

# Understanding the decision of companies to invest in renewables: An investor perspective

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**Abstract.** Investments in renewable energy sources (RES) can mobilize significant capital to support renewable energy deployment. However, policymaking does not pay adequate attention to investors' motives and preferences and thus it is possible that current policies lack vital elements that appeal to potential investors. The aim of this study was to examine how Greek companies that have invested in renewables perceive RES investments and, in specific, to examine their views about economic drivers, barriers to investments and the measures that could facilitate investments. To that aim, 15 in-depth interviews were held with representatives of Greek companies and the data were analyzed with thematic analysis. It was indicated that perceiving the investment as profitable and secure was what mainly drove companies to invest while rapid depreciation was another driver. The perceived barriers requiring policy response involved the bureaucracy of the licensing procedure and the lack of grid capacity. In addition, companies that lack substantial capital find it difficult to ensure favorable conditions for loans. The most recommended measures to facilitate companies to invest in RES were to eliminate bureaucracy, expand the grid and accelerate procedures.

## 1 Introduction

Socially responsible investments refer to a strategy that resonates with ethical, environmental or corporate governance criteria. In this regard, investments in renewable energy can be perceived as adhering to the principles of socially responsible investments [1, 2]. At the same time, investments in renewables can address problems like funding gaps and lock-ins [3]. Acknowledging the environmental benefits as well as the potential of renewable energy investments to accelerate the deployment of renewables, many states of the European Union (EU) have been establishing policies that promote RES investments. Even though investors are able to mobilize significant capital to support renewable energy deployment, they tend to be hesitant to do so for various reasons [4, 5, 6].

In compliance with EU legislation and, in an effort to achieve its national RES objectives, Greece has been promoting renewable energy and has exerted great efforts to create an attractive investment environment. There are three major RES support schemes in place and, in specific, the country has enacted a sliding feed-in premium, a feed-in premium via an auction method, as well as a net metering scheme [6]. Nevertheless, changes in the regulatory framework and the tendency to curtail

incentives might have affected the willingness of investors to invest in renewable energy. Meanwhile, policymaking does not seem to pay adequate attention to investors' motives and preferences and thus it is possible that current policies lack vital elements that appeal to potential investors. In this study, the aim is to examine how Greek companies that have invested in renewable energy perceive the investments and, in specific, to examine their views about economic drivers, barriers to investments and the measures that could facilitate investments.

## 2 Methodology

The population under study comprised Greek companies that have made investments in renewable energy with a minimum installed capacity of 400 kilowatt. In-depth interviews were chosen as the research instrument, because they can access respondents' viewpoints and beliefs. In the case of investors, in-depth interviews can reach a deeper and thorough understanding of perceptions and motives underlying their decision to proceed to investments in renewables [7, 8]. For this purpose, an interview guide was designed based on relevant literature on RES investments. Purposive sampling was used and the sample size can be

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considered adequate when there are no new codes or themes in the data, that is, when thematic saturation has been attained. In this study, 15 in-depth interviews were held with representatives of the companies. The number of participants is adequate as thematic saturation had been achieved from the tenth interview. However, some more interviews were conducted to further ensure thematic saturation. All interviews were held in-person, and with the consent of the interviewees, interviews were recorded using an MP3 recorder while the identity of all interviewees was kept anonymous. The data were transcribed and, transcripts were analyzed according to the protocol proposed by Braun and Clarke [7]. This type of analysis serves to identify, analyze and report patterns (i.e., themes) that occur within the transcribed data. Thematic analysis in this study identified ten themes, 33 sub-themes and 52 codes.

## 3 Results

### 3.1 Sample

Most interviewees were representatives of limited companies (n=7) as well as limited liability companies (n=6). Only two had the legal form of limited partnership and private capital companies. In addition, most of these companies reported employing between 15-20 people and only one reported employing five to ten employees. In terms of annual turnover, most investors reported a turnover that exceeds one million Euros per year. In addition, most investors were based in Thrace, Macedonia and Peloponnese. Seven respondents reported that their investments had been made in 2019 and three in 2018. All investments had a capacity higher than 500 kw. It is also important to note that most investors had made more than one investment. The sums of invested money ranged from 300,000 to 3,000,000 Euros.

### 3.2 Identified themes

#### 3.2.1 Economic drivers for investing in renewable energy

Sub-themes explicitly mentioned when discussing the economic drivers of companies' decision to invest in large-scale RES systems involved: profit, additional revenues, investment security, rapid depreciation, enhanced capital management and the creation of passive revenues.

It appears that investors regarded the investment in renewables as a secure way to make a profitable investment. In specific, three participants stated that their main driver was to make 'profit' while the relatively rapid depreciation time emerged as another advantage that drove them to invest. This is exemplified in the following quote:

*Depreciation is also very good. There is depreciation in the first years. And so you know that it is a very good investment in the long run (Participant 14).*

The investment was also perceived as 'secure' by two interviewees. This perception is illustrated in the following quote:

*We saw it as something quite secure, you know, certain. That is, from the moment you get the license, it becomes secure. Something extraordinary should happen to go wrong with the investment (Participant 8).*

The investment was also seen as an optimal way to manage the company's capital in an enhanced way and to create passive revenues. In relation to the former, Participant 4 explained that:

*Instead of letting the capital remain 'static', you just make the investment and this capital starts to give money for the company.*

#### 3.2.2 Barriers to investments

The most prominent barrier to investments concerned the extensive bureaucracy that characterizes the issuance of the license as well as all the other time-consuming procedures which result in significant delays. Delays, however, also emerge while interested investors wait for PPC to approve their application. These barriers are exemplified in the following quotes:

*Companies prepare their business plans but PPC takes too long to carry out the whole process. It is such a bureaucratic process. It also takes too much time to respond to investors if they can actually do the installation of the system and connect it to the grid (Participant 4).*

*It is a long-lasting process no doubt. It is a whole process that you must plan well in advance. You must be very patient and be prepared to wait a long time [...] What I want to say is that although there is interest on the part of investors, many are deterred when they learn that they have to wait at least two years (Participant 5).*

The need to have their own funds or capital was another cited barrier. In specific, the existence of capital enables investors to receive bank loans with lower interest rates. The crucial effect of capital was cited by the majority of interviewees (Participants 1-4, 5,8, 10-14) with some of them describing it as 'major bottleneck' and others stating that 'it's best not to invest at all if there is no capital'.

The lack of grid capacity was cited as another dominant barrier by about half respondents. The following quote illustrates how limited grid capacity affects investments:

*The grid has been saturated and this is why it takes such a long time to get the license. And the worst is that you don't know whether and when there will be more licenses available (Participant 3).*

The letter of legal guarantee that investors need to deposit was another cited barrier (n=4). In specific, investors are obliged to deposit a letter of legal guarantee which, however, does not ensure that the license will be issued. In order to deposit the guarantee, investors need to engage a considerable capital without, however, knowing whether the investment will be realized. This barrier is exemplified in the following quotes:

*Now you are required to deposit a letter of legal guarantee. However, giving this guarantee does not mean that the investment will be implemented in the end. [...] While you do this, however, the application is still pending so you are not sure whether the investment will proceed (Participant 1).*

*For big investments you need to deposit high letters of guarantees. These are lots of money. What I mean is that these guarantees are deterrent for most businesses interested in investments (Participant 11).*

As already mentioned, a frequently cited barrier concerned the delays in license issuance. Delays are encumbered by the fact that there are some investors who do not proceed to actual investments even though they submit applications. This is illustrated in the following quote:

*Over the last years, there have been many cases of companies that pretended to be engaged in such investments but weren't really interested in them. In other words, they pretend to do the investment but in reality they pursue some side revenues. They are 'fake' companies and even submit applications. These companies come and rent lands and carry out all procedures like us, but at the end do not make the investment [...] Consequently, people who are earnest and really want to invest lag behind and lose valuable time. In addition, a lot of grid capacity is engaged [...] (Participant 1).*

Apart from the above barriers, other barriers that were stated by interviewees included: high taxation (n=5), the instability of the institutional framework (n=5), the unreliability of the grid (n=2), lack of information and misinformation (n=3) and the lack of other funds to maintain the development of the company while engaging existing funds in the investment in renewable energy (n=2).

### **3.2.3 Measures to facilitate large-scale investments in renewable energy**

As expected, the majority of interviewees perceived that in order to attract large investments, the key is to eliminate bureaucracy as well as to accelerate procedures involved in the entire investment process. Some participants described these measures as 'crucial' and 'necessary' while others stated that investments are 'impossible' unless bureaucracy is removed. The following quote is indicative of interviewees' views and provides an adequate example of the importance that respondents ascribe to the elimination of delays caused by bureaucracy:

*The whole process should become much quicker and bureaucracy must be removed. Investors should start the investment without waiting so long and wondering whether the investment will be realized or not. The timeframe of investment is way too long and this timeframe should be shorter [...] (Participant 4).*

The creation of more grid capacity was the second most cited measure to attract large investments in renewable energy. In other words, participants perceived that it makes 'no difference' to attract investors unless

the grid is upgraded. Meanwhile, two participants described the grid as 'obsolete' and 'unable' to receive the electricity produced from renewable energy sources.

According to participants, the state should also make changes in the planning of its energy sector and seek to plan investments based on the country's energy needs. Energy planning was cited by a few participants as a measure that would improve the overall investment environment. For instance, Participant 2 expressed the view that:

*It has to do a lot with planning. Namely, it should be more about how much energy the country has to import and how much energy it produces. That is, investments have to do with our energy demands as well as imports and exports. Investments should be analogous to such planning. Investments should correspond to the country's energy needs.*

Participants seemed to be divided about the requirement to deposit letter of legal guarantee as a measure to improve investments. In other words, investors are obliged to deposit guarantees but this does not always ensure that the investment will proceed. On the one hand, there were participants who thought that this is an effective measure to ensure that investors, who have submitted application, are really determined to proceed to the investment. In essence, these participants thought that the guarantee could deter investors who are 'not serious' about the investment and seek to 'take advantage' of the situation. On the other hand, however, there were participants who thought that the obligation to deposit guarantees acts as another inhibiting factor for interested investors and often prevents interested investors.

Other cited measures involved the establishment of a more favorable investment regime for investments in renewable energy (n=3), the design of policies aimed at absorbing the available international and European funds allocated for the energy transition (n=3) as well as the establishment of a stable price for selling the produced energy (n=2).

## **4 Conclusions**

The focus of this study has been on Greek companies that have invested in renewable energy and, in specific, on their views regarding economic drivers, barriers and measures that could facilitate RES investments. Notably, the investment was seen by most companies as profitable and secure, while rapid depreciation was another significant investment aspect that drove companies to invest. In order to increase investments from companies, it is recommended to give prominence to these drivers in investments campaigns. A central topic addressed in the interviews concerned barriers to renewable energy investments. Insights into barriers could help identify policy areas that require immediate attention and, in this way, to enhance the investment environment. The most cited barriers concerned the licensing process, which was seen as highly bureaucratic and time-consuming, as well as the limited grid capacity which is interrelated with bureaucratic delays. For more companies to invest in

renewable energy, therefore, bureaucratic and capacity barriers need to be reduced significantly. That being said, there are more barriers that need to be addressed by policymakers. Most notably, companies need to possess a big capital cushion in order to receive loans with favorable conditions from banks. In practice, this may be acting as an inhibiting factor for many potential investors who do not possess a high capital or their funds are engaged in other activities.

Finally, the interviewees have recommended measures to facilitate investments in renewable energy with the highest measure being bureaucracy elimination, grid capacity expansion and acceleration of the licensing process. From a policy viewpoint, since these measures seemed to hold the greatest importance for investors, they may be the missing link to what transforms willingness-to-invest into actual investment. Respondents were, however, somewhat divided about the use of letters of legal guarantee as a means to deter 'fake' investors. In particular, a proportion of interviewees perceived that this measure exacerbates the already long process whereas other participants regarded it as an effective way to 'filter' investors so that only real investors can proceed with their investment.

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