Technical support for RES policy development and implementation – Simplification of permission and administrative procedures for RES installations (RES Simplify)

Greece

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Executive summary

This report covers three RES-E technologies: onshore wind, ground-mounted PV and small-scale hydropower.

One of the basic barriers to the licensing of renewable energy technologies in Greece is the grid connection process. The Independent Power Transmission Operator (IPTO) as well as the Hellenic Distribution Network Operator (HEDNO) are currently overloaded with the provision of connection offers for new wind power plants as well as with the review of the grid connection offers for re-designed ones, i.e., those that have amended the characteristics of their projects (i.e., capacity, material). Especially for onshore wind power projects, the uncertainty surrounding the grid connection makes the total waiting time for the licensing process indefinable. For ground-mounted PV, the waiting time for grid connection can currently take around two years (for a PV system connected to HEDNO in 2019).

Obtaining an Environmental Impact Assessment (EIA) approval can be considered a further barrier for onshore wind projects but also small-scale hydropower plants. The EIA related deadlines are not being kept and both technologies are facing an emerging resistance at the local level. Appeals against the EIA approval as well as the Installation and Operation Licenses are often submitted by stakeholders impacted by the planned projects, which extends the project realisation process. So far, however, the State Council (Higher Administrative Court) has rejected the claims in most cases.

Greece has already started to implement the recast Renewable Energy Directive (2018/2001/EU; RED II) in its national legislation. For example, Law No. 4685/2020 aims at simplifying and accelerating the environmental permitting process. In addition, the Electricity Production License, the issue of which was formerly considered as a barrier, has been substituted by a less bureaucratic and more efficient procedure. There are currently further discussions to simplify the licensing procedures. These include the grid connection procedure, the simple notification procedure, and the annulment of installation and operation licenses. These amendments are expected to be introduced in the second half of 2021. Finally, Greece is aiming to implement the so called 'two plus one rule' (art. 16 RED II). However, the introduction is expected to take two years.

Table 1 contains a traffic light assessment of the relevant process steps for the installation of wind, PV and small hydro in Greece.

Table 1: Traffic light assessment of the relevant process steps

Process step	Site selection	Electricity production license	Application preparation process	Administrative authorisation	Grid connection permit	Corporate legal-fiscal	Other
Onshore wind							
PV ground-mounted							
Small hydro							

No barriers identified
Minor barriers identified
Severe barriers identified
Moderate barriers identified
Not relevant for target country
No projects implemented

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1. National RES targets and relevant RES technologies

Greece has submitted its updated version of the National Energy and Climate Plan (NECP) in December 2019. According to the NECP, country is planning to increase the overall share of renewable energy sources (RES) in its gross final energy consumption to 35% by 2030, compared to initial NECP target of 31%[1]. In the electricity sector, the share of renewables will rise to at least 60% (NECP Greece, 2019).

For the achievement of the overall RES target, electricity from renewable energy sources is seen as a 'key pillar'. The timely and efficient implementation of the foreseen measures in the electricity sector is therefore of crucial importance, as the installed renewable energy capacity in this sector is to be doubled by 2030. In terms of both installed capacity and electricity production, PV, onshore wind power and hydropower are the key renewable energy technologies in Greece. By 2030, PV is expected to reach 7.7 GW and 11.8 GWh (3 GW and 4.5 GWh in 2020), wind power 7 GW and 17.2 GWh (3.6 GW and 7.3 GWH in 2020) and hydropower 3.9 GW and 6.6 GWh (3.4 GW and 5.5 GWh in 2020).

Figure 1 displays the annual deployment of solar PV and onshore wind between 2010 and 2019. It can be observed that solar PV reached the peak in 2012 and 2013, with only very poor deployment since 2014. In the case of onshore wind, there was a constant development over these ten years, with a peak reached in 2019.

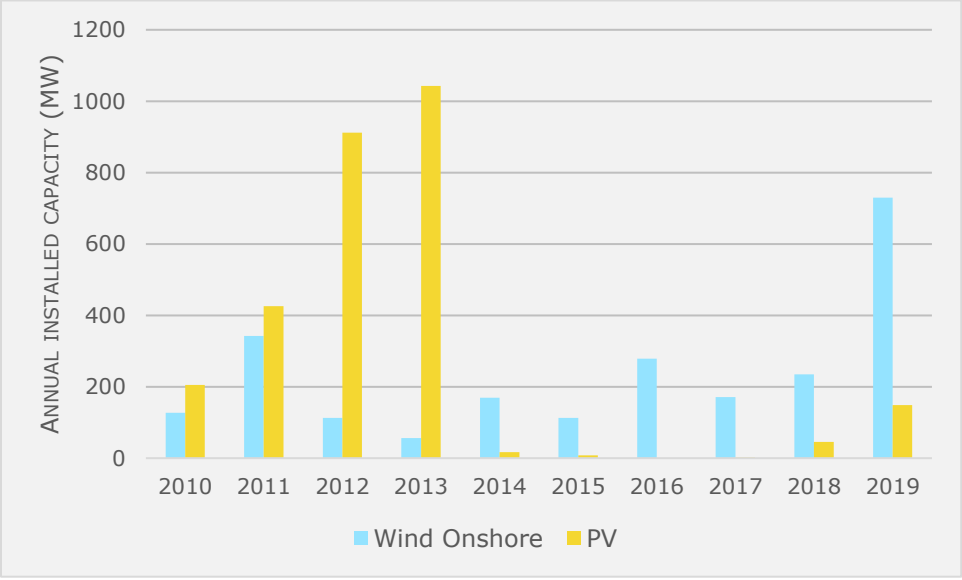

Figure 1: Annual installed capacity of PV and Wind onshore 2010-2019 (source: EurObserv'ER)

[1] The 31% RES target was defined in the first NECP draft published in January 2019.

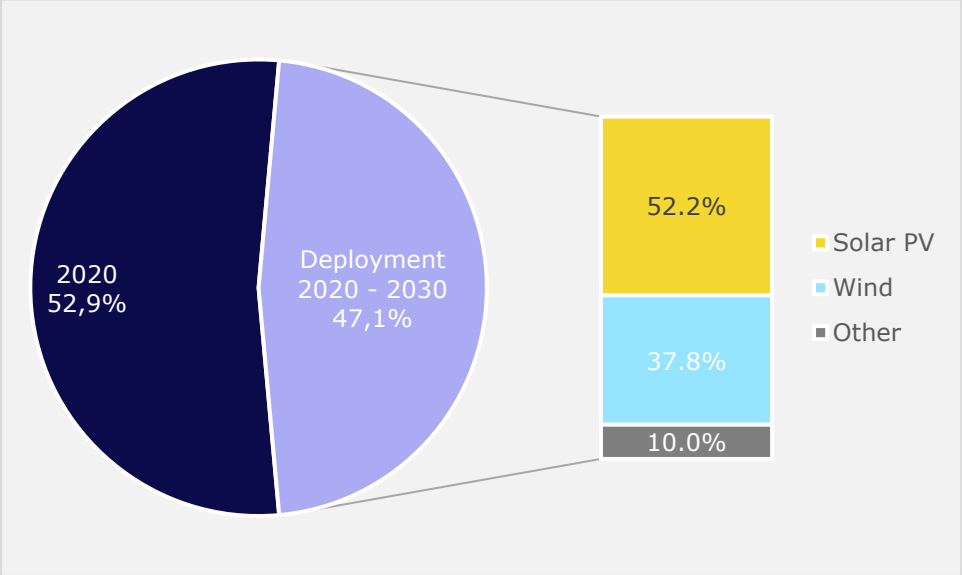

Figure 2: Deployment of RES-E 2020-2030 (source: NECP)

2. Administrative and grid connection procedure

2.1. Relevant process steps

In Greece, the following process steps are relevant for the approval of a renewable energy installation in the electricity sector:

Site selection. The site selection is based on the Special Spatial Planning Framework for RES, which is currently under revision.

Certification of the RES Producer. The certification replaced the previous Electricity Production License for RES. It is expected to drastically reduce the duration of the permitting process.

Environmental Impact Assessment. The EIA approval should be obtained from the Decentralised Administrations or the Ministry of Environment and Energy (MEE).

Preliminary Grid Connection Offer (GCO) and Binding Grid Connection Offer (BGCO). Both are relevant for the connection of a renewable energy installation to the electricity grid.

Installation and Operation licenses. The Installation License authorises the construction of a RES installation, while the Operation License permits the operation of a system. The Operation License is only issued after all other permits have been secured.

Smaller renewable energy installations (typically below 500 kW) are exempt from certain approvals (e.g., EIA approval), which reduces the overall duration of the approval process for these systems (see the subsequent sections of this report).

2.1.1. Site selection

Process flow

The site selection for renewable energy installations in Greece is primarily based on the RES Special Spatial Plan (Ministerial Decree 49828/2008). This applies to all new installations. The site selection is examined and approved at the 'Administrative authorisation' stage.

Onshore wind

The location for onshore wind farms is examined in line with the Special Spatial Planning Framework for RES. The Framework defines (WindEurope, 2020):

- The load-bearing capacity of areas (maximum density of typical wind turbines per municipality) for wind farm development
  - 4% on islands
  - 5% in wind suitable areas (continental Greece except wind priority areas), and
  - 8% in wind priority areas
- Excluded areas
- Criteria for the inclusion of onshore wind in the landscape, and
- Distances from various land uses.

Ground-mounted PV

In general, ground-mounted PV systems are allowed in most areas in Greece (PV Financing, 2017). To a certain extent, PV installations are also permitted on high-yield agricultural land. The percentage of agricultural land for PV installations is defined for the Regional Units in art. 2 OG 3149/2020: 0.5%, with the exception of the Region of Attica and the Greek Islands, where the share of agricultural land for PV installations is set at 1%. Thus, the approach applied is as follows: first, 0.5% or 1% (depending on the Regional Unit) of the total cultivated land is estimated and then the maximum area for PV installation over 1 MW is defined. For example, in the Central Macedonia region and the Thessaloniki Regional Unit, 0.5% of the cultivated land amounts to 15,018 hectares, and the area on which PV installation with more than 1 MW could be located is 939 hectares.

Hydropower

Chapter 3 of the RES Spatial Planning contains provisions with regard to the installation of small hydropower plants. These include:

- Location of water basins with exploitable hydraulic potential
- Identification of areas of incompatibility or exclusion, within which the location of small hydropower plants and related works is prohibited
- Determination of the criteria for assessing the bearing capacity of small hydropower plants
- Determination of the criteria and rules for the integration of small hydropower plants in the natural, cultural and man-made environment of the settlement area.

In general, the site selection process is pretty straightforward as it follows the provisions of the RES Special Spatial Plan. The Plan was adopted in 2008 and is considered a reliable guide for renewable energy installations. Moreover, it was also approved by the State Council (Higher Administrative Court).

Deadlines

Not relevant for the site selection.

Detected barriers

Amendment to the spatial planning framework may hinder the development of renewable energy sources. In 2018, the Ministry of Environment and Energy announced the amendment of the RES Special Spatial Plan. The amendment is intended to introduce stricter provisions that would primarily affect onshore wind and small hydropower plants.

As of today, the drafting of the new RES Special Spatial Plan has not yet been completed. However, on the one hand the RES industry fears that this document may lack any concrete planning guidelines. On the other hand, they are concerned about the impact of the amended RES Special Spatial Plan on the subordinate regional spatial plans and, in particular, that certain environmental groups could use this to further hinder the RES deployment.

Currently, 37% of the Greek territory above 500m, which have a considerable wind potential, is Natura 2000+ sites. The RES industry fears that stricter provisions in the updated RES Special Spatial Plan and as a result also in the subordinate Regional Special Plans could block the deployment of onshore wind power plants in certain regions. This is

currently happening, for example, on the island of Crete, where there is a complete ban on wind energy (RNP, 2020).

Conflict between PV and agricultural land. Before 2013, land use for PV projects was not an issue, due to the fact that there were only small projects (<10MWp) and investors were able to use 1% of agricultural land. However, in 2014, the PV market in Greece started to grow again and as a result, PV installations were banned on prime agricultural land. To address this issue, MEE issued the decision OG 3149/2020, which defined the share of agricultural land in the Regional Units that is available for PV systems up to 1 MWp (SolarPower Europe, n.d.).

Resistance to solar PV projects come either from the pastoral sector (sheep farmers), who see PV as a competitor to available land, or from farmers who would like to have their own share of the national PV target for 2030. From 2018, PV projects greater than 20 MWp that participate in auctions (joint PV+Wind auctions) are also obliged to pay 3% of their gross income to local communities (ibid.).

Identified good practice

No good practice related to this process was identified.

2.1.2. Electricity production licence

Process flow

Law No. 4685/2020, which entered into force in May 2020, replaced the former Electricity Production License for renewable energy technologies with the Certification of the RES Producer. The new certification is relevant for all new installations as well as for repowered installations.

For Certification, the RES project developers have to submit an application to the Regulatory Authority on Energy (RAE). Applications can be submitted within the first 10 days of February, June and October, the so called 'cycles' (art. 11 Law No..4685/2020). In practice, this certification constitutes 'a project feasibility approval', where specific parameters are examined.

In addition, the Law No. 4685/2020 (art. 10 Law No. 4685/2020) introduced two new categories of projects – (1) Non-special projects and (2) Special projects (see Table 2 below).

Table 2: Classification of projects according to Law No.4685/2020

Project type	Non-special projects	Special projects
Project size	• Onshore < 150 MW • PV • Small hydropower plants below 15 MW	• Onshore > 150 MW • Offshore
Planning Procedure	Simplified Procedure	Normal Procedure

Source: WindEurope, 2020

For special projects, the following criteria are examined by the RAE:

- Technical, energy and feasibility study. Especially for wind energy projects certification of wind measurements performed by an accredited laboratory should be included
- Financial capability of the investor to realise the project
- Compatibility of the project with the RES Special Spatial Planning
- Whether the project is not planned in any a-priori exclusion zone (e.g., Natura 2000 sites)
- Especially for onshore wind projects, it should be proven that the capacity of each wind project (basically the capacity for each wind turbine of the project) does not exceed maximum load-bearing capacity of the broader area. This way grid congestion is avoided and more projects can be realised on a specific area.

In the case of non-special projects, instead of evaluating the criteria described above, project developers simply have to pay the following fees (art.17 law No.4685/2020):

- 3.000 €/MW for the capacity up to 1MW
- 2.500 €/MW for the part of the capacity exceeding 1MW and up to 10MW
- 2.000 €/MW for the part of the capacity exceeding 10MW and up to 50MW
- 1.500 €/MW for the part of the capacity exceeding 50MW and up to 100MW
- €/MW for the part of the capacity exceeding 100MW and up to 150MW.

For all renewable energy technologies, the certification is valid for 25 years. However, it can be renewed once for the same period of time (WindEurope, 2020; art. 10-25 Law No.4685/2020).

Furthermore, art. 18 of the Certification of RES Producers Regulations (OGG B 5291/2020) contains specific provisions for repowered projects. In general, the certification process for repowering is the same as for new installations (described above). However, some specific restrictions apply. Firstly, the project location must be identical with the location of the original project, while the power plant capacity can be increased under certain circumstances, but only if the electricity grid is not congested. In the case of congested grids, additional provisions apply. In general, RAE consults the Hellenic Distribution Network Operator (HEDNO) and Independent Power Transmission Operator (IPTO) annually on the prospective grid overloads. Then, RAE then decides which areas should be defined as areas with overloaded grids and how much capacity is available in these areas for new projects. Based on that, RAE can assess how many Certifications can be issued for each area in each 'cycle' (art. 16 OGG B 5291/2020).

The Certification of RES Producer is only in effect from May 2020. It is primarily aimed at simplifying and accelerating this permitting process stage for RES project developers. According to the national stakeholders interviewed, the initial experience with this new procedure has been quite positive and it seems that it could reduce the overload of RAE.

Deadlines

When the application for the Certification of RES Producer is submitted to the RAE, the following deadlines have to be met (art. 11 Law No.4685/2020):

- Within 5 days from the receipt of application, RAE can request the plant operator to provide further details and publishes the summary of the application, which includes the key details of the project
- Within 15 days from the application publications, whoever has a legal interest can submit a reasoned objection

- Within 15 days from receiving comments/ objections, the plant operator should respond to the comments/ objections
- Within 20 days after the deadline for objections/ for responding to comments/objections, RAE issues the Certification of RES Producer
- Within 30 days from the receipt of a negative answer, plant operator can object to RAE, if the application is not approved by RAE.

Since this procedure is very new, there is no information as to whether the deadlines are kept by the RAE.

Detected barriers

The production license takes an unnecessary long time. The previous Production License was considered a great barrier. In many cases, the process could last 1.5 years. Stakeholders from the renewable energy sector complained about the unnecessary delay, due to the fact that many of the parameters examined for the issuance of the production license are also examined at a later stage. In addition, it was acknowledged that RAE was understaffed and therefore the process could not be accelerated. Law No. 4685/2020 introduced the new Certification of RES Producer which aims at simplifying this process step and thus reduce the overall permitting process time (GAREP Representative, 2020). The first experiences with the new Certification have been positive and it might help reducing the overload of RAE (Psomas, 2020). However, it has been mentioned that RAE is not proceeding with the issuance of the certification for the repowering projects (Stakeholder 1, 2021).

Exemptions from the Certification of RES Producer for smaller renewable energy projects created difficulties for the realisation of larger projects. Developers of some small renewable energy projects are exempt from the obligation to obtain Certification of RES Producer (previously Electricity Production License). This exemption concerns PV below 1MW. These small projects follow a very quick permitting procedure which is not monitored at any step by RAE. This can create project overlapping cases between larger projects that require certification and smaller projects that are subject to the above-mentioned exemption. This basically applies in public land cases.

More specifically, there are cases where a project (that is not subject to an exception) has received Certification of RES Producer (previously Electricity Production License) but is not able to proceed to the next licensing step (partially or completely), e.g., the environmental permitting. However, the investor has already paid in the first phase significant amounts of money, e.g., RAE fees, guarantees for Certifications, for the EIA study as well as other relevant costs. Thus, the stakeholder interviewed suggested that this process should be monitored by the regulator (Stakeholder 1, 2021).

Identified good practice

The introduction of the Certification of RES Producer was basically a policy recommendation from stakeholders in the renewable energy sector in the past few years (especially after 2016).

The Certification of RES Producers Regulations (OGG B 5291/2020) for the first time contains provisions for conflict resolution between project developers. In cases of spatial conflict, i.e., if two project developers apply for Certification of RES Producer for the same site, RAE urges the parties to find an ‘amicable resolution’ within 30 days.

2.1.3. Administrative authorisation

Process flow

The administrative authorisation basically includes the Environmental Impact Assessment (EIA) approval. This procedure is required for all new renewable energy installations as well as repowered ones.

The EIA approval procedure starts with the project developer submitting the EIA study of an installation to the competent authority. This can be either MEE or the Decentralised Regional Administration. In any case the project developer should submit the EIA study within the applicable deadlines (see under 'Deadlines' below). If the project developer fails to meet the statutory deadlines, the Certification of RES producer is cancelled (art. 12 Law No.4685/2020).

There are two stages of the EIA approval procedure (art.4 Law No. 4014/2020):

1. The competent authority (MEE or the Decentralised Regional Administration) examines whether the EIA study is complete. If the deadline for completing the assessment of the EIA study has expired and there are no comments or requests from the competent authority, the EIA study is considered complete.
2. The competent authority forwards the EIA study to other competent authorities and agencies (e.g., responsible for forestry, archaeology, etc.) in order to collect their views and comments on the study, as well as well as suggested environmental terms and conditions for the realisation of the project. If other competent authorities and agencies do not respond within the deadlines set in the Law No. 4685/2020 (see under 'Deadlines' below), the authority can proceed with the EIA approval. However, there is an exception with regard to views and comments of certain agencies, which are considered essential (e.g., archaeological and forestry). Here, in case of no answer, the issue will be examined by the Central (or the Regional) Council of Environmental Licensing within 20 days.

   Local communities, along with other competent authorities and agencies, have also the right to review the EIA study and provide their views on it. Additionally, the Regional Council is required to follow a formal 'public consultation' procedure and issues an opinion.

The EIA Approval is valid for 15 years and can be renewed several times (Law No. 4014/2011).

In terms of EIA Approval, projects are divided into three basic project categories (see Table 3 below). Category B projects are examined at regional level. For Category B projects, project developers are obliged to submit Standard Environmental Requirements. This is a simplified EIA procedure. Category A2 projects are also examined at regional level, but they require an EIA approval. Finally, larger A1 projects require EIA approval and are examined at national level.

The EIA study focuses on all possible environmental impacts of a renewable energy project. The EIA may include impacts on land use, forest use, biodiversity, civil aviation, military defence, classical/ Byzantine and newer archaeology.

Table 3: Classification of projects according to their size and the environmental licensing requirements

Responsible Authority	**Ministry of Environment, Energy and Climate Change**	**Decentralized Regional Administration**	**Decentralized Regional Administration**
Project size for wind energy projects	Category A1 projects: • P > 60 MW or • P > 45 MW and located in protected area or including the construction of a High Voltage Line longer than 20 km	Category A2 projects: • 10 MW < P < 60 MW or • 10 MW < P < 45 MW and located in a protected area	Category B projects: • P < 10 MW
Project size for ground-mounted PV energy projects		P > 10 MW	• 1 < P ≤ 10 MW or • P≤ 1 that are exempt from the obligation of issuing an RES Producer's Certification
Project size for small hydro projects		P ≤ 15 MW and Water Volume ≤ 2.000.000 m^3 and • 5 km ≥ L > 250 m if the hydraulic parts of the project, the flood basin and the watercourse diversion section of the are out of range of Natura 2000 site. • L ≤ 8 km, if the hydraulic parts of the project, the flood basin and the watercourse diversion section of the are inside a Natura 2000 site. Where L= Diversion Duct Length • diversion of water to another watercourse, within the same River Water Basin	P < 0.5 MW
EIA Requirements	Mandatory	Mandatory	Projects must meet pre-defined environmental terms (Standard Environmental Requirements procedure)

Source: OGG B 3291/2020

Especially for small hydropower projects, a permit for the exploitation of water resources for electricity generation is required (water use authorisation). In order to issue this permit, the availability of the water quantities used must be documented. The amount of

water resources used in the small hydropower plant should follow the provisions stipulated in the River Basin Management Plan of the Region's Water Directorate. In addition, a further license is required to carry out water exploitation projects (license for the realisation of water exploitation works). However, for small hydropower plants (up to 10 MW), a Single Permit, which includes both licenses, is issued (OGG B 2878/2014 in conjunction with Law No. 3199/2003).

Applications for all permits related to small hydropower plants are submitted to the local administration authority i.e., the local administration secretariat in charge of water management[2]. The application is then forwarded to the General Secretary of the Decentralised Regional Administration, which is the authority responsible for the issue of the licenses. 'Water use authorisation' and/or 'realisation of water exploitation works' is issued after the EIA approval or the approval of the Standard Environmental Requirements (art. 2 OGG B 2878/2020).

Deadlines

Law No. 4685/2020 (art. 1-9) has shortened the deadline for issuing the EIA approval to 120 days and contains provisions for strict compliance with this deadline. Currently, the EIA approval process may take up to 3-4 years (Kakiopoulos, 2020). It should be noted that the EIA approval process applies to wind, small hydropower and PV above 2 MW (WindEurope, 2020).

The statutory deadlines related to the EIA Approval are provided in Table 4 below (WindEurope, 2020).

Table 4: Deadlines for the submission of application for EIA Approval

Project type	Non-special projects	Special Projects
Deadline for submission of application	• 6 months from issuance of the Certification • 18 months from issuance of the Certification if a Special Ecological Assessment is required	• 12 months from issuance of the Certification • 36 months from issuance of the Certification if a Special Ecological Assessment is required
Comment	• The above deadlines can be further extended by 24 months, if the developer pays 150€/MW/month. • The above deadlines are suspended only in case of a court decision for the suspension of any permission which is required for the project.	

Source: WindEurope, 2020

Furthermore, Law No. 4014/2011 (as amended by the Law No. 4685/2020) foresees the following deadlines for the EIA Approval procedure:

For Category A1 projects (art. 3 Law No. 4014/2020)
Preliminary EIA: The authority examines the submission within 10 days and then has two days to forward it to other competent authorities for their opinion. The relevant authorities are obliged to express their views on the submission within 30 days. Within 20 days the authority must take into consideration any comments made by other

[2] In all cases, the application should be accompanied by technical documents specifying the exact location of the works and the volume of water used. Apart from that, the opinions of related agencies (e.g. Archaeological Agency, Forest Agency, Natura 2000 site administration) should be submitted, if necessary.

competent authorities and express its positive or negative opinion on the submission within 20 days, even if some related authorities have not made any comments.

EIA: The authority reviews the submission within 10 days and then it has two days to forward it to other competent authorities for their opinion. Other competent authorities are obliged to express their opinion within 30 days. If some authority does not express its opinion and this opinion is not considered essential, the approval process continues. However, if the authority's opinion is deemed essential, the Central Committee of Environmental Licensing holds an obligatory meeting. Then, when all opinions are collected, the competent authority must within 20 days take into consideration all comments from other competent authorities and express its positive or negative opinion on the submission within 10 days.

For Category A2 projects (art. 4 Law No. 4014/2020)
EIA: The authority examines the submission within 5 days and it has one day to forward it to other competent authorities for their opinion. They are obliged to express their opinion within 30 days. If some authority does not express its opinion and it is not considered essential, then the approval process continues. However, if the authority's opinion is deemed essential and the regional administrative coordinator requests it within 15 days from receiving the EIA submission, then the Regional Committee of Environmental Licensing will hold an obligatory meeting within 20 days. Then, when all opinions are collected, the competent authority must within 20 days take into consideration all comments from other competent authorities and express its positive or negative opinion on the submission within 10 days.

For the EIA renewal, the authority examines the submission within 3 days and has 15 days to decide whether an updated EIA needs to be submitted. If so, the plant operator is obliged to submit a revised EIA within 3 months.

With regard to the 'Water use authorisation' the following deadlines are foreseen (art. 4 OGG B 2878/2014).

- The local administration authority examines the submission withing 10 days. If an on-site inspection is needed, then the deadline is extended by additional 10 days. If the Authority has any comments or questions, the project developer should submit additional required documents within 5 days.
- The application is forwarded to the Decentralised regional administration, which expresses its positive or negative opinion on the submission within 20 days and then informs the local administration authority (no deadline is set).

Although the deadlines are very clearly defined in legal terms, in practice they are not met by the competent authorities. There is lack of staff in the Decentralized Regional Administrations, or sometimes they lack the necessary expertise. Therefore, especially for the EIA Approval by Decentralised Administration, the approval duration can be long (Kakiopoulos, 2020). Central administration agencies (Ministries, RAE, IPTO and HEDNO) are sufficiently trained, however, also they are understaffed. The forest agencies are adequately staffed, but can sometimes have negative attitude towards some projects. To accelerate the permitting process, the Greek Civil Aviation Agency developed specific algorithms to check whether problems might emerge if a wind energy project is installed in a location that might interfere with the operation of civil aviation radars (Papastamatiou, 2020).

Also, in the case of small hydropower, the Local and Decentralised Administration staff is sometimes not sufficiently trained to deal with these projects. If a small hydropower plant is located in different administrative regions, the investor might be confronted with

different attitudes from different regional authorities. Another important issue is that some authorities do not respond in a timely manner and can submit their opinions on the EIA long after the consultations deadline (Kakiopoulos, 2020).

Detected barriers

Difficulties in obtaining EIA approval for small hydropower plants. This is the greatest barrier concerning the deployment of small-scale hydropower in Greece. The regulatory framework was tightened before the small hydropower sector could be sufficiently deployed, as it happened in other EU Member States. This is mainly a consequence of the EU Water Framework Directive which prohibits interventions in water bodies.

At times, EIA for small hydropower plants is not approved and consequently, project developers take legal action against this decision, hereby further delaying the realisation of the plants.

In any case, 6-7 years are needed for a small-scale hydropower plant to obtain all the necessary permits. Currently, there are 800-1000 MW of small hydropower projects in Greece waiting in the pipeline (Small Hydro Representative, 2019).

Long reviews of the EIA. Many mature wind projects are forced to restart their licensing procedure due to the falling prices in the tenders. In doing so, they are exposed to delays. The redesign of a wind power project under new parameters obliges plant operators to resubmit for approval their EIA. As a result, the approval will be extended from usually 5-6 years to 7-10 years.

As previously mentioned, the Law No. 4685/2020 includes promising provisions to accelerate approval procedures for renewable energy projects, including EIA. An important development is the division of projects into three categories:

- new projects
- repowered projects (‘repowering’ is only mentioned; the framework is still missing)
- ‘redesigned’ projects

Special attention should be given to the last category as such projects are ready and therefore their permitting process should be accelerated. The barrier refers basically to wind power (Wind Developer, 2020).

Negative attitude of the local communities towards the implementation of renewable energy projects. Local communities usually have a negative attitude towards the construction of wind farms. Local communities as well as specific environmental NGOs reject the realisation of these investment projects. Arguments against wind energy relate to the preservation of the landscape and the protection of bird species.

In March 2020, a joint press release from various environmental NGOs underlined the necessity of setting biodiversity as a goal of equal importance with the climate change. For that reason, they propose the suspension of all EIA approvals for all projects, which, under current legal framework, fall under the ‘Category A licensing’ that refers to areas of the Natura 2000 Network. In addition, they demand the immediate revision of the ‘Special RES Spatial Plan’, as the existing plan corresponds to a different economic reality (Wind Developer, 2020).

Biodiversity issues challenging the IEA. The EIA approval as well as specific traits of the EIA approval can be challenged by stakeholders opposing the projects. Some local aspects that might not have been included in the EIA may be presented as causes for halting the development of small hydropower plants. A characteristic argument is the presence of the otter nests. Due to the possible presence of these species, citizens may question the realization of a small hydropower plant. Sometimes this argument is also based on past testimonies, which are not based on evidence (Kakiopoulos, 2020).

Delays in 'water use authorisation'. One of the most bureaucratic processes for the realisation of a small hydropower plant is the 'water use authorisation'. The application submitted by the project developer needs to specify the quantity and exact location of water use. The issue of the licenses includes 7-8 agencies (forest agency, archeological agency, Natura 200 site administrator, other local administration authorities), a public consultation procedure and final decision on the approval. Moreover, 'water use authorisation' should be published in the Official Government Gazette. The project realisation can be delayed by further issues. For example, the Regional Forest Agency may demand the cutting of plane trees in order to avoid plane trees disease. There are also cases when a specific ichthyological study (fish species study) might be required if an endemic species is present. In some cases, these are the arguments used to legally challenge a 'water use authorisation' (Kakiopoulos, 2020).

Identified good practice

No good practice related to this process was identified.

2.1.4. Grid connection permit

Process flow

In order to apply for an Installation License (see section 2.1.6 'Other'), the plant operator is obliged to obtain a grid connection offer from the Hellenic Distribution Network Operator (HEDNO) or Independent Power Transmission Operator (IPTO) (art. 8 Law No.4368/2006).

For RES plants above 8 MW, the System Operator HEDNO or IPTO issues a non-binding preliminary Grid Connection Offer (GCO) immediately after the issuance of the Certification of RES Producer. After the EIA approval, IPTO or HEDNO check whether there is ample capacity in the transmission/ distribution grid for the realisation of a RES project. In any case, the preliminary GCO describes a provisional solution for connecting the RES plant to the electricity grid (art. 8 Law No. 4368/2006).

If there is enough capacity in the local electricity grid and the connection solution from the preliminary GCO can be implemented without any technical problem, the System Operator (IPTO or HEDNO) issues the Binding Grid Connection Offer (BGCO). Otherwise, the System Operator suggests an alternative solution or does not proceed with the issuance of a BGCO.

Within 2 months after the BGCO is issued, the developer must pay a Bank Guarantee to the System Operator. The amount depends on the project's total capacity.

More specifically, the fees are defined as follows (par. I.1.3. Law No. 4152/2013):

- Capacity up to 1MW: € 42/kW
- Capacity exceeding 1MW and up to 10MW: € 21/kW

- Capacity exceeding 10MW and up to 100MW: € 14/kW
- Capacity above 100MW: 7/kW

In addition, the plant operator has to pay the full amount for all grid connection work carried out by IPTO/ HEDNO. If the grid connection cost does not exceed EUR 250,000, the full amount needs to be paid in one payment. For the grid connection works over EUR 250,000, the repayment conditions are stipulated in the connection agreement (par. I.1.2. Law No. 4152/2013).

A similar but less complicated process is followed for smaller RES Plants. More specifically, for RES projects that are not obliged to obtain a Certification of RES Producer and an EIA approval, the grid connection offer is automatically binding (BGGO) (art. 8 3468/2006).

Deadlines

Preliminary Grid Connection Offer (GCO)

IPTO, the Transmission System Operator (TSO), is obliged to make a preliminary GCO

- within 4 months from the submission of application by the plant operator for RES plants that need a Certification of RES Producer (or previously Electricity Production License) and an EIA Approval; or
- within 6 months for RES plants that are exempt from the obligation to obtain a Certification of RES Producer (previously Electricity Production License) (art. 8 par. 4 Law No. 3468/2006).

Preliminary GCO will be valid for 3 years. However, it can be extended if the plant operator has submitted all the necessary documents, proving the necessity for grid extension. The extension varies between 18 - 24 months, depending on the grid connection works the grid operator has to carry out before the conclusion of the connection contract, i.e., the BGCO (art. 8 par. 4 Law No. 3468/2006).

Binding Grid Connection Offer (BGCO)

The BGCO should be concluded within 3 months for renewable energy power plants that are exempt from the obligation to obtain Certification of RES Producer (previously Electricity Production License) and within 6 months for the rest of renewable energy power plants from the moment of the application submission (art. 11 par. 4 Law No. 3468/2006).

Detected barriers

Delays in the management of connection requests by IPTO/ HEDNO. The IPTO is currently overloaded with providing a connection offers for new wind power plants, as well as with reviewing the connection offers for re-designed ones, i.e., those that have amended the characteristics of their projects (i.e., capacity, material). The same applies to PV projects, especially small clusters of small ground-mounted PV below 1MW.

Due to the fact that there are considerable delays in previous permitting procedure steps, IPTO and the HEDNO are flooded with new connection requests, and this can, at a later stage, create further bottlenecks (Wind Developer, 2020).

In any case, grid connection is currently considered the basic barrier of the licensing process in Greece. Especially for wind power projects, the uncertainty surrounding grid connection makes the total waiting time of the licensing process undefinable (Papastamatiou, 2020). For PV, this time can be two years in case of connection to the

grid operated by HEDNO (as of 2019) and 9 months in case of connection to the grid operated by IPTO (Psomas, 2020).

Identified good practice

No good practice related to this process was identified. However, MEE expects to tackle with this problem and relevant political decision are expected in 2021 (Psomas, 2020).

2.1.5. Corporate legal fiscal

Process flow

During the operation of a renewable energy power plant, a special tax (3%) is deducted every year from the revenues of a RES plant operator. One third of the amount goes to municipalities for the implementation of local development projects or to local households to reduce electricity bills (art. 25 Law No.3468/2006). This applies to wind power and PV projects above 20 MW.

An additional 1% is imposed on the operators of small hydropower plants (art. 25a Law No. 3468/2006).

Deadlines

There are no relevant deadlines for this process step.

Detected barriers

Delays in transferring the special tax. There have been considerable delays concerning the transfer of the one third of the special tax to local administrations and more specifically to households, which is administered by HEDNO (Stefanatos, 2020).

Imposition of a retroactive fee. MEE is currently discussing the imposition of new fees on renewable energy producers in order to reduce the deficit of the Special RES Account that finances all renewable energy projects. In particular, an extraordinary tax of 6% is expected to be introduced on renewable electricity producers' revenues generated in 2020 (Energypress, 2020).

Identified good practice

The imposition of the special fee attributed to local communities can be considered good practice as it raises the acceptance of renewable energy projects by the local communities.

2.1.6. Other

Process flow

To launch the operation of a RES plant (new, repowered), the plant operator has to obtain two more licenses – an Installation License and an Operation License.

Installation License

The aim is to obtain an administrative decree that confirms that all legally required licenses, and documents have been submitted to the Decentralised Regional

Administration. The criterion for awarding an Installation License for all renewable energy projects is effectively a checklist on aspects of spatial planning, land use rights, project commissioning and environmental compliance.

The Installation License enables the project developer to construct the RES installation. It is valid for 2 years and can be extended twice under certain conditions (art. 8 par. 10 Law No. 3468/2006).

The key documents which are required for the issuance of the Installation License are (art. 8 Law No. 3468/2006):

- The Binding Grid Connection Offer (BGCO)
- The EIA approval
- The land use right. The EIA approval provides for the right to use land in public forest areas. In addition, the EIA approval provides for a right of expropriation for private land.

Operation License

The Operation License is the final license for the renewable energy project and is issued by the Decentralised Regional Administration and MEE after the construction and successful start of the power plant.

For Category A1 projects, the MEE is the competent authority for issuing the Installation and Operation Licenses. For Categories A2 and B projects, the Installation and Operation Licenses are granted by the Decentralized Administration.

In addition, the Centre of RES and Energy Saving is responsible for carrying out measurements to monitor the performance of RES installation (art. 8 Law No. 3468/2006).

Deadlines

Installation License

The Installation License is granted within 15 days after the application documents have been examined. The application documents have to be reviewed within 30 days of submitting the application.

Operating Licence

An Operating Licence is issued within 20 days from the application receipt.

Detected barriers

Long waiting time for deciding on the annulment of licences. Since the entry into force of the Law No. 3468/2006 on the promotion of RES in Greece (including its subsequent amendments), a significant number of lawsuits for the annulment of RES licenses (Installation License, Operation License, EIA Approval) have been filed with the State Council (High Court). This was the result of the opposition of local communities and public authorities (municipalities) to the implementation of new renewable energy projects. This barrier negatively impacts the legal, technical or operational level of the project. Due to the complaint procedures, the project implementation process is delayed as the licensing process is paused until the annulment request is examined by the Court. This barrier also affects renewable energy projects in operation. In most cases, it takes more than two years for the annulment of licenses to be examined and for a decision to

be made, thereby causing severe consequences to the companies developing such projects (Wind Developer, 2019).

This barrier negatively impacts mainly wind farms and small hydropower plants.

Identified good practice

It is currently being discussed whether the Installation License should be revoked, as it re-examines aspects that have already been checked in earlier procedural steps (EIA Approval, grid connection). It is also examined whether the Operation License should be substituted with a simple notification procedure (Psomas, 2020).

3. Use of IT systems

In Greece, IT systems are used in several steps of the licensing procedure.

For the Certification of RES Producer (former production license), project developers submit their applications to an electronic register administered by RAE[3]. In return, RAE issues the Certification of RES Producer and sends electronically to the applicant (art. 11, 19 Law No.4685/2020). The process is substantially accelerated as the electronic register is connected to all relevant systems such as tax database (Psomas, 2020).

For EIA Approval, an Electronic Environmental Register (EER[4]) is available for information related to the process of issuance, renewal, modification, as well as monitoring the implementation of EIA and Standard Environmental Requirements (art. 18 Law. No. 4014/2011). The EER is in place since 2018 and it is expected to gain importance in the future as since 2021 all environmental permitting procedures should be carried out via the EER. In addition, the EIA should be made available to the public (art. 19a Law No. 4014/2011).

4. Complaint procedure

All interested parties can appeal against the EIA Approval, the Installation License and/or the Operation License. An appeal to revoke the EIA Approval can be submitted to the State Council by any interested party within three months after the interested party became aware of its issuance (art. 24-27 Law No.2690/1999 in conjunction with Presidential Decree 18/1989).

Two specific requests can be attached to the appeal to revoke the EIA Approval, Installation License and Operation License. First, a request to suspend the license until the State Council decides on the appeal can be submitted. This request may take 3-6 months. Second, a request for temporary cessation can be made until the State Council decides on the appeal. This request may take 1-2 weeks (Wind Europe, 2020). In any case, the decision of the State Council is final. There are no other court instances for further appeals (Presidential Decree 18/1989).

There is no specific deadline for the State Council to make a definite decision. There are cases where the decision has been published within less than 1 year and other ones which took 4 years or even in extreme cases 7 years (WindEurope, 2020).

The decision-making process for granting the permit as well material aspects of approval can be disputed. There are cases, where the realisation of a RES project can be stopped

[3] The register is not yet publicly available.
[4] https://eprm.ypen.gr/

multiple times due to separate environmental or other claims. It is also interesting that in many cases a citizen can appeal against the granting of a certain license. This is basically because citizens can claim that they were not aware of the public consultation process for a specific project and therefore would like to appeal the decision retrospectively. Citizens can then appeal the decision along with other interested parties that are opposing the realisation of the project.

Additionally, Certification of RES Producer Regulations (OGG B 5291/2020) foresee that any interested party can object to the application for the license within 15 days after the application is available to the public. The project developer must respond to the objection within 15 days (art. 10 OGG B 5291/2020).

5. Specific features to ease administrative procedure

Table 5 below provides information on the existing specific features to ease administrative procedures in Greece.

Table 5: Specific features to ease administrative procedures

Specific feature	Existing	Short description
Simultaneous procedures	yes	In practice, EIA approval is carried out along with Preliminary Grid Connection Offer (Psomas, 2020).
National contact points and one-stop-shops	no	There is no national contact point or one-stop-shop in Greece, but this is the intention of the MEE in the long-term (Psomas, 2020).
Application of 2+1 and 1+1 rules	no	Not yet, but this is the rationale behind the new legislative framework stipulated in 4685/2020.
Simple notification procedure	no	
Pre-planning	no	The RES Special Spatial Plan defines the criteria for the installation of renewable power plants, but not the sites for renewable energy projects per se (HWEA, 2020). Basically, the Plan poses restrictions on the number of wind turbines to be installed and the load-bearing capacity with regard to environmental protection (Stefanatos, 2020). However, such sites are defined for small-scale hydropower in the RES Special Spatial Plan (Kakiopoulos, 2020).
Pre-application consultation	no	N.A.
Project acceptance measures	yes	In Greece, there is a special tax to increase the acceptance of renewable energy projects by local communities and municipalities. The special tax of 3 % that is deducted every year from the revenues of a RES plant operator and remitted to local administrations. The special tax is divided as follows: • 1.7% go directly from DAPEEP (RES and Guarantees of Origin Administrator) to municipalities • 1% is offered to local residents to reduce their electricity bills • 1.3% offered to the Green Fund

Measures to streamline litigation by third parties	no	A common procedure followed by the opponents of renewable energy projects is that after the time of public consultation on EIA, installation/ operation license, a natural person (not an entity (as they should be aware of the deadlines) submits an objection and afterwards a claim to annul the license to the High Court. The litigation is initiated by a natural person and then backed by the entity that also opposes the project. If the court rejects the claim, the same person can come up with a further claim for annulment, which is based on different reasons. These actions create unnecessary delays in the realisation of the project. However, the High Court approved the RES Special Spatial Plan and based on this Plan, the majority of the claims against renewable energy projects are rejected (Papastamatiou, 2020).
Other	no	N.A.

6. Indicators to measure the performance of the overall process

Table 6 below provides information on the indicators to measure the performance of the overall administrative and grid connection process in Greece.

Table 6: Performance indicators to assess administrative and grid connection processes

Performance indicator	Description
Average response time by the competent authorities and TSO/DSO for grid connection procedures	For ground-mounted PV the average response varies between 9 months (IPTO) to 2 years (HEDNO) (Psomas, 2020).
Process duration	In general, average process duration for onshore wind power is 8 years. Currently, there are many projects in the pipeline and they can be divided in two categories: • Mature projects that have an EIA approval. They need 3-4 years to be fully approved. • Projects with Certification of RES producers. No information. For small hydropower projects the average time is between 4- 10 years (Kakiopoulos, 2020). More specifically, the issue of the former Production License can take up to one year; the EIA approval around 3-4 years or sometimes more if it is legally challenged (+3 years); Connection approval 2 years; Installation/ Operation License up to 2 months. In many cases, the authority responsible for the Installation License is also responsible for the Operation License, which something helps to save some time. There are cases, where the installation of a small hydropower plant deviates from the initial planning. Approval of such an amendment can take up to 1.5 year. If plant operators proceed with the construction works without informing the responsible authorities, this delays the issue of the Installation/ Operation License (Kakiopoulos, 2020).

	Process duration for ground-mounted PV is relatively shorter (4-5 years) (Psomas, 2020).
Project approval rates	Based on the data from HWEA, the project approval rates of wind energy projects were estimated between 3.2% and 6% in 2017. The 6% rate concerned projects that were mature and ready for completion (Installation and Operation License with an average duration time of 5.5 years). For projects that were at the beginning (submission for a generation production license) the percentage of the approval rate fell to 3.2% (Papastamatiou, 2020). For small hydropower projects 20% (Kakiopoulos, 2020) and for ground-mounted PV 85% (Psomas, 2020).
Costs of administrative processes	The fees (e.g., RAE levy, the letter of guarantee for participation in tenders) and also the number of permits to be acquired vary from project to project and thus also the associated costs (Papastamatiou, 2020). For all projects standard fees are imposed in each licensing step (Certification of RES Producer). In addition, HEDNO requests a lump sum of EUR 1000 for examining each submission. Moreover, a guarantee letter is needed for the grid connection (see section 2.1.4) (Psomas, 2020). For small hydro an average cost of EUR 300,000/ MW can be assumed (Kakiopoulos, 2020).
Share of permits that are legally challenged	For onshore wind power 60% but previously almost 100% (HWEA, 2020). For small hydropower 10% but previously this was higher (20%-25%) (Kakiopoulos, 2020).
Share of legal challenges that are overruled	For onshore wind power, it is nearly 0%. This is due to the fact that the State Council has expressed its positive opinion on the RES Special Spatial Plan. As all projects are based on that Plan, the State Council considers them legal (Papastamatiou, 2020). The same is applicable for small hydro power (Kakiopoulos, 2020).
Stakeholder interests	Stakeholder interests are taken into account. There are provisions on mandatory public consultation in specific licensing steps (see section 2.1.3). Although legally not required, project developers can also organise meetings on a local level in advance of the project implementation (Papastamatiou, 2020).

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