects' owners proceed to the execution of Operating Aid Agreements.

The current operation aid scheme is governed and regulated by Law 4414/2016.

Law 4414/2016 abolished the feed-in tariff regime (FiTO of Law 3468/2006 and established the feed-in premium (FiP) mechanism, which is a market-based tariff in the form of a differential mark-up on the wholesale Electricity Market price for new RES plants coming into operation (trial or standard). However, under the support scheme introduced by Law 4414/2016, there are still some categories (mainly small-scale and demonstration projects) for which a fixed tariff Operating Aid Agreement is exceptionally concluded.

Law 4414/2016 also provides for the holding of auctions for certain RES categories/technologies (for the time being, wind and solar parks), from which the reference tariff (R.T.) for the FiP will be derived. Essentially, an FiP is a premium to the generator's revenues, resulting from the price of the auctions. The auction scheme was initially approved until 2020; however, pursuant to the European Commission's decision (C(2021) 8651) in November 2021, the auction scheme has been extended until 2025.

Quite recently, by virtue of Law 4864/2021, incentives for projects considered "strategic investments", i.e. those that strengthen the national or local economy and usually require a large budget, were adopted. In particular, Law 4864/2021 provides regulatory incentives, such as location incentives and the fast-track licensing procedure, as well as financial incentives, such as tax exemptions and expenditure aid/cost support. In particular, projects that are installed in a "delignification zone" enjoy even more privileges, such as higher building rates in off-plan areas and priority review of administrative acts.

At any case, we note that the current legislative framework provides, as a prerequisite for the filing of an application to each competent authority, the obligation of submitting guarantee bonds by potential producers.

Those provisions aim to dissuade the initiation of the licensing procedure in relation to development of immature projects or business with an inadequate financial capacity to support the implementation of such

a project, while taking into account the limited capacity of the grid.

12. Has your Government had to help with the basic cost of energy over the last year and has that led to any discussion about de-linking the gas price and renewables prices?

The Greek Government has successively granted state subsidies to electricity consumers, in order to assist the households and small businesses affected by the unprecedented increase of the electricity price due to the energy crisis caused by the Russian invasion of Ukraine. To that end, the Greek legislator introduced and established a temporary mechanism for the return of part of the revenues of the energy producers.

In addition, the conversation for the de-linking of natural gas and electricity prices is quite intense, both at a European and at a national level, as well as for the structural modification of the energy market model.

13. If there was one emerging example of how businesses are engaging in renewable energy, what would that be? For example, purchasing green power from a supplier, direct corporate PPAs or use of assets like roofs to generate solar or wind?

There are various examples and combinations which could be cited.

However, especially as far as energy-consuming enterprises and large-scale groups is concerned, there is a constantly increasing interest for the conclusion of bilateral corporate PPAs either as financial instruments (according to the provisions of Greek Law 4425/2016 and Directive MiFID II) or with physical delivery.

14. What are the significant barriers that impede both the renewables industry and businesses' access to renewable energy? For example, permitting, grid delays, credit worthiness of counterparties, restrictions on foreign investment.

The growing demand and penetration of RES in the local energy mixture, as well as the more ambitious targets anticipated by the – under revision – NECP, require focus by the Greek State on upgrading and expanding the grid, in order to satisfy the needs arising from the constantly

increasing capacity of RES plants and secure its stability.

Due to the unprecedented renewable capacity that has been licensed within the last years and taking into consideration capacity constrained infrastructure, procedure for the granting of a Final Grid Connection Offer (GCO) has become considerably long-lasting. RES projects are classified into categories in terms of priority for GCO granting and (grid connection priority regime) which has been introduced by Ministerial Decision no ΥΠΕΝ/ΓΔΕ/84014/7123/12.08.2022. By virtue of said decision specific terms and requirements have been imposed on specific project categories, as well as an additional bond is being requested or certain criteria for the substantiation of the project owner's financial strength.

To this end Law 4951/2022 includes for new GCOs special terms providing certain limitations with respect to the injection – up to 5% of their annual power production – of the power to be produced by renewable energy power plants.

15. What are the key contracts you typically expect to see in a new-build renewable energy project?

From a licensing perspective, a Grid Connection Agreement entered into between the owner of a RES plant and IPTO or HEDNO, as the case may be, for the construction of interconnection works is required.

As for the granting of operating aid RES producers, which fall under operating aid scheme of Law 4414/2016, the conclusion of an operating aid agreement with DAPEEP (Fixed tariff operating aid agreement or Sliding premium operating aid agreement, as the case may be) is required. RES projects located on Non-Interconnected islands proceed with concluding of a Fixed tariff operating aid agreement with HEDNO, under its capacity as operator of Non-Interconnected islands.

After the set into force of the Target Model in Greece (effective as of November 1, 2020) RES producers can conclude and sign bilateral contracts with off takers and be compensated as per its provisions.

RES producers participate in the Energy Markets either directly or indirectly, being represented by an Aggregator. In this case, RES producers shall enter into a "Representation Agreement" with an Aggregator, under which the latter undertakes to perform all rights and obligations of the RES producer, deriving from its participation in the Energy Markets.

16. Are there any restrictions on the export of renewable energy, local content obligations or domestic supply obligations?

There are not any such specific restrictions or relevant obligations.

17. Has deployment of renewables been impacted in the last year by any non-country specific factors: For example, financing costs, supply chain or Covid 19?

Despite the ongoing energy crisis due to the Russian invasion of Ukraine, not only the deployment of RES projects remains unaffected in general, but also the interest in investments in RES energy production is constantly increasing, primarily to confront the dependence on natural gas and fossil fuels in general. RES projects are of overriding public interest.

However, to the extent that all the above external factors (*externalities*) had a reflection to the RES market affecting the prompt completion of projects both under construction or development, Greek State proceeded with a series of legislative interventions, mainly relating to extension to the deadline for completion, or maintenance of existing (higher) tariffs applying to a series of technologies.

18. Could you provide a brief overview of the major projects that are currently happening in your jurisdiction?

A great array of large-scale RES projects has either recently come online, such as the 204 MWp solar photovoltaic power plant of Hellenic Petroleum Renewables in Kozani, north Greece, or are currently under construction, such as the 330 MW wind project of Terna Energy on the island of Evia and the 230 MWp solar photovoltaic project developed by PPC Renewables in the depleted lignite mines of western Macedonia. The implementation of the NECP and the announced by the Greek Government strategic decision for the final dependence from the production of electricity by use of lignite, has given a great boost to the development of large-scale RES projects, especially photovoltaics. Therefore, an unprecedented number of RES projects, and in particular, scalable solar photovoltaic projects, are developed across Greece.

19. How confident are you that your jurisdiction can become a leader in newer areas like offshore wind or hydrogen?

In recent developments, the Hellenic Republic has adopted a detailed legal framework in relation to the licensing procedure for the development, construction, and operation of offshore wind parks.

In addition, the first competitive tendering procedure for the granting of an investment aid/annual operating aid to energy storage plants has already been declared (see answer above under 10). The aforementioned aid scheme has an estimated total budget of €341 million and has been approved by the European Commission, whereas the said measure will also be partially funded by the Recovery and Resilience Facility (RRF) of the EU.

In relation to green hydrogen and at a European level, the Commission has proposed detailed rules to define what constitutes renewable hydrogen in the EU, with the adoption of two Delegated Acts required under the Renewable Energy Directive, as part of a broad EU regulatory framework for hydrogen. The first Delegated Act defines under which conditions hydrogen, hydrogen-based fuels or other energy carriers can be considered as a renewable liquid and gaseous fuels (RFNBO). The second Delegated Act provides a methodology for calculating life-cycle greenhouse gas emissions for RFNBOs. However, at national level, there is currently no comprehensive framework for the development, licensing, installation, and operation of green hydrogen projects.

20. How are renewables projects commonly financed in your jurisdiction?

The standard financing scheme includes a combination of equity (usually 20–30%) and bank financing (usually 70–80%).

Lately, the funding of RES projects through funds of the Recovery and Resilience Facility (RRF) of the EU has proved to be a crucial instrument in the financing of utility-scale RES projects. To be noted that one of the pillars of the National Recovery and Resilience Plan adopted and implemented by the Hellenic Republic is the green transition, which is realised through the development and operation of RES plants.

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