



📷 Panagiotis Papastamatiou, CEO of the Hellenic Wind Energy Association. Copyright: Hellenic Wind Energy Association

When the Sky is the Limit: Unleashing Greece's Wind Power

While a minimum of €3.5 billion worth of investments are required to meet Greece's ambitious 2030 wind energy target, "they are realistic and can be achieved," says Panagiotis Papastamatiou CEO of the Hellenic Wind Energy Association, yet harnessing the sector's true potential, he adds, including the development of offshore wind power will require decisive actions on behalf of the government and definitive decisions.



GIG Team • 6 days ago • 0 comments • 17 minutes read

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GIG: What role do you attribute to renewable energy investments in Greece's economic recovery?



Papastamatiou: There is a consensus among our society and political system that renewables should and will be one of the main pillars of economic development in Greece over the next decades. This is one of the main pillars reflected in the country's Recovery and Resilience Plan along with digital investments, which has been or should be soon submitted by the Greek government to the European Commission.

And this is because renewable energy investments create economic growth, new green jobs, energy independence, and they reduce the deficit in Greece's commercial balance. In addition, they have a multiplier effect on all development processes, which is a prerequisite for growth of our economy.

GIG: What tangible impact do wind energy investments have on the wider economy and society?



Papastamatiou: For starters, wind energy projects have a local added value of approximately 35% of the total investment, while during their operational phase they have a local added value of around 80% of their operational expenditure.

“Secondly, the wind energy sector is a strong generator of employment, which creates more jobs per megawatt than natural gas power plants. In 2018 alone there were 5,100 jobs in the wind energy sector in Greece.”

This can be increased if we enrich the sector's supply chain and deepen the involvement of connected industries like cement, cables, shipyards, and ports, among others.

And last but not least there's the relationship that exists between wind energy and local societies. 3% of the turnover derived from wind parks, by law, is transferred directly to local societies, either through the

corresponding municipalities to finance local works or allocated directly to consumers. This is on top of the underlying infrastructure projects that are carried out for each wind park project and the direct impact they have on local supply chains and societies.

GIG: Greece's National Energy and Climate Plan establishes ambitious renewable targets, highlighting plans for 35% of energy to be derived from renewables by 2030, while the phase out of lignite-based energy production by 2028 entails a drastic switch of the state utility's power generation to clean energy. Is this realistic? What does this mean for Greece's wind energy investment landscape?



Papastamatiou: While Greece's Energy and Climate Plan establishes ambitious targets, they are realistic and can be achieved. In fact, these targets will be further increased following the European Commission's recent announcement to push for a 55% reduction in greenhouse emissions by 2030.

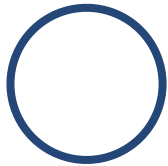
Wind energy is, of course, one of the main forms of renewable energy that can contribute to achieve these targets for several reasons. Firstly, it's comparatively very cheap. Secondly, wind energy has the capacity to harness the massive amount of energy in terms of megawatts we need to achieve our goal. And, finally, there is already a developed market in Greece with strong and diversified players, including both investors and manufacturers who can sustain the growth of the market.

“To put this into perspective, Greece currently has a wind energy capacity of 3.9 GW, meaning this would need to be almost doubled to achieve the minimum target of 7GW by 2030. This represents an investment in wind energy of about €3.5 billion.”

Bear in mind we already have 1.4 GW of new wind projects that have been awarded power purchase agreements (PPAs) through the auctions system and have submitted the corresponding bank guarantees required for each development's good performance. These projects will materialise within the next three to four years making it very feasible that by 2023 or 2024 we will have increased our wind energy capacity to a level of 5.5 GW.

Therefore, achieving the current minimum target for 2030 is feasible. There is a strong investor interest in the market and a pipeline of mature projects, and this creates confidence that we are on the right path. Of course, we should not forget that, as I've already mentioned, the 2030 target will be increased.

GIG: From an investment perspective, how competitive is the Greek market compared to its EU peers?



Papastamatiou: In general, when you look at the bigger picture Greece's wind energy landscape has its pros and cons, the main advantage being Greece's wind energy and overall renewable energy potential, which pose the possibility of producing electricity in a competitive and economically effective manner.

“However, there are several challenges that we face in capitalising upon this. From a technical point of view, for example, Greece is at the corner of Europe meaning it lacks strong interconnections with its neighbouring countries making it a virtually isolated electricity system.”

Overcoming this requires ambitious planning.

There are also problems associated with bureaucracy. However, our view in confronting this is, for the most part, focused on modifying previously approved licenses for projects that are already in the pipeline. After more than two decades of wind energy development in Greece, there is a critical mass of mature wind projects, which can be developed and completed within the next three to five years, and contribute significantly to achieve the proposed targets. The message we are trying to convey to the government is that their main focus should be on certifying the modification of existing licenses, at least with respect to onshore wind energy, and not only on increasing the project pipeline.

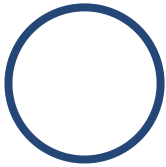
The third challenge concerns local society and their view of wind energy investments. I think it's reasonable, whenever a new technology is going to be implemented or a new reform is going to be made, for people to have

doubts about the feasibility and social profitability of these initiatives. And renewables cannot be an exception to this rule.

We are now in a phase where a large number of parks are being built across the country, so it is logical that these reactions and doubts are widespread. However, this is a challenge that both the companies in our sector and the government need to make a strong effort to overcome by communicating the right message, fighting misinformation, and, of course, developing the appropriate social and economic tools to balance any kind of negative impact these development projects may have on local communities.

Wind farm in Crete, Greece. Copyright: Georgios Tschlis / Shutterstock

GIG: The Minister of Environment and Energy Kostis Hatzidakis recently announced the initiation of an extensive dialogue with stakeholders concerning the deficits in the Renewable Energy Account (ELAPE). What is your perspective in this regard?



Papastamatiou: There is indeed an accounting deficit in the ELAPE. This is a problem we should face and deal with. On the other hand, the cash-flow picture of ELAPE is much better and, therefore, there are no delays in the payments to RES producers by the Manager of Renewable Sources and Guarantees of Origin (DAPEEP). This is due to the fact that PPC, the main electricity supplier, pays its obligations to DAPEEP on a regular basis. Contrary to the past, PPC can now effectively serve its obligations mainly due to the advantage it has gained with the increase of its tariffs last summer (due to the reduction of the special RES levy ETMEAR), and the reduction of prices in the wholesale market (SMP). These two drivers (the reduction of ETMEAR and SMP) are also, prima facie, the reasons for the accounting deficit in ELAPE.

There are three main factors behind the reduction of the SMP over the last period: the increased penetration of renewables, the international drop in gas prices, and the COVID crisis.

“ *We should always have in mind that (i) increasing renewables is a permanent trend, (ii) fluctuations in fossil fuel prices will always exist – which is one of the biggest disadvantages of fossil fuels versus renewables, and (iii) the COVID crisis is temporary.*

Therefore, we need to consider the medium to long term trends for ELAPE and not only the picture of one short period, which may be misleading as it is affected by temporary variables.

Concerning the possible solutions, there are several factors that need to be taken into account:

Firstly, the impact of the COVID crisis on the electricity market and especially ELAPE, makes it almost obligatory for the government to mobilise any and all resources available for a recovery, including public funds, in an effort to cover at least the part of the deficit that is attributable to the crisis.

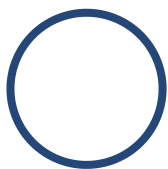
Secondly, as long as the Greek electricity market is not a fully liberalised market and lacks adequate competition, I understand that the government

feels the need to ensure that no exaggerations exist and that there are no increased margins or overcompensations throughout the entire supply chain, including suppliers. In the long term, state interventions create more distortions. However, given the current extraordinary circumstances, I cannot deny the state's privilege, in the short term, as long as the government accelerates the liberalisation process.

Thirdly, it is very important to carefully assess bad experiences from the past. The so called "New Deal" of 2014 was a disaster, not for wind, but for photovoltaics. The state intervened retroactively in an unfair way, it treated equivalent investments unequally, and it allocated the burden among the photovoltaic producers without transparent criteria, leading some existing investments to losses while protecting others. I would dare to say that the retroactive cuts of 2014 caused big damage to photovoltaics but combined with the irrational way these had been applied, created a much bigger damage to Greece and its image. With that said, the events of 2014 are a clear example of what we should avoid and try to cure.

As a final remark, we welcome the intention of the government for extensive dialogue and we are ready to contribute to that together with the suppliers, conventional procedures, other renewables, and consumers. Our common target should be to protect legality, secure investor confidence, and reject illegal interventions on existing agreements.

GIG: 2019 was a landmark year for Greece's wind energy sector, and according to data from the Hellenic Wind Energy Association, Greece added 727 megawatts of new wind energy capacity. In fact, wind power capacity expanded 8% in the first half of this year. What changed? What is this significant increase attributable to?



Papastamatiou: The main drivers of this positive development have been the companies and the human capital in Greece's wind energy sector that have been working tirelessly for more than two decades.

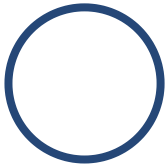
On the one hand, there was a critical mass of projects that had been under development for many years, and they finally came to fruition. On the other hand, 2019 was the last year stipulated for the connection of projects

with feed-in tariffs, which created a rush for the connection of old wind park projects. However, the first factor was a stronger driver than the latter.

There is also an overall belief and acceptance in the market that renewable energy is the path of the future, and this creates investor confidence. And this is why this trend is continuing into 2020, even though we no longer have feed-in tariffs and all these new wind parks will be exposed to a highly competitive market. The investment interest is there.

Wind turbine in Crete, Greece. Copyright: photoff / Shutterstock

GIG: How has the profile of the companies operating within the sector evolved over the last couple of years?

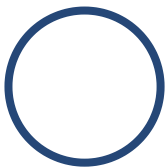


Papastamatiou: In terms of operating assets at the end of June 2020, and without distinguishing the fact that many of the leading domestic investors in the wind energy sector are listed companies and therefore have an international share capital, foreign players represented 43% of investments in the sector, while the remainder were domestic companies.

“However, what is very important about the profile of our market is the fact that we’ve seen a considerable diversification in the last year, both with respect to investors and manufacturers. This is positive because it reflects the will of the market; the sector is no longer dependent on a limited number of groups for capital or exports.”

New investors have come in, while old investors who had invested in the past have returned, reenergizing projects and installing new wind parks. Moreover, new manufacturers have entered the market like GE Renewables, Italy’s Leitwind, the Netherlands’ EWT, or China’s Goldwind, with an interest in selling products in the market.

GIG: 2020 has been a challenging year for most sectors across the globe. How has the pandemic affected energy auctions and wind energy investment projects in Greece?



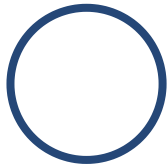
Papastamatiou: While the impact is manageable, the coronavirus pandemic has and continues affecting our sector, mostly in the form of delays, especially with respect to the development and licensing of projects.

As an example, imagine that a bird study needs to be undertaken for a specific wind project to be granted the relevant environmental license or the modification of its license. According to best practices, there are specific times of year when bird observations should be carried out and the most critical period for this is the spring due to migratory flows. Due to the pandemic, we lost our window this year to conduct these studies which sets the licensing procedure back a whole year. These studies will now need to be completed in the spring of 2021.

Some delays were suffered on the construction side but they were a lot less severe than we had initially expected when the lockdown was imposed.

And of course, there was an impact on the overall electricity sector, owing to a reduction of demand, the fall in market prices, in addition to issues relating to the flow of money in the electricity sector.

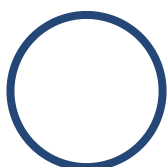
GIG: How satisfied are you with the energy auctions system?



Papastamatiou: I must admit that while we had our doubts at the beginning, auctions have been a success story in Greece. There has been a reduction in prices while investor interest has been ongoing. Auctions have sent a message to investors that prices are sustainable, and the system is playing an important role in enabling the transition of renewables to a fully competitive environment.

It is important to note that projects that are selected via the auctions system are and will be exposed to the daily competitive electricity markets; they are not protected as was the case with the old feed-in tariffs. As these agreements are similar in nature to a hedging contract, companies are liable for all market obligations, from balancing responsibilities and penalties for imbalances across to the obligation to participate in the Day-Ahead and Intraday markets. The ultimate objective of this model is for companies to optimise their electricity production and become competitive; producing electricity when market prices are high and operating in the same manner other power plants do.

GIG: You've highlighted that one of the biggest barriers to deepening investment in the sector is the lengthy and bureaucratic procedures behind licensing and permitting. The government has committed to slashing the licensing period, having already undertaken a number of steps to simplify processes. What is your assessment of the work that has been done so far? What more is needed?



Papastamatiou: To understand what needs to be done, we first need to have a clear picture of the underlying problems.

At the moment, we have pending license applications for projects that have applied and only been awarded production licenses, albeit being very immature, and that have been in the licensing pipeline for 10 years or more. This is due to a number of reasons: from the authorities not having examined the applications across to the projects being in areas with saturated grids, for example. However, in most of the cases this is unacceptable and has created a lot of problems.

“We are satisfied with the efforts the government has made up until now, but we need more to be done. Simplifying the licensing procedure, in our view, calls for the state and the government to make fast and definitive decisions, within a two to three-year term, which can be either negative or positive.”

We do not expect all license applications to be approved; this is impossible.

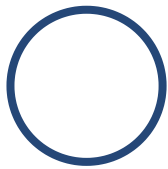
According to recent government estimations, all the projects at several stages of development amount up to 76 GW. And while Greece will not install anywhere near this capacity of renewables over the next few years, the number gives you an idea of the magnitude of the challenge.

Addressing this requires the government to have an effective plan, with a clear timeline, that establishes that within the next two years, decisions will be made on all projects within this project pipeline. It's not a matter of approving all projects, it's about decision making and moving in this direction which will send a positive message to investors, society, and all stakeholders within the sector.

Finally, there is also the matter of energy storage, which is connected to the new electricity market and plays a key role in terms of balancing and creating flexibilities within our sector. According to a recent study undertaken by the National Technical University of Athens, Greece needs anywhere between one to one and a half gigawatts of storage by 2030, which our system can support and can be justified by the economics of the investments that the sector is drawing in. We need a specific framework within the scope of a competitive market, that will provide a feasibility for

investments and security in terms of income, and this is something we are hoping to finalise with the government and the European Commission.

GIG: I'd like to talk a little bit more about the environment, because this is an aspect that greatly affects licensing procedures. The new environmental bill that was passed in March has had mixed reactions. What does this mean for the sector?



Papastamatiou: The new environmental bill has two main chapters that relate to the wind energy sector; the first focuses on environmental licensing and the second on environmental protection. Let's start with the latter because there have been a substantial amount of misunderstandings on the topic.

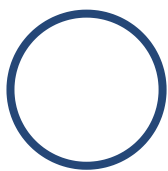
The reality is that the new regulations introduced for environmental protection, especially for the installation of new wind projects in Natura areas are more stringent than the rules that were previously established in the 2011 legislation.

As for environmental licenses, while there was a simplification of procedures, additional work is required from a regulatory point of view. On the one hand, there is a discrepancy in the interpretation of several of the new clauses, by different regional and local authorities, regarding the modification of existing environmental licenses. Streamlining this will require the enactment of secondary legislation, so we are working with the government to push this forward as quickly as possible.

On the other hand, clear guidelines are required as to the priority order in which pending applications should be examined by different national and local authorities. For example, if a mature project that has all the necessary licensing decides to make a small technical modification, such as using a larger wind turbine for efficiency reasons, this will need to be approved by the relevant military authority. However, this authority has a pipeline of immature projects that were previously submitted for assessment, leaving the mature project at the back of the list, which is highly inefficient. The central government needs to establish guidelines, priorities, and deadlines for project approvals.

Wind park in Kefalonia, Greece. Copyright: Kostas Fragias / Shutterstock

GIG: Looking ahead, what are biggest potential game changers for the sector?



Papastamatiou: The main drivers for the new era of the renewable energy market are undoubtedly going to be the liberalisation and new design of the overall electricity market.

All other aspects ranging from electricity grid interconnections across to licensing, albeit their importance, are always going to be on the table, and will need to be dealt with in an ongoing manner. New wind parks are going to be exposed, on an hourly basis, to increasing competition in the electricity market, including wind parks that have been selected via the auctions system. This is a big change.

The second game changer is that we will soon see more renewable energy investments entering the market through private agreements, such as off-taker agreements, corporate power purchase agreements (PPAs), and contracts for difference (CfDs) with private counterparts rather than through the auctions system. These will either be large consumers, – which we don't have a lot of in Greece – or suppliers, and will boost different trends.

For example, trying to finance a project through a corporate PPA rather than through a contract with DAPEEP awarded through an auction is likely to increase the off-taker risk. Moreover, corporate PPAs will have a shorter contract duration. Lenders, such as Greek banks, may assess this risk higher meaning prices could increase.

“*On the other hand, the increasingly more competitive environment will require greater capacities, capabilities, and access to money, which we expect will lead to a concentration of the market. Small and medium sized investors will likely exit the market, providing a window for large scale entities to have a dominant position in new wind park investments. This shift to larger sized market players will likely have an inverse effect, reducing prices, as these entities have access to cheaper money and are able to hedge their risk due to vertical integration.*”

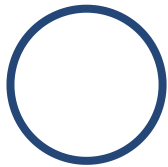
As a result, these changing market dynamics will create a need for greater market oversight on behalf of the regulatory authorities to monitor that competition rules are being applied effectively, for example, or that cross-subsidies are not being used.

I am convinced that within the next decade the changes we are seeing in the renewable electricity market will bring about positive effects for consumers as electricity prices will continue to decline due to increased competition.

Therefore, it is crucial that we undertake all possible efforts to ensure the best possible transition from today's competitive framework with auctions to a liberalised market without auctions. As auctions are gradually reduced and more bilateral contacts take their place, this will allow all stakeholders –

investors, operators, banks, manufactures, etc. – the time needed to acquire knowhow and create the necessary tools to secure a smooth transition.

GIG: Greece's offshore wind capacity is an area that is yet to be developed. What potential do you see in this space and what needs to happen for us to start seeing investments roll in?



Papastamatiou: There is huge potential in offshore wind energy in Greece; “the sky is the limit.” Offshore wind farms pose a huge advantage, in our view, which is the possibility of harvesting an abundant mass of energy in terms of megawatt capacity, in a much easier and more efficient manner. And with the gradual fall in technology costs, this is a segment that can attract investments and contribute significantly to reach our wind energy targets beyond the current decade.

However, there are several constraints that need to be overcome, the most important of which relates to the international interconnections of Greece's electricity grid. In our view, there is no way to realistically target the development of several gigawatts of offshore wind energy in the Aegean Sea if we don't simultaneously develop stronger and bigger international electricity grid interconnections over the next decade, towards all directions (north, south, west, and east).

On the other hand, this is a sector that remains unregulated in Greece. The development of a number of gigawatts of offshore wind in the Aegean will, in-parallel, require the creation of a maritime spatial plan, an economic exclusivity zone and, in general, a number of important policy decisions.

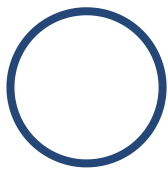
“With this in mind, we have made a proposal to kick start the development of Greece's offshore wind energy capacity in the short term, focused on the development of one to three large scale commercial projects ranging between 200 to 500 megawatts each, prior to the designation of our exclusive economic zones or the complete maritime spatial plan.”

The idea behind this proposal is for the government to pre-select a limited number of very broad sea areas within our territorial waters, after having

conducted a strategic environmental assessment. A select number of developers would then be chosen, probably through a tender, who would be given the rights to undertake all relevant environmental and technical studies, in order to construct the offshore wind energy project(s). Doing so would contribute tremendously to attract investors to Greece while sending the right message to local supply chains, from shipyards across to the boards of major conglomerates.

Taking into consideration the potential development scope of our entire sea area, 200 to 500 megawatt offshore projects would be relatively small with respect to the wider maritime spatial plan, which should, nonetheless, be developed in a parallel manner. Our proposal would allow us to get the ball rolling in Greece's offshore energy wind development, while providing our government and regulators with the time needed to develop the appropriate framework for a real large scale development after 2030.

GIG: What message would you like to send to investors who are assessing Greece's wind energy sector?



Papastamatiou: After two and a half decades, Greece has developed a wealth of knowhow and an important industry in the wind energy sector. There is great potential for investments in the sector and international investors should be very attracted to this. At the same time, foreign investors should be cautious when selecting their projects and, when doing so, it is important for them to have a complete business plan before proceeding.

As the voice of the wind energy sector in Greece, the Hellenic Wind Energy Association welcomes international investments into the country. Each successful story of foreign investment is beneficial for our sector because it's the best form of advertising we can have. We want investors to succeed. However, the Greek market is complex and challenging, and investors need to be cautious to avoid misinterpreting regulations.