

**Wind Farm at the location Aidoni (16.5 MW) located in the Municipal Unit of  
Karystos, Euboea Prefecture.**

**NON-TECHNICAL STUDY**

**INTRODUCTION**

The project concerns the installation of a Wind Farm, implemented by the company Energeiaki Kafireas Euboea O.E., a subsidiary of Terna Energy S.A., located in the Municipality of Karystos, Euboea Prefecture, Central Greece Region, and under the Decentralized Administration of Thessaly and Central Greece.

The project involves the installation and operation of a wind farm with a total installed capacity of 16.5 MW, consisting of five (5) wind turbines with a nominal capacity of 3.3 MW, along with ancillary works.

The purpose of the proposed project is to exploit the high wind potential of the area for electricity production and subsequently sell the generated electricity to the Public Power Corporation (PPC), channeling it into the National Electricity Transmission System (NETS).

Part of the overall project falls within the boundaries of a protected area of the Natura 2000 network, with codes GR2420012 “Mount Ochi, coastal zone and islets” and GR2420001 “Mount Ochi, Karystos plain, River, Cape Kafireas and coastal marine zone.”

The choice of location does not adversely affect the environment and generally human activities, as well as areas protected for the natural environment. The proposed site for the Wind Power Station is far from settlements and inhabited areas (at distances greater than those specified by current legislation). The environmental impact assessment study has been developed considering national legislation, particularly Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). The approval process for the Environmental Impact Study (EIS) also followed all public consultation procedures according to European and national legislation.

**CLASSIFICATION OF THE PROJECT**

The entire project under consideration, according to national legislation for the classification of public and private projects and activities into categories and subcategories, is classified in Group 10, specifically in Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 areas or  $L \geq 20$  km, where P: installed capacity, L: length of the high voltage ( $\geq 150$  kV) transmission interconnection line].

**SIZE OF THE PROJECT**

The proposed project within this Environmental Impact Study (EIS) consists of the following:

- Operation of a wind farm, with a total installation of 5 wind turbines, with a total installed capacity of 16.5 MW and total electricity generation capacity amounting to 16.5 MW.
- Road interventions (new openings and improvements) totaling 25.9 km (for the entire project).
- The interconnection of the wind turbines with the substations will be made with an underground Medium Voltage Network of 20 kV or 33 kV with a total length of 47.4 km (24 km on existing roads and 23.5 km on new roads).

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL & URBAN PLANNING COMMITMENTS**

The project and its ancillary works meet the criteria as defined in the Special Framework for Spatial Planning and Sustainable Development for Renewable Energy Sources (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has obtained all necessary legal permits. For the EIS approval process, all procedures (project publicity and public consultation) will be followed to inform all stakeholders as stipulated in Article 4 of Law 4014/2011 (Government Gazette 209A/21.10.2011).

To reduce impacts on the natural environment of the area, the Forestry Service will examine and verify to ensure the complete restoration of the site after the construction works are completed and the removal of all construction materials.

The implementation of the project is not expected to affect the climatic and bioclimatic characteristics of both the immediate and broader areas. The project is not anticipated to cause impacts on the soil and morphology of the study area during its operational phase. After the construction phase is completed, the area will be restored to its original condition, considering the terrain's morphology.

The impacts on the landscape and aesthetic environment during the construction phase from the presence of construction sites and machinery could be characterized as minor and short-term impacts, which will largely become reversible after the construction phase is completed, provided that the construction sites are restored and appropriate landscaping measures are implemented, if required. Due to the appropriate distance, there is no possibility of visibility of the studied wind farm from designated settlements. These factors render the visual burden on the landscape from the project's installation weak. During the construction and operation phases of the project, no significant effects on the water resources of the area are expected, and the impact is characterized as negligible.

Regarding the impacts of the proposed project on the vegetation and flora of the project area, its operation is expected to have minor effects on the flora species in the study area, which mainly consists of "thermophilic vegetation," pastures, and woody vegetation.

The project's operation is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with the implementation of appropriate measures after the operational and restoration period of the site.

As for the effects of the proposed project on bird species, the wind farm is not expected to cause disturbance. Additionally, the type of installed wind turbines and their design comply with new technology, and their interconnection is underground to minimize negative impacts on the area's avifauna. Finally, a collision monitoring and prevention system has been installed on the wind turbines, in accordance with the ornithological study and observation.

Regarding the impacts of the proposed project on animal species, they are local and temporally limited, and it is expected that they will be restored after the operation of the park is concluded.

The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is worth noting that forest roads and the area adjacent to the Wind Farm will not be restricted by fencing, thus allowing the continued use of the area. The proposed project is not expected to have any direct impact on land uses in the study area, as the wind turbines are to be constructed on undeveloped areas, primarily consisting of pastures, outside settlements, and at a sufficient distance from their boundaries.

The installation sites of the studied wind farms and their accompanying works are located outside declared archaeological sites, and consequently, no impacts on the historical and cultural environment in the project construction area are expected.

The installation and operation of the studied wind farms are not expected to result in any negative impact on the social and economic environment of the area, nor to disrupt any existing human activities. On the contrary, it is expected that it will positively affect the economic and social environment of the area. Specifically, the project will contribute a total annual compensation benefit, which will be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe, as it involves taking all necessary measures to prevent access to points of installation that may pose risks (transformers, medium and high voltage fields and lines).

The park is expected to have a positive impact on the overall state of the atmospheric environment, as its operation will contribute to increasing electricity generation through renewable, environmentally friendly energy sources. The amount of electricity produced by the studied wind farms will positively contribute to the country's energy deficit, by developing energy production from renewable resources and covering part of the annual energy demand through the avoidance of burning fossil fuels that produce greenhouse gases. Specifically, the equivalent energy production (22.7 GWh annually) from fossil fuels (lignite) leads to atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located quite far from human activities, the levels of disturbance from generated noise are expected to be negligible.

### **Positive Economic Investment**

The Aidoni Wind Farm is an investment that exploits an inexhaustible natural resource without burdening the environment, as it is not a source of pollution and does not produce waste, while promoting the improvement of productivity and competitiveness of the national economy and serving as a means for national energy autonomy. It also increases the energy autonomy of the broader project area and contributes to reducing the country's energy deficit. It aids in fuel savings and avoids the use of other solid, liquid, or gaseous fuels that would otherwise be needed for producing an equivalent amount of electricity, which could also produce gaseous pollutants with negative impacts on the environment (greenhouse effect, ozone depletion, acid rain, etc.).

**Wind Farm at the Location of Dougza - Antias (10.8 MW) located in the  
Municipal Unit of Karystos, Euboea Prefecture.**

**NON-TECHNICAL STUDY**

**INTRODUCTION**

The project involves the installation of a Wind Farm, implemented by the company Energy Kafireas Euboea O.E., a subsidiary of Terna Energy S.A., located in the Municipality of Karystos, Euboea Prefecture, Central Greece Region, under the Decentralized Administration of Thessaly and Central Greece. The project involves the installation and operation of a wind farm with a total installed capacity of 10.8 MW, consisting of three (3) wind turbines with a nominal capacity of 3.6 MW, along with ancillary works.

The purpose of the proposed project is to utilize the high wind potential of the area for electricity production and subsequently sell the produced electricity to the Public Power Corporation (PPC), channeling it into the National Electricity Transmission System (NETS).

Part of the total project lies within the boundaries of a Protected Area of the Natura 2000 network, with codes GR2420012 "Mount Ochi, coastal zone and islets" and GR2420001 "Mount Ochi, Karystos plain, River, Cape Kafireas and coastal marine zone."

The chosen location does not affect the environment and generally human activities, as well as areas designated for the protection of the natural environment. The proposed installation site of the Wind Farm is far from settlements and populated areas (at distances greater than those specified by existing legislation). The environmental impact assessment study has been prepared considering national legislation, particularly Article 4 of Law 4014/2011 (Gov. Gazette 209A / 21.09.2011). The approval process for the Environmental Impact Study (EIS) also followed all public consultation procedures as prescribed by European and national legislation.

**CLASSIFICATION OF THE PROJECT**

The entire project under examination, according to national legislation for the classification of public and private projects and activities into categories and subcategories, is classified in Group 10, specifically in Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 areas or  $L \geq 20$  km, where P: installed capacity, L: length of high-voltage transmission line ( $\geq 150$  kV)].

**SIZE OF THE PROJECT**

The proposed project in this Environmental Impact Study (EIS) consists of the following:

- Operation of a wind farm, which involves the installation of a total of 3 wind turbines, with a total installed capacity of 10.8 MW and total electricity production capacity of 10.8 MW.

- Road construction interventions (new openings and improvements) totaling 25.9 km (for the entire project).
- The connection of the wind turbines to the substations will be done with an underground Medium Voltage Network of 20 kV or 33 kV, totaling 47.4 km (24 km on existing roads and 23.5 km on new roads).

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL AND URBAN PLANNING COMMITMENTS**

The project and its ancillary works meet the criteria, as defined in the Special Framework for Spatial Planning and Sustainable Development for RES (Gov. Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has received all necessary legal permits. For the approval process of the EIS, all procedures (project publicity and public consultation) will also be followed for informing all interested parties as stipulated in Article 4 of Law 4014/2011 (Gov. Gazette 209A / 21.10.2011).

In order to minimize impacts on the natural environment of the area, the Forestry Service will examine and ensure complete restoration of the surrounding environment after the completion of construction works, and the removal of all remaining construction materials.

No impacts on climatic and bioclimatic characteristics are expected from the implementation of the project, both in the immediate and broader area. The project is not expected to cause impacts on the soil and morphology of the study area during its operational phase. After the completion of the construction phase, the area will be restored to its original state, considering the landform.

Impacts on the landscape and aesthetic environment during the construction phase due to the presence of construction sites and machinery could be characterized as low-intensity and short-term impacts, largely reversible after the completion of the construction phase, provided that the construction areas are restored and appropriate vegetation arrangements are implemented, if necessary. Due to adequate distance, there is no visibility of the proposed wind farm from designated settlements. This renders the visual burden on the landscape from the project installation weak. No effects on the water resources of the area are expected during the construction and operation phases, and the impact is characterized as negligible.

Regarding the impacts of the project on the vegetation and flora of the project area, its operation is expected to have weak impacts on the plant species in the study area, which primarily consists of "thermophilous vegetation," pastures, and woody vegetation. The operation of the project is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with the implementation of appropriate measures after the end of the operational period and site restoration. As for the impacts of the project on bird species, the wind farm is not expected to cause

disturbance. Moreover, the type and design of the installed turbines comply with new technology, and their interconnection is done underground to minimize negative effects on the region's avifauna. Finally, a collision detection and prevention system has been installed on the wind turbines, in accordance with the ornithological study and observation.

Regarding the impacts of the project on animal species, they are local and temporally limited and are expected to recover after the wind farm's operation ends. The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is worth noting that forest roads and the area adjacent to the Wind Farm will not be fenced, allowing continued use of the area. The proposed project is not expected to have any direct impact on land uses in the study area, as the turbines will be constructed on undeveloped areas primarily consisting of pastures, outside settlement boundaries, and at a sufficient distance from the borders of settlements. The installation sites of the proposed wind farms and their ancillary works are located outside declared archaeological sites, and consequently, no impacts on the historical and cultural environment in the project area are expected.

The installation and operation of the proposed wind farms are not expected to have any negative impact on the social and economic environment of the area, nor to disrupt any existing human activities. On the contrary, it is expected to positively affect the economic and social environment of the area. Specifically, the project will contribute a total annual compensatory benefit to be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe, as all necessary measures are typically taken to prevent access to points of installation that may pose risks (transformers, fields, and medium and high voltage lines).

The park is expected to positively impact the general state of the atmospheric environment, as its operation will contribute to increasing electricity production through renewable, environmentally friendly energy sources. The amount of electricity produced by the proposed wind farms will positively contribute to the country's energy balance deficit, by developing energy production from renewable sources and covering part of the annual energy demand through avoiding the burning of fossil fuels that produce greenhouse gases. Specifically, the production of an equivalent energy (22.7 GWh annually) from fossil fuels (lignite) leads to atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located quite far from human activities, the levels of nuisance from the generated noise are expected to be negligible.

### **Positive Economic Investment**

The Dougza - Antias Wind Farm is an investment that exploits an inexhaustible natural resource without burdening the environment, as it does not produce pollution and waste while promoting the improvement of productivity and competitiveness of the national economy and serving as a means for national energy autonomy. It also increases the energy autonomy of the broader project area and contributes to reducing the country's energy deficit. It aids in saving fuels and avoiding the use of other solid, liquid, or

gaseous fuels that would otherwise be needed to produce an equivalent amount of electricity, which could also generate gaseous pollutants with negative environmental impacts (greenhouse effect, ozone depletion, acid rain, etc.).



## **Wind Farm at Vios – Kalamaki - Bathriza (21.6 MW)**

### **Non-Technical Study**

#### **INTRODUCTION**

The project involves the installation of a Wind Farm, implemented by the company "Energiaki Kafireos Evias O.E.," a subsidiary of Terna Energy S.A., located in the Municipality of Karystos, Evia Prefecture, in the Region of Central Sterea Hellas, and under the Decentralized Administration of Thessaly and Central Sterea Greece.

The project concerns the installation and operation of a wind farm with a total installed capacity of 21.6 MW, consisting of six (6) wind turbines with a nominal power of 3.6 MW each, along with the associated works. The aim of the proposed project is to utilize the high wind potential of the area for electricity generation and subsequently sell the produced electricity to the Public Power Corporation (PPC), channeling it into the National Electricity Transmission System (NETS).

Part of the project falls within the boundaries of a Protected Area of the Natura 2000 network, with codes GR2420012 "Mount Ochi, coastal zone, and islets" and GR2420001 "Mount Ochi, Karystos plain, Potami, Cape Kafireas, and coastal marine zone."

The chosen location does not affect the environment and generally human activities, as well as areas for the protection of the natural environment. The proposed installation site of the wind farm is far from populated areas (at distances greater than those specified by current legislation). The Environmental Impact Assessment (EIA) has been prepared taking into account national legislation, specifically Article 4 of Law 4014/2011 (Gov. Gazette 209A / 21.09.2011). The approval process for the EIA also followed all public consultation procedures according to European and national legislation.

#### **CLASSIFICATION OF THE PROJECT**

The entire project under examination, according to national legislation for the classification of public and private works and activities into categories and subcategories, is classified in Group 10, specifically in Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 areas or  $L \geq 20$  km, where P: installed power, L: length of high-voltage interconnection line ( $\geq 150$  kV)].

#### **SIZE OF THE PROJECT**

The proposed project in this Environmental Impact Study (EIS) consists of the following:

- Operation of a wind farm, which is expected to install a total of 6 wind turbines, with a total installed capacity of 21.6 MW and a total electrical production capacity of 21.6 MW.
- Control cabin (250 m<sup>2</sup>)

- Road construction interventions (new openings and improvements) totaling 25.9 km (for the entire project).
- The interconnection of the wind turbines with the substations will be made with an underground Medium Voltage Network of 20 kV or 33 kV with a total length of 47.4 km (24 km on existing roads and 23.5 km on new roads).

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL AND URBAN PLANNING COMMITMENTS**

The project and its accompanying works meet the criteria as defined in the Special Framework for Spatial Planning and Sustainable Development for Renewable Energy Sources (Gov. Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has obtained all the legal permits required. The approval process for the EIS will also follow all procedures (project disclosure and public consultation) for the information of all interested parties as provided in Article 4 of Law 4014/2011 (Gov. Gazette 209A/21.10.2011).

To mitigate the impacts on the natural environment of the area, the Forest Service will review and ensure the complete restoration of the environment after the construction work is completed, and the removal of all construction materials.

The implementation of the project is not expected to affect the climatic and bioclimatic characteristics of both the immediate and broader area. The project under study is not expected to cause impacts on the soil and the morphology of the study area during its operational phase. After the completion of the construction phase, the project area will be restored to its original state, considering the land morphology.

The impacts on the landscape and aesthetic environment during the construction phase due to the presence of construction sites and machinery could be characterized as low-intensity and short-term impacts that will largely become reversible after the construction phase, provided that the construction areas are restored and appropriate vegetation designs are implemented, if required. Due to the appropriate distance, there is no possibility of visibility of the proposed wind farm from designated settlements. These factors render the visual impact of the landscape from the project's installation mild. During the construction and operation phase, the project is not expected to affect the area's water resources, and the impact is characterized as negligible.

Regarding the impacts of the project on the vegetation and flora of the project area, its operation is expected to have mild impacts on the plant species of the study area, which largely consists of "thermophilic vegetation," pastures, and woody vegetation.

The operation of the project is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with appropriate measures taken after the operation and restoration period.

Concerning the impacts of the project on bird species, the wind farm is not expected to cause disturbance. Additionally, the type and design of the installed turbines comply

with the latest technology, and their interconnection is done underground to minimize negative impacts on the local avifauna. A collision detection and prevention system has also been installed on the wind turbines, according to the ornithological study and observation.

Regarding the impacts of the project on animal species, they are local and temporally limited and are expected to be restored after the wind farm's operational phase.

The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is worth noting that the forest roads and the area adjacent to the Wind Farm will not be restricted by fencing, allowing for continued use of the area. The proposed project is not expected to have any direct impact on land uses in the study area, as the wind turbines will be constructed on undeveloped lands primarily consisting of pastures, outside urban boundaries and at a sufficient distance from settlement boundaries.

The installation sites for the proposed wind farms and their associated works are located outside declared archaeological sites, and thus no impacts on the historical and cultural environment of the construction area are anticipated.

The installation and operation of the proposed wind farms are not expected to cause any negative impacts on the social and economic environment of the area, nor disrupt any existing human activities. On the contrary, it is expected to positively impact the economic and social environment of the area. Specifically, the project will contribute a total annual benefit, which will be distributed to the local community and the Municipality of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe, as it is standard practice to take all necessary measures that prevent access to installation points that may pose risks (transformers, fields, and medium- and high-voltage lines).

The park is expected to have a positive impact on the overall state of the atmospheric environment, as its operation will contribute to increasing electricity generation from renewable, environmentally friendly energy sources. The quantity of electricity produced from the proposed wind farms will positively contribute to the country's energy deficit, by developing energy production from renewable resources and covering part of the annual energy demand by avoiding the combustion of fossil fuels that produce greenhouse gases. Specifically, the production of equivalent energy (22.7 GWh annually) from fossil fuels (lignite) results in atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located far from human activities, noise pollution levels from the generated noise are expected to be negligible.

### **Positive Economic Investment**

The Vios – Kalamaki - Bathriza Wind Farm is an investment that exploits an inexhaustible natural resource without burdening the environment, as it is not a source

of pollution and does not produce waste, while promoting improvements in productivity and competitiveness of the national economy and supporting national energy autonomy. It also enhances the energy autonomy of the broader project area and contributes to reducing the country's energy deficit. It helps save fuels and avoids the use of other solid, liquid, or gaseous fuels that would otherwise be needed for the production of an equivalent amount of electricity, which could also produce gaseous pollutants with negative impacts on the environment (greenhouse effect, ozone depletion, acid rain, etc.)

## **Wind Farm Dexamenes II Location (15 MW) located in the Municipality of Karystos, Euboea Regional Unit**

### **NON-TECHNICAL STUDY**

#### **INTRODUCTION**

The project concerns the installation of a Wind Farm, implemented by the company TERNA Energeiaki Omalies MAE, a subsidiary of TERNA Energy S.A., located in the Municipality of Karystos, Euboea Regional Unit, Central Greece Region, under the Decentralized Administration of Thessaly and Central Greece.

The project involves the installation and operation of a wind farm with a total installed capacity of 15 MW, consisting of five (5) wind turbines with a nominal capacity of 3 MW each, along with its accompanying infrastructure.

The purpose of the proposed project is to utilize the high wind potential of the area to generate electricity and subsequently sell it to the Hellenic Public Power Corporation (PPC), channeling the generated electricity into the National Energy Transmission System (ESMHE).

A part of the project is spread within the boundaries of the Natura 2000 Protected Area network with codes GR2420012 “Ochi Mountain, coastal zone, and islets” and GR2420001 “Ochi Mountain, Karystos plain, Potami, Cape Kafireas, and coastal marine zone.”

The site selection does not affect the environment, human activities, or areas designated for the protection of the natural environment. The proposed installation site of the ASPIHE is located far from settlements and residential areas (at distances greater than those defined by current legislation). The Environmental Impact Assessment (EIA) has been prepared considering national legislation, specifically Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). The approval process of the EIA also followed all procedures for public consultation according to European and national legislation.

#### **PROJECT CLASSIFICATION**

The entire project under review, according to national legislation for the classification of public and private projects and activities into categories and subcategories, falls under Group 10, specifically Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 areas or  $L \geq 20$  km, where P: installed capacity, L: length of high-voltage transmission interconnection line ( $\geq 150$  kV)].

#### **PROJECT SIZE**

The project consists of the following:

- Operation of the wind farm, with the installation of a total of 5 WT, with a total installed capacity of 15 MW
- Road interventions totaling 39.4 km (for the entire project)

For the transmission of the generated electricity, the construction of:

1. Underground medium voltage network 20 or 33 kV on a road network approximately 70 km long, aerial medium voltage network 20 or 33 kV approximately 700 m long,
2. Underground alternating current high voltage network 150 kV on a road network approximately 11.6 km long,
3. Aerial alternating current high voltage network 150 kV approximately 1.75 km long,
4. Underground direct current high voltage network on the Euboea side approximately 1.5 km long.

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL & URBAN PLANNING OBLIGATIONS**

The project and its associated infrastructure meet the criteria specified in the Special Framework for Spatial Planning and Sustainable Development for RES (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

## **Environmental Impact Assessment**

The project has received all required legal permits. The approval process of the EIA will also follow all necessary procedures (project disclosure and public consultation) to inform all interested parties as provided in Article 4 of Law 4014/2011 (Government Gazette 209A / 21.10.2011).

To minimize impacts on the natural environment of the area, the Forestry Service will examine and ensure the full restoration of the surrounding environment after the completion of construction work, as well as the removal of all residual construction materials.

No impacts on the climatic and bioclimatic characteristics, either immediate or broader, are expected from the implementation of the project. The project under review is not expected to impact the soil and morphology of the study area during its operational phase. After the completion of the construction phase, the project area will be restored to its original state, respecting the natural land morphology.

## **Landscape and Aesthetic Environment**

Impacts during the construction phase from the presence of construction sites and machinery are anticipated to be mild and short-term, mostly reversible upon the completion of construction and the restoration of sites, including suitable landscaping where needed. Given the project's distance from populated areas, there is minimal visibility from recognized settlements. These factors make the visual impact on the landscape from the project installation minor. Neither the construction nor the operation of the project is expected to affect the region's water resources, with the impact considered negligible.

## **Flora and Fauna Impacts**

For flora, the wind farm is expected to have minor impacts on local vegetation, primarily Mediterranean scrubland, pasture, and woody vegetation. The impact is anticipated to be negligible and reversible with appropriate measures following the end of the operational period and the restoration of the site.

Regarding avifauna, the wind farm is not expected to cause disturbance to local bird species. The type of installed wind turbines and their design comply with modern technology, and their connections are underground to minimize adverse effects on local bird populations. Additionally, a collision prevention and monitoring system has been installed as per ornithological studies.

For other wildlife, any impacts are anticipated to be localized, short-term, and reversible after the park's operational period.

### **Land Use Compatibility**

The project will not significantly impact existing land uses, which are primarily pastoral. Note that forest roads and areas adjacent to the wind farm will remain accessible without fencing, allowing for continued use of the land. The wind turbines will be constructed on undeveloped lands mainly classified as pasture and located outside settlement boundaries and at a safe distance.

### **Cultural Heritage**

The installation sites for the wind farms and their associated infrastructure are outside designated archaeological areas, so no impact on historical or cultural heritage is anticipated.

### **Socioeconomic Impact**

The construction and operation of the wind farm are not expected to negatively affect the region's social and economic environment or disrupt existing human activities. On the contrary, it is anticipated to have a positive impact. The project will contribute an annual compensatory benefit distributed to the local community and the Municipal Unit of Karystos.

### **Public Health and Safety**

Regarding human health, wind farms are considered very safe since they adhere to standard safety measures preventing access to areas where high voltage transformers, fields, and conductors could pose risks.

### **Positive Environmental and Economic Investment**

The Dexamenes II Wind Farm is an investment that harnesses an inexhaustible natural resource without environmental degradation. It does not generate waste or pollution and promotes national economic productivity and competitiveness, aiding national energy autonomy. It also increases regional energy independence and contributes to reducing the country's energy deficit by avoiding the need for other energy sources that would generate harmful emissions, including greenhouse gases, ozone depletion, and acid rain.

**Wind Farm Kalamaki II Site (18 MW) Located in the Municipal Unit of  
Karystos, Euboea Region.  
NON-TECHNICAL STUDY**

## **INTRODUCTION**

The project involves the installation of a Wind Farm, implemented by the company TERNA Energy Omilies M.A.E., a subsidiary of TERNA Energy S.A., located in the Municipality of Karystos, Euboea Region, Central Greece, under the Decentralized Administration of Thessaly and Central Greece.

The project includes the installation and operation of a wind farm with a total installed capacity of 18 MW, consisting of six (6) wind turbines with a nominal capacity of 3 MW each, along with the accompanying works.

The purpose of the proposed project is to utilize the high wind potential of the area for electricity generation and subsequently sell the generated electricity to the Public Power Corporation (PPC), channeling it into the National Electricity Transmission System (N.E.T.S.).

Part of the project is developed scattered within the limits of the Protected Area of the Natura 2000 network, with codes GR2420012 “Mount Ochi, coastal zone and islets” and GR2420001 “Mount Ochi, Karystos plain, Potami, Cape Kafireas, and coastal marine zone.”

The choice of location does not affect the environment or generally anthropogenic activities, as well as areas designated for the protection of the natural environment. The proposed site for the Wind Farm is far from settlements and inhabited areas (at distances greater than those specified by current legislation). The environmental impact assessment study has been prepared in accordance with national legislation, particularly Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). The approval process for the environmental impact assessment also followed all public consultation procedures in accordance with European and national legislation.

## **CLASSIFICATION OF THE PROJECT**

The entirety of the project under consideration, according to national legislation for the classification of public and private projects and activities into categories and subcategories, falls under Group 10, specifically under Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 areas or  $L \geq 20$  km, where P: installed capacity, L: length of high voltage ( $\geq 150$  kV) transmission line].

## **SCALE OF THE PROJECT**

The project consists of the following:

- Operation of a wind farm, with a total installation of 6 wind turbines and an installed capacity of 18 MW.
- Roadworks totaling 39.4 km (for the entire project).



To transport the generated electricity, the construction of the following is planned:

1. An underground medium voltage network of 20 or 33 kV over approximately 70 km of road, an overhead medium voltage network of 20 or 33 kV over approximately 700 m.
2. An underground high voltage alternating current network of 150 kV over approximately 11.6 km of road.
3. An overhead high voltage alternating current network of 150 kV over approximately 1.75 km.
4. An underground high voltage direct current network along the Euboea side over approximately 1.5 km.

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL & URBAN PLANNING COMMITMENTS**

The project and its accompanying works meet the criteria as defined in the Special Framework for Spatial Planning and Sustainable Development for Renewable Energy Sources (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has obtained all necessary legal permits. For the approval process of the environmental impact assessment, all procedures (project publicity and public consultation) will be followed to inform all stakeholders as provided in Article 4 of Law 4014/2011 (Government Gazette 209A/21.10.2011).

To minimize the impacts on the natural environment of the area, the Forest Service will examine and verify that complete restoration of the environment is ensured after the construction works are completed, and all remaining construction materials are removed.

The implementation of the project is not expected to affect the climatic and bioclimatic characteristics of both the immediate and wider area. The project under study is not expected to cause impacts on the soil and morphology of the study area during its operational phase. After the completion of the construction phase, the project area will be restored to its original condition, considering the morphology of the land. The impacts on the landscape and aesthetic environment during the construction phase of the project from the presence of construction sites and machinery can be characterized as low-intensity and short-term impacts that will largely become reversible after the completion of the construction phase, provided that the construction areas are restored and appropriate landscaping is implemented if required. Due to the appropriate distance, there is no possibility of viewing the proposed wind farm from any designated settlement. This renders the visual burden on the landscape from the installation of the project weak. In the construction and operation phase of the project, it is not expected that the water resources of the area will be affected, and the impact is considered negligible.

Regarding the impacts of the project on the vegetation and flora of the area where the works are located, the operation of the project is expected to have mild impacts on the plant species of the study area, which mostly consists of “thermosclerophyll vegetation,” pastures, and woody vegetation. The operation of the project is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with the implementation of appropriate measures after the end of the operational period and the restoration of the site.

Regarding the impacts of the project on bird species, the wind farm is not expected to cause disturbance. Furthermore, the type of installed wind turbines and their design comply with the latest technology, while their interconnection is done underground to minimize negative impacts on the avifauna of the area. Finally, a system for recording and preventing collisions with wind turbines has been installed according to the ornithological study and observation.

Regarding the impacts of the project on wildlife species, they are of a local character and temporally limited and are expected to be restored after the operation of the park has ended.

The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is worth noting that the forest roads and the area adjacent to the Wind Farm will not be restricted by a fence, thus allowing continued use of the area. The proposed project is not expected to have any direct impact on land uses in the study area, as the wind turbines are to be constructed on undeveloped lands primarily characterized as pastures, outside designated areas, and at a sufficient distance from the boundaries of settlements.

The sites for the installation of the proposed wind farms and their accompanying works are located outside declared archaeological sites; therefore, no impacts are expected on the historical and cultural environment of the project construction area. The installation and operation of the proposed wind farms are not expected to have any negative impact on the social and economic environment of the area, nor to disrupt any existing anthropogenic activities. On the contrary, it is expected to positively influence the economic and social environment of the area. Specifically, the project will contribute a total annual compensatory benefit that will be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe because, according to common practice, all necessary measures are taken to prevent access to installation points that may pose risks (transformers, fields, and medium and high voltage lines).

The park is expected to have a positive impact on the overall atmospheric environment, as its operation will contribute to increasing electricity production from renewable, environmentally friendly energy sources. The quantity of electricity generated by the

proposed wind farms will positively contribute to the country's energy deficit, promoting energy production from renewable sources and covering part of the annual energy demand by avoiding the burning of fossil fuels that produce greenhouse gases. Specifically, the production of an equivalent energy (22.7 GWh annually) from fossil fuels (lignite) leads to atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located far from anthropogenic activities, the noise pollution levels generated are expected to be negligible.

### **Positive Economic Investment**

The Kalamaki II Wind Farm is an investment that exploits an inexhaustible natural resource without burdening the environment, as it is not a source of pollution and does not produce waste while promoting the improvement of productivity and competitiveness of the national economy and serves as a means for national energy autonomy. It also increases the energy autonomy of the broader project area and contributes to reducing the energy deficit of the country. It helps save fuels and avoids the use of other solid, liquid, or gaseous fuels that would otherwise be needed for the production of an equivalent amount of electricity that could also produce gaseous pollutants with negative impacts on the environment (greenhouse effect, ozone depletion, acid rain, etc.).

**Wind Farm Kalamaki (6 MW) located in the Municipal Unit of Karystos, Evia  
Regional Unit.  
NON-TECHNICAL STUDY**

## **INTRODUCTION**

The project involves the installation of a Wind Farm, implemented by the company TERNA Energiaki Omalies S.A., a subsidiary of TERNA Energy S.A., located in the Municipality of Karystos, Evia Regional Unit, Central Greece Region, under the Decentralized Administration of Thessaly and Central Greece. The project concerns the installation and operation of a wind farm with a total installed capacity of 6 MW, consisting of two (2) wind turbines with a nominal power of 3 MW each, along with auxiliary facilities.

The aim of the proposed project is to harness the high wind potential of the area to produce electricity, which will then be sold to the Public Power Corporation (DEI), channeling it into the National Power Transmission System (EHTS). Part of the project is developed within the boundaries of the Natura 2000 Protected Area network with codes GR2420012 "Ochi Mountain, coastal zone and islands" and GR2420001 "Ochi Mountain, Karystos plain, Potami, Cape Kafireas, and coastal marine zone."

The selected location does not impact the environment, human activities, or protected natural areas. The proposed installation site of the Wind Energy Production Station (WEPS) is distant from settlements and residential areas (at distances greater than those stipulated by current legislation). The Environmental Impact Assessment (EIA) study has been prepared in accordance with national legislation, specifically Article 4 of Law 4014/2011 (Official Gazette 209A / 21.09.2011). The EIA approval process has followed all public consultation procedures according to European and national law.

## **PROJECT CLASSIFICATION**

According to national law on the classification of public and private projects and activities, the project falls under Group 10, specifically Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 areas or  $L \geq 20$  km, where P: installed power, L: length of high voltage interconnection line ( $\geq 150$  kV)].

## **PROJECT SIZE**

The project consists of the following components:

- Wind farm operation with a total of 2 wind turbines (WTs), totaling an installed capacity of 6 MW
- Road interventions totaling 39.4 km for the entire project
- For the transmission of the generated electricity, the following are planned:
  1. Underground medium voltage network of 20 or 33 kV along roads for approximately 70 km, and an overhead medium voltage network of 20 or 33 kV for approximately 700 m.
  2. Underground high voltage alternating current network of 150 kV along roads for approximately 11.6 km.

3. Overhead high voltage alternating current network of 150 kV for approximately 1.75 km.
4. Underground direct current high voltage network along roads in the Evia area for approximately 1.5 km.

## **COMPATIBILITY WITH LAND USE & URBAN PLANNING REQUIREMENTS**

The project and its associated works comply with the criteria as outlined in the Special Spatial Planning and Sustainable Development Framework for Renewable Energy Sources (Official Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has obtained all necessary legal permits. For the EIA approval process, all procedures (public disclosure of the project and public consultation) were followed as required by Article 4 of Law 4014/2011 (Official Gazette 209A/21.10.2011). To reduce impacts on the local natural environment, the Forestry Service will examine and ensure the full restoration of the surrounding environment post-construction and the removal of all construction materials.

The project is not expected to affect the climatic and bioclimatic characteristics of the immediate and wider area. The project is not expected to impact the soil and the morphology of the study area during its operation phase. After completing the construction phase, the project area will be restored to its original state with attention to the soil's morphology.

Visual impacts during the construction phase, such as from construction sites and equipment, are expected to be of minor intensity, temporary, and largely reversible upon completion of construction, with the condition that construction areas are restored and appropriate landscaping is carried out if necessary. The visual impact on the landscape from the project installation is minimal due to sufficient distance, and there is no line-of-sight from designated settlements.

The water resources of the area are not expected to be affected during construction and operation, with the impact considered negligible.

Regarding impacts on vegetation and flora, the project's operation is expected to have minimal effects on the region's flora, predominantly consisting of sclerophyllous vegetation, pastures, and woody vegetation. Any negative impacts on vegetation and flora are expected to be negligible and reversible with appropriate measures post-operation and area restoration.

## **SOCIO-ECONOMIC AND ENVIRONMENTAL BENEFITS**

The installation and operation of the wind farm are not expected to have a negative impact on the social and economic environment of the area or disrupt existing human activities. On the contrary, it is expected to have a positive effect on the area's economic and social environment, with an annual benefit to be distributed to the local community and the Municipality of Karystos.

The wind farm will positively impact the atmospheric environment by contributing to increased electricity generation from renewable, environmentally friendly energy sources. The electricity generated by the wind farms (22.7 GWh annually) will contribute to the national energy deficit by avoiding greenhouse gas emissions associated with fossil fuels like lignite, which would otherwise emit 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, and 18.2 t PM.

Noise levels are expected to be negligible, as the wind farm is located far from human activities.

### **Positive Economic Investment**

The Kalamaki Wind Farm is an investment that utilizes an inexhaustible natural resource without environmental impact, as it is pollution-free and produces no waste. It promotes productivity and competitiveness of the national economy and supports national energy autonomy. It also contributes to fuel savings, avoiding the need for other solid, liquid, or gaseous fuels that would otherwise produce emissions harmful to the environment, such as greenhouse gases, ozone depletion, and acid rain.

# **Wind Farm in the Location Korakovrachos II (6 MW) Located in the Municipality of Karystos, Euboea Regional Unit Non-Technical Study**

## **Introduction**

The project involves the installation of a wind farm, developed by TERNA Energy Omaliés MAE, a subsidiary of TERNA Energy S.A., in the Municipality of Karystos, Euboea Regional Unit, Central Greece Region, under the Decentralized Administration of Thessaly and Central Greece. The project concerns the installation and operation of a wind farm with a total installed capacity of 6 MW, consisting of two (2) wind turbines with a nominal capacity of 3 MW each, along with ancillary works.

The purpose of the proposed project is to harness the high wind potential of the area to produce electrical energy, which will then be sold to PPC (Public Power Corporation), delivering it to the National Electricity Transmission System (NETS). Part of the project is dispersed within the boundaries of the Natura 2000 Protected Area, codes GR2420012 “Mount Ochi, coastal zone, and islets” and GR2420001 “Mount Ochi, Karystos plain, Potami, Cape Cavo D’Oro, and coastal marine zone.”

The project location selection does not impact the environment or generally human activities and protected areas of the natural environment. The proposed installation site of the Wind Power Station (WPS) is located far from settlements and residential areas (distances greater than those set by current legislation). The environmental impact assessment (EIA) has been conducted considering national legislation, particularly Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). The EIA approval process has also followed all public consultation procedures according to European and national legislation.

## **Project Classification**

The project under consideration is classified according to national legislation for the classification of public and private projects and activities into categories and subcategories, under the 10th Group and specifically under Subcategory A1 [for  $P > 45$  or  $P > 35$  within Natura 2000 network areas or  $L \geq 20$  km, where P: installed power, L: length of the high-voltage transmission line ( $\geq 150$  kV)].

## **Project Scale**

The project consists of:

- Operation of a wind farm, including the installation of 2 wind turbines with a total installed capacity of 6 MW
- Roadwork interventions with a total length of 39.4 km (for the entire project)
- For the transmission of the generated electricity, the construction is proposed as follows:
  1. Underground medium-voltage network of 20 or 33 kV along roadways, approximately 70 km in length, and an overhead medium-voltage network of 20 or 33 kV, approximately 700 m in length

2. Underground high-voltage alternating current network of 150 kV along roadways, approximately 11.6 km in length
3. Overhead high-voltage alternating current network of 150 kV, approximately 1.75 km in length
4. Underground direct current high-voltage network on the Euboea side, approximately 1.5 km in length

### **Compatibility with Institutionalized Spatial & Urban Planning Constraints**

The project and its ancillary works meet the criteria defined in the Special Spatial Planning and Sustainable Development Framework for RES (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has obtained all the required legal permits. For the approval process of the EIA, all procedures (project disclosure and public consultation) will follow for the notification of all stakeholders as stipulated in Article 4 of Law 4014/2011 (Government Gazette 209A/21.10.2011). To minimize environmental impacts, the Forest Service will review and ensure full environmental restoration of the area after construction, removing all remaining construction materials.

The project is not expected to affect the climatic and bioclimatic characteristics of the immediate or surrounding area. The project will not impact the soil or the morphology of the study area during operation. Upon completion of the construction phase, the project area will be restored to its original condition, respecting the soil's morphology.

The visual and aesthetic impacts during the construction phase due to the presence of work sites and machinery are expected to be of low intensity and short-term, largely reversible upon the completion of construction, with the restoration of worksite areas and the implementation of appropriate landscaping measures, if required. Due to suitable distance, the wind farm will not be visible from designated settlements, rendering the visual impact on the landscape minimal. During the construction and operation phases, the area's water resources are not expected to be affected, with the impact considered negligible.

Regarding the project's impact on vegetation and flora in the project area, its operation is expected to have minimal effects on the flora species in the area, which mostly consists of 'thermophilic vegetation,' grazing land, and woody vegetation. The operation is expected to have negligible negative effects on the area's vegetation and flora, reversible with appropriate measures after the operational period and site restoration.

Regarding the project's impact on bird species, the wind farm is not expected to cause disturbance. The installed wind turbines and their design comply with new technology standards, and their interconnection is underground to minimize negative effects on the area's avifauna. Additionally, a collision recording and deterrence system has been installed on wind turbines, per ornithological study and observation.



The project's impact on fauna is local and temporary and is expected to be restored after the wind farm's operational phase. The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is noteworthy that forest roads and areas adjacent to the wind farm will not be fenced, allowing access to the area.

The installation sites of the wind farms and their ancillary works under study are outside designated archaeological sites, and therefore, no impacts on the historical-cultural environment are expected in the project construction area.

The installation and operation of the wind farms under study are not expected to have a negative impact on the region's social and economic environment, nor will they disrupt any existing human activities. Instead, it is expected to positively impact the region's economic and social environment. Specifically, the project will provide an annual benefit that will be distributed to the local community and the Karystos Municipal Unit.

Regarding human health, it should be noted that wind farm operation is extremely safe, as all necessary measures will be taken to prevent access to installation points that may pose risks (transformers, fields, and medium- and high-voltage lines).

The wind farm is expected to have a positive impact on the atmospheric environment, contributing to increased electricity generation from renewable, environmentally friendly energy sources. The electricity generated by the wind farms will positively contribute to the country's energy deficit, supporting renewable energy production and meeting part of the annual energy demand while avoiding the burning of fossil fuels that produce greenhouse gases. Specifically, equivalent energy production (22.7 GWh annually) from fossil fuels (lignite) would lead to atmospheric emissions of: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

### **Positive Economic Investment**

The Korakovrachos II Wind Farm is an investment that utilizes an inexhaustible natural resource without environmental burden, as it does not pollute or produce waste while enhancing the productivity and competitiveness of the national economy and supporting national energy autonomy. It also increases energy independence for the wider project area and helps reduce the country's energy deficit. It contributes to fuel conservation and the avoidance of other solid, liquid, or gaseous fuels that would otherwise be needed to produce an equivalent amount of electricity, which could also emit gaseous pollutants with negative environmental impacts (greenhouse effect, ozone depletion, acid rain, etc.).

## **Non-Technical Study for the Korakovrachos Wind Park (21 MW)**

### **INTRODUCTION**

The project concerns the installation of a Wind Park, led by the implementing company TERNA Energy Omales S.A., a subsidiary of TERNA Energy S.A., located in the Municipality of Karystos, Regional Unit of Evia, Central Greece Region, under the jurisdiction of the Decentralized Administration of Thessaly and Central Greece. This project entails the installation and operation of a wind park with a total installed capacity of 21 MW, composed of seven (7) wind turbines, each with a nominal power of 3 MW, along with associated facilities.

The purpose of the proposed project is to utilize the high wind potential of the area for electricity generation, with the generated power sold to the Public Power Corporation (DEI) and supplied to the National Transmission System (ESMHE). Part of the project is located within the Natura 2000 Protected Area with codes GR2420012 "Mount Ochi, coastal zone, and islets" and GR2420001 "Mount Ochi, Karystos plain, Potami, Cape Cavo Doro, and coastal marine zone."

The chosen site avoids impacting the environment, human activities, and protected natural areas. The proposed location for the Wind Park is situated far from residential zones and settlements, adhering to legal distancing requirements. The environmental impact assessment (EIA) complies with national legislation, specifically Article 4 of Law 4014/2011 (FEK 209A / 21.09.2011). The EIA approval process also adhered to public consultation protocols in line with both European and national legislation.

### **PROJECT CLASSIFICATION**

According to national legislation for the classification of public and private projects and activities into categories and subcategories, this project falls under the 10th Group, specifically Subcategory A1 [for  $P > 45$  or  $P > 35$  within Natura 2000 areas, or  $L \geq 20$  km, where  $P$  is installed power and  $L$  is the length of the high-voltage ( $\geq 150$  kV) transmission line].

### **PROJECT SIZE**

The project comprises:

- Operation of the wind park, which includes the installation of a total of 7 turbines with a combined installed capacity of 21 MW.
- Road interventions totaling 39.4 km (for the entire project).

To facilitate the transfer of the generated electricity, the following will be constructed:

1. Underground medium-voltage network of 20 or 33 kV along 70 km of roads, an overhead medium-voltage network of approximately 700 m,
2. Underground high-voltage AC network of 150 kV along approximately 11.6 km of roads,
3. Overhead high-voltage AC network of 150 kV approximately 1.75 km long,
4. Underground high-voltage DC network on the Evia side, approximately 1.5 km long.

## **PROJECT COMPATIBILITY WITH ESTABLISHED SPATIAL & URBAN PLANNING REQUIREMENTS**

The project and its associated facilities comply with the criteria set forth in the Special Spatial Planning Framework for Renewable Energy Sources (RES) (FEK 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has obtained all necessary permits. The EIA approval process will include public notification and consultation to inform all stakeholders, as stipulated by Article 4 of Law 4014/2011 (FEK 209A/21.10.2011). To mitigate environmental impacts, the Forestry Service will oversee and ensure the full restoration of the area following construction, including the removal of construction materials.

No adverse impacts on the area's climatic and bioclimatic characteristics are expected from the project's implementation. The project is unlikely to affect the soil or morphology of the area during the operational phase. Upon construction completion, the area will be restored to its original condition, preserving the natural morphology.

Visual and aesthetic impacts during the construction phase due to the presence of machinery and work sites are expected to be low-intensity, short-term, and largely reversible, contingent on site restoration and potential landscape enhancements. Due to sufficient distance, the wind park will not be visible from any designated settlements, making the visual impact on the landscape minimal.

### **Ecosystem and Fauna Impacts**

The project's impact on the local vegetation and flora, primarily composed of thermophilous scrub, pasturelands, and woody vegetation, is expected to be minor. With appropriate post-operation restoration measures, any negative impacts on local flora will be reversible.

For avian species, the wind park is not anticipated to cause significant disturbance. The turbines, equipped with modern technology, and the underground connection systems are designed to minimize adverse effects on the local bird population. Additionally, a collision prevention system has been installed per the ornithological study.

Impacts on local wildlife are expected to be minor, temporary, and will be resolved upon the project's conclusion. The project will have minimal effects on existing land uses, allowing continued access due to the lack of fencing around the site.

The installation sites for the wind parks and associated facilities are outside declared archaeological areas, so no impacts on historical or cultural heritage are anticipated.

## **SOCIAL AND ECONOMIC IMPACT**

The project is not expected to negatively impact the social and economic environment of the area. Instead, it is anticipated to positively influence the local economy. Specifically, it will contribute an annual financial benefit to the local community and the Municipality of Karystos.

Regarding public health, wind park operations are highly safe, as all necessary precautions are taken to prevent access to potentially hazardous areas (transformers, medium and high-voltage fields, and conduits).

### **Positive Economic Investment**

The Korakovrachos Wind Park represents an investment that leverages an inexhaustible natural resource without environmental degradation, as it produces no pollution or waste. It enhances the national economy's productivity and competitiveness and contributes to national energy autonomy. It also increases the region's energy independence and helps address the country's energy deficit.

The park will positively impact the atmospheric environment by increasing electricity production from renewable, eco-friendly energy sources. The annual energy production (22.7 GWh) from the wind park will contribute to reducing the need for fossil fuels, leading to substantial greenhouse gas reductions. Specifically, the production equivalent from fossil fuels (lignite) would result in the following emissions: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, and 18.2 t PM.

The project's distance from human activities makes noise impacts negligible.

## **Wind Farm at Tsouka-Mandragiara (21.6 MW)**

**Location:** D.E. Karystou, P.E. Euboea

### **NON-TECHNICAL STUDY**

#### **INTRODUCTION:**

The project involves the installation of a wind farm, implemented by the company Energeiaki Kafireos Euboea S.A., a subsidiary of Terna Energy S.A., located in the Municipality of Karystos, P.E. Euboea, Region of Central Sterea Hellas, under the Decentralized Administration of Thessaly and Central Sterea Greece. The project entails the installation and operation of a wind farm with a total installed capacity of 21.6 MW, consisting of six (6) wind turbines with a nominal power of 3.6 MW, along with ancillary works. The purpose of the proposed project is to utilize the high wind potential of the area for electricity production and subsequently sell the generated electricity to DEI, feeding it into the National Electricity Transmission System (ESMIE).

Part of the project falls within the boundaries of a Protected Area of the Natura 2000 network with codes GR2420012 "Mount Ochi, coastal zone and islets" and GR2420001 "Mount Ochi, Karystos plain, river, Cape Kafireas and coastal marine zone." The choice of location does not affect the environment and generally anthropogenic activities as well as areas designated for the protection of the natural environment. The proposed installation site of the wind farm is far from settlements and inhabited areas (at distances greater than those stipulated by the applicable legislation). The Environmental Impact Assessment (EIA) has been prepared taking into account national legislation, particularly Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). For the approval process of the EIA, all public consultation procedures have also been followed in accordance with European and national legislation.

#### **CLASSIFICATION OF THE PROJECT:**

The entire project under examination is classified according to national legislation for the classification of public and private projects and activities into categories and subcategories as part of Group 10, specifically in Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 areas or  $L \geq 20$  km, where P: installed capacity, L: length of the high-voltage transmission line ( $\geq 150$  kV)].

**SIZE OF THE PROJECT:** The proposed project consists of:

- Operation of the wind farm, with a total installation of 6 turbines, with a total installed power of 21.6 MW and a total electrical output capacity of 21.6 MW.
- Control building (250 m<sup>2</sup>).
- Road interventions (new openings and improvements) totaling 25.9 km (for the entire project).
- The connection of the turbines to the substations will be made with an underground Medium Voltage Network of 20 kV or 33 kV totaling 47.4 km (24 km on existing roads and 23.5 km on new roads).

## **COMPATIBILITY OF THE PROJECT WITH LEGISLATED SPATIAL & URBAN PLANNING RESTRICTIONS:**

The project and its ancillary works meet the criteria as specified in the Special Spatial Planning Framework and Sustainable Development for RES (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

## **ENVIRONMENTAL IMPACT ASSESSMENT:**

The project has obtained all necessary legal permits. The approval process for the EIA will also follow all procedures (project publication and public consultation) for informing all interested parties as provided in Article 4 of Law 4014/2011 (Government Gazette 209A/21.10.2011). To minimize impacts on the natural environment of the area, the Forestry Service will examine and ensure full restoration of the environment after the construction works, and the removal of all remaining construction materials.

No impacts on climatic and bioclimatic characteristics of both the immediate and wider area are expected from the project. The project is not expected to cause any impacts on the soil and morphology of the study area during its operation. After the construction phase is completed, the project area will be restored to its original condition with regard to the morphology of the land.

The impacts on the landscape and aesthetic environment during the construction phase of the project from the presence of construction sites and machinery could be characterized as low-intensity and short-term, becoming largely reversible after the completion of the construction phase, provided that the construction sites are restored and appropriate landscaping is implemented if required. Due to the suitable distance, there is no visibility of the project from any designated settlement. This renders the visual impact of the project on the landscape mild. During the construction and operation phases of the project, no impacts on the water resources of the area are expected, and the effect is considered negligible.

Regarding the impacts of the proposed project on the vegetation and flora of the project site, operation is expected to have minor effects on the plant species of the study area, which mainly consists of "thermosclerophyllous vegetation," pastures, and woody vegetation. The operation of the project is expected to have negligible negative effects on the vegetation and flora of the area, reversible with appropriate measures taken after the operational and restoration period.

Concerning the impacts of the proposed project on bird species, the wind farm is not expected to cause disturbance. Additionally, the type of installed turbines and their design are in line with new technology, and their connections are underground to minimize negative effects on the local bird population. A collision prevention and monitoring system has been installed on the turbines in accordance with the ornithological study and observations.

Regarding the impacts of the proposed project on wildlife, these are expected to be local in nature and temporally limited, and are expected to be restored after the operation of the park is completed.

The project is not anticipated to have significant impacts on existing land uses, which are of minor importance. It is worth noting that forest roads and the area adjacent to the wind farm will not be restricted by a fence, allowing continued use of the area. The proposed project is not expected to have any direct impact on land uses in the study area, as the turbines are to be constructed on undeveloped land primarily used as pastures, outside the boundaries of settlements and at a sufficient distance from them.

The installation sites of the proposed wind farms and their ancillary works are located outside declared archaeological sites, and therefore no impacts on the historical and cultural environment in the project area are expected.

The installation and operation of the proposed wind farms are not expected to cause any negative impacts on the social and economic environment of the area, nor disrupt any existing human activities. On the contrary, it is expected to positively affect the economic and social environment of the area. Specifically, the project will contribute a total annual compensatory benefit, which will be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe, as all necessary measures are typically taken to prevent access to installation points that may pose risks (transformers, fields, and medium and high voltage lines).

The park is expected to have a positive effect on the overall state of the atmospheric environment, as its operation will contribute to the increase of electricity production through renewable, environmentally friendly energy sources. The amount of electricity produced by the proposed wind farms will positively contribute to the country's energy balance, with the development of energy production from renewable resources and the coverage of part of the annual energy demand by avoiding the burning of fossil fuels that produce greenhouse gases. Specifically, the production equivalent of 22.7 GWh annually from fossil fuels (lignite) results in the following atmospheric emissions: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located sufficiently far from human activities, the levels of nuisance from generated noise are expected to be negligible.

### **Positive Economic Investment:**

The Tsouka-Mandragiara wind farm is an investment that utilizes an inexhaustible natural resource without burdening the environment, as it does not produce pollution or waste, while promoting the improvement of productivity and competitiveness of the national economy and serving as an aid for national energy autonomy. It also increases the energy autonomy of the wider area of the project and contributes to the reduction of the country's energy deficit. It helps conserve fuels and avoids the use of other solid, liquid, or gaseous fuels that would otherwise be needed to produce an equivalent amount of electricity, which could also produce gaseous pollutants with negative environmental impacts (greenhouse effect, ozone depletion, acid rain, etc.).

**Wind Farm at the Location of Miliá (18 MW) Located in the Municipal Unit of Karystos,  
Euboea Prefecture.**

**NON-TECHNICAL STUDY**

**INTRODUCTION**

The project involves the installation of a Wind Farm, implemented by the company Energy Kafireos Euboeas O.E., a subsidiary of TERNA Energy S.A., located in the Municipality of Karystos, Euboea Prefecture, Central Sterea Greece Region, under the Decentralized Administration of Thessaly and Central Sterea Greece.

The project pertains to the installation and operation of a wind farm with a total installed capacity of 18 MW, consisting of five (5) wind turbines with a nominal capacity of 3.6 MW, along with the accompanying infrastructure.

The purpose of the proposed project is to exploit the high wind potential of the area for the production of electrical energy, which will subsequently be sold to the Public Power Corporation (PPC), channeling it into the National Electricity Transmission System (NETS).

Part of the project lies within the boundaries of a Protected Area of the Natura 2000 network, with codes GR2420012 "Mount Ochi, coastal zone and islets" and GR2420001 "Mount Ochi, Karystos plain, River, Cape Kafireas, and coastal marine zone."

The chosen location does not affect the environment and generally human activities, as well as areas protecting the natural environment. The proposed installation site of the Wind Farm is located far from settlements and inhabited areas (at distances greater than those stipulated by current legislation). The environmental impact assessment study has been prepared considering national legislation, specifically Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). The entire public consultation process, as required by European and national legislation, has also been followed for the approval process of the Environmental Impact Study (EIS).

**CLASSIFICATION OF THE PROJECT**

The entire project under examination, according to national legislation for the classification of public and private works and activities into categories and subcategories, is classified in Group 10, specifically in Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 areas or  $L \geq 20$  km, where P: installed capacity, L: length of the high-voltage ( $\geq 150$  kV) interconnection line].

**SIZE OF THE PROJECT**

The proposed project as detailed in this Environmental Impact Study (EIS) consists of:

- Operation of the wind farm, which includes the installation of a total of 5 wind turbines, with a total installed capacity of 18 MW and total electric production output amounting to 18 MW.



- Road construction interventions (new openings and improvements) with a total length of 25.9 km (for the entire project).
- The interconnection of the wind turbines with the substations will be done using an underground Medium Voltage network of 20 kV or 33 kV with a total length of 47.4 km (24 km along existing roadways and 23.5 km along new roadways).

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL & URBAN PLANNING RESTRICTIONS**

The project and its accompanying works meet the criteria as determined in the Special Framework for Spatial Planning and Sustainable Development for Renewable Energy Sources (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has obtained all the necessary legal permits. The approval process for the EIS will also follow the complete procedures (project publicity and public consultation) to inform all interested parties as stipulated in Article 4 of Law 4014/2011 (Government Gazette 209A / 21.10.2011).

To minimize impacts on the natural environment of the area, the Forestry Service will examine and ensure the full restoration of the site after the construction works are completed, as well as the removal of all leftover construction materials.

No impacts on the climatic and bioclimatic characteristics of the immediate and wider area are expected from the project's implementation. The project under study is not expected to cause any impacts on the soil and morphology of the study area during its operational phase. After the completion of the construction phase, the project area will be restored to its original state, considering the land morphology.

The impacts on the landscape and aesthetic environment during the construction phase from the presence of construction sites and machinery are characterized as low-intensity and short-term, which will largely become reversible after the completion of the construction phase, provided that the construction sites are restored and appropriate landscaping is implemented, if required. Due to the suitable distance, there is no possibility of viewing the proposed wind turbines from designated settlements. This renders the visual burden of the landscape from the project's installation weak. During the construction and operational phases of the project, the water resources of the area are not expected to be affected, and the impact is characterized as negligible.

Regarding the impacts of the proposed project on the vegetation and flora of the project location, its operation is expected to have minor impacts on the flora species of the study area, which primarily consists of 'thermophilous vegetation', pastures, and woody vegetation. The operation of the project is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with appropriate measures taken after the operation and restoration period of the site.

Regarding the impacts of the proposed project on bird species, the wind farm is not expected to cause any disturbance. Additionally, the type of installed turbines and their design comply with new technology, and their interconnection is done underground to minimize negative effects on local bird populations. Finally, a system for recording and preventing collisions with wind turbines has been installed, in accordance with the ornithological study and observations.

Regarding the impacts of the proposed project on animal species, they are local and temporally limited and are expected to be restored after the park's operation ends.

The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is worth noting that the forest roads and the area adjacent to the Wind Farm will not be fenced, thus allowing the use of the area. The proposed project is not expected to have any direct impact on the land uses of the study area as the wind turbines are to be constructed on undeveloped lands primarily characterized as pastures, outside the limits and at a sufficient distance from the boundaries of settlements.

The installation sites of the proposed wind farms and their accompanying works are located outside declared archaeological sites, and therefore no impacts on the historical-cultural environment in the project construction area are expected.

The installation and operation of the proposed wind farms are not expected to cause any negative impact on the social and economic environment of the area, nor to disrupt any existing human activities. On the contrary, it is expected to positively influence the economic and social environment of the area. Specifically, the project will contribute a total annual benefit that will be distributed to the local community and the Municipality of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe because, according to common practice, all necessary measures are taken to prevent access to potentially hazardous installation points (transformers, medium and high voltage fields and conduits).

The park is expected to positively impact the overall condition of the atmospheric environment, as its operation will contribute to the increase of electricity production through renewable, environmentally friendly energy sources. The amount of electric energy produced by the proposed wind farms will positively contribute to the country's energy balance, with the development of energy production from renewable resources and covering part of the annual energy demand by avoiding the burning of fossil fuels that produce greenhouse gases. More specifically, the production of equivalent energy (22.7 GWh annually) from fossil fuels (lignite) results in atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located far from human activities, the noise levels from generated sound are expected to be negligible.

### **Positive Economic Investment**

The Miliá Wind Farm is an investment that utilizes an inexhaustible natural resource without burdening the environment, as it does not produce pollution or waste while promoting the

improvement of productivity and competitiveness of the national economy, and it serves as a means for national energy autonomy. It also increases the energy autonomy of the wider area of the project and participates in reducing the country's energy deficit. It contributes to fuel savings and the avoidance of using other solid, liquid, or gaseous fuels that would otherwise be needed to produce an equivalent amount of electric energy, which could also produce gaseous pollutants with negative environmental impacts (greenhouse effect, ozone depletion, acid rain, etc.).

**Wind Farm at the Location of Milza (18 MW) Located in the Municipality of Karystos, Regional Unit of Evia.**  
**NON-TECHNICAL STUDY**

**INTRODUCTION**

The project is about the installation of a Wind Farm, implemented by the company TERNA Energiaki Omalies MAE, a subsidiary of TERNA Energy SA, located in the Municipality of Karystos, Regional Unit of Evia, Region of Central Sterea Greece, and under the Decentralized Administration of Thessaly and Central Sterea Greece. The project involves the installation and operation of a wind farm with a total installed capacity of 18 MW, consisting of six (6) wind turbines with a nominal capacity of 3 MW, along with the accompanying works.

The purpose of the proposed project is to utilize the high wind potential of the area for the production of electricity and subsequently sell the produced electricity to the Public Power Corporation (PPC), channeling it into the National Electricity Transmission System (NETS).

Part of the project is developed within the boundaries of the Protected Area of the Natura 2000 network, with codes GR2420012 "Mount Ochi, coastal zone, and islets" and GR2420001 "Mount Ochi, Karystos plain, River, Cape Kafireas, and coastal marine zone."

The choice of location does not affect the environment or generally human activities and areas for the protection of the natural environment. The proposed installation site for the Wind Power Project (WPP) is far from settlements and inhabited areas (at distances greater than those specified by the current legislation). The environmental impact assessment study has been carried out taking into account national legislation, specifically Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). For the approval process of the environmental impact study (EIS), all public consultation procedures have also been followed in accordance with European and national legislation.

**CLASSIFICATION OF THE PROJECT**

The entire project under examination, according to national legislation for the classification of public and private projects and activities into categories and subcategories, falls into the 10th Group and specifically into Subcategory A1 [for  $P > 45$  or  $P > 35$  and within areas of the Natura 2000 network or  $L \geq 20$  km, where  $P$ : installed power,  $L$ : length of high-voltage interconnection line ( $\geq 150$  kV)].

**SIZE OF THE PROJECT**

The project consists of the following:

- Operation of the wind farm, where the installation of a total of 6 wind turbines is planned, with a total installed capacity of 18 MW
- Road construction interventions totaling 39.4 km (for the entire project)

To transport the produced electricity, the following constructions are planned:

1. Underground medium voltage network of 20 or 33 kV over a road length of approximately 70 km, overhead medium voltage network of 20 or 33 kV with a length of approximately 700 m,

2. Underground alternating current high voltage network of 150 kV over a road length of approximately 11.6 km,
3. Overhead alternating current high voltage network of 150 kV with a length of approximately 1.75 km,
4. Underground high voltage direct current network over a road length of approximately 1.5 km on the Evia side.

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL AND URBAN PLANNING RESTRICTIONS**

The project and its accompanying works meet the criteria, as defined in the Special Framework for Spatial Planning and Sustainable Development for Renewable Energy Sources (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has received all the necessary legal permits. For the approval process of the EIS, all procedures (publication of the project and public consultation) for informing all interested parties will also be followed as provided in Article 4 of Law 4014/2011 (Government Gazette 209A/21.10.2011).

In order to minimize the impacts on the natural environment of the area, the Forestry Service will examine and ensure the complete restoration of the environment after the construction works are completed and the removal of all remaining construction materials.

The implementation of the project is not expected to have any impact on the climatic and bioclimatic characteristics of both the immediate and broader areas. The project under study is not expected to cause any impact on the soil and the morphology of the study area during its operational phase. After the completion of the construction phase, the area of the project will be restored to its original state, considering the morphology of the land.

The impacts on the landscape and aesthetic environment during the construction phase of the project from the presence of construction sites and machinery could be characterized as low intensity and short-term impacts that will largely become reversible after the completion of the construction phase, provided that the construction sites are restored and appropriate landscaping measures are implemented, if required. Due to the appropriate distance, there is no possibility of visibility of the project under study from designated settlements. The above make the visual impact on the landscape from the installation of the project weak. In both the construction and operational phases of the project, no impact is expected on the water resources of the area, and the effect is considered negligible.

Regarding the impacts of the project under study on the vegetation and flora of the project location, its operation is expected to have weak impacts on the flora species of the study area, which mostly consists of 'thermophilous vegetation,' pastures, and woody vegetation. The operation of the project is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with the implementation of appropriate measures after the operation and restoration period.

Regarding the impacts of the project under study on bird species, the wind farm is not expected to cause any disturbance. Furthermore, the type of installed wind turbines and their design are in accordance with new technology, and their connection is underground to minimize negative impacts on the area's avifauna. Finally, a collision recording and prevention system has been installed on the wind turbines, according to the ornithological study and observation.

Regarding the impacts of the project under study on fauna species, they are of a local nature and temporally limited and are expected to be restored after the operation of the park has ended.

The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is worth noting that the forest roads and the area adjacent to the Wind Farm will not be limited by a fence, thus allowing the use of the area. The proposed project is not expected to have any direct impact on the land uses of the study area since the wind turbines will be constructed on undeveloped areas primarily characterized as pastures, outside the limits and at a sufficient distance from the boundaries of settlements.

The installation sites of the proposed wind farms and their accompanying works are located outside declared archaeological sites, and consequently, no impacts on the historical-cultural environment of the project construction area are expected.

The installation and operation of the proposed wind farms are not expected to have any negative impact on the social and economic environment of the area, nor to disrupt any of the existing human activities. On the contrary, it is expected to positively affect the economic and social environment of the area. Specifically, the project will contribute a total annual compensatory benefit, which will be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe since, according to common practice, all necessary measures are taken to prevent access to installation points that may pose risks (transformers, fields, and medium and high voltage lines).

The park is expected to have a positive effect on the overall condition of the atmospheric environment, as its operation will contribute to increasing electricity generation through renewable, environmentally friendly energy sources. The quantity of electricity produced by the proposed wind farms will positively contribute to the country's deficit energy balance, developing energy production from renewable resources and covering part of the annual energy demand by avoiding the burning of fossil fuels that produce greenhouse gases. More specifically, the production of equivalent energy (22.7 GWh annually) from fossil fuels (lignite) leads to atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located far from human activities, the levels of disturbance from the produced noise are expected to be negligible.

### **Positive Economic Investment**

The Milza Wind Farm is an investment that exploits an inexhaustible natural resource without burdening the environment, as it does not constitute a source of pollution and does not produce waste, while promoting the improvement of productivity and competitiveness of the national economy and supporting national energy autonomy. It also increases the energy autonomy of the broader area of the project and contributes to reducing the country's energy deficit. It contributes to fuel savings and avoids the use of other solid, liquid, or gaseous fuels that would otherwise be required to produce the equivalent amount of electricity that could also generate air pollutants with negative environmental impacts (greenhouse effect, ozone depletion, acid rain, etc.).

## **Wind Farm Molizeza I (18 MW) located in the Municipality of Karystos, in the Regional Unit of Evia.**

### **NON-TECHNICAL STUDY**

#### **INTRODUCTION**

The project involves the installation of a Wind Farm, implemented by the company TERNA Energiaki Omalies MAE, a subsidiary of TERNA Energy S.A., located in the Municipality of Karystos, Regional Unit of Evia, Central Sterea Greece Region, and under the Decentralized Administration of Thessaly and Central Sterea Greece.

The project concerns the installation and operation of a wind farm with a total installed capacity of 18 MW consisting of six (6) wind turbines with a nominal power of 3 MW along with associated works.

The purpose of the proposed project is to utilize the high wind potential of the area for the production of electricity and subsequently to sell the produced electricity to the Public Power Corporation (PPC), channeling it into the National Electricity Transmission System (NETS).

Part of the project is developed scattered within the boundaries of the Protected Area of the Natura 2000 network with codes GR2420012 "Mount Ochi, coastal zone, and islets" and GR2420001 "Mount Ochi, Karystos plain, River, Cape Kafiareas, and coastal marine zone".

The selection of the site does not affect the environment and generally human activities, as well as areas designated for the protection of the natural environment. The proposed installation site of the Wind Farm is located far from settlements and populated areas (at distances greater than those defined by the existing legislation). The environmental impact assessment study has been conducted taking into account national legislation, particularly Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). The entire public consultation process has also been followed for the approval of the Environmental Impact Assessment (EIA) according to European and national legislation.

#### **CLASSIFICATION OF THE PROJECT**

The entire project under consideration is classified according to national legislation for the classification of public and private projects and activities into categories and subcategories in Group 10, specifically in Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 network areas or  $L \geq 20$  km, where P: installed power, L: length of the high voltage interconnection line ( $\geq 150$  kV)].

#### **PROJECT SIZE**

The project consists of the following:

- Operation of a wind farm, where the installation of a total of 6 wind turbines is anticipated, with a total installed capacity of 18 MW.
- Road construction interventions totaling 39.4 km (for the entire project).
- To transfer the produced electricity, the construction of the following is anticipated:
  1. Underground medium voltage network of 20 or 33 kV over a road length of approximately 70 km, overhead medium voltage network of 20 or 33 kV of approximately 700 m,

2. Underground high voltage AC network of 150 kV over a road length of approximately 11.6 km,
3. Overhead high voltage AC network of 150 kV of approximately 1.75 km,
4. Underground high voltage DC network over a road on the Evia side of approximately 1.5 km.

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL & URBAN PLANNING COMMITMENTS**

The project and its accompanying works meet the criteria, as defined in the Special Framework for Spatial Planning and Sustainable Development for Renewable Energy Sources (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has obtained all the necessary legal permits. For the EIA approval process, all procedures (project disclosure and public consultation) will be followed to inform all interested parties as provided in Article 4 of Law 4014/2011 (Government Gazette 209A/21.10.2011).

In order to reduce the impacts on the natural environment of the area, the Forestry Service will examine and ensure the complete restoration of the surrounding environment after the completion of the construction works, and the removal of all remaining construction materials.

The implementation of the project is not expected to have impacts on the climatic and bioclimatic characteristics of both the immediate and wider area. The project under consideration is not expected to cause impacts on the soil and morphology of the study area during its operational phase. After the completion of the construction phase, the project area will be restored to its original condition, considering the morphology of the soil.

The impacts on the landscape and the aesthetic environment during the construction phase of the project due to the presence of construction sites and machinery could be characterized as low-intensity impacts and short-term, which will largely become reversible after the completion of the construction phase, provided that the construction sites are restored and appropriate landscaping measures are implemented, if required. Due to the appropriate distance, there is no possibility of viewing the wind turbine under study from a designated settlement. This makes the visual burden on the landscape from the installation of the project weak. During the construction and operation phases of the project, the water resources of the area are not expected to be affected, and the impact is characterized as negligible.

Regarding the impacts of the project under study on the vegetation and flora of the area where the works are located, the operation is expected to have minor impacts on the flora species of the study area, which mostly concerns 'thermophilous vegetation', pastures, and woody vegetation.

The operation of the project is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with appropriate measures taken after the operational and restoration period of the site.

Regarding the impacts of the project under study on bird species, the wind farm is not expected to cause disturbance. Additionally, the type of installed wind turbines and their design comply with new technology, while their interconnection is underground to minimize negative impacts on the avifauna of the area. Finally, a collision detection and deterrence system has been installed on the wind turbines, in accordance with the ornithological study and observation.



Regarding the impacts of the project under study on wildlife species, they are of a local nature and temporally limited, and are expected to be restored after the park's operation has ended.

The project is not expected to have significant impacts on existing land uses, which are of minor significance. It is worth noting that forest roads and the area adjacent to the Wind Farm will not be restricted by fencing, thus allowing the use of the area. The proposed project is not expected to have any direct impact on land uses in the study area, as the wind turbines are to be constructed on undeveloped land primarily characterized by pastures, outside boundaries, and at a sufficient distance from the boundaries of settlements.

The installation sites of the wind farms under study and their accompanying works are located outside declared archaeological sites and therefore no impacts are expected on the historical-cultural environment in the construction area of the project.

The installation and operation of the wind farms under study are not expected to have any negative impacts on the social and economic environment of the area, nor to disrupt any existing human activities. On the contrary, it is expected that it will positively affect the economic and social environment of the area. Specifically, the project will contribute an annual compensatory benefit which will be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe because, according to usual practice, all necessary measures are taken to prevent access to installation points that may pose risks (transformers, fields, and medium and high voltage lines).

The park is expected to have a positive impact on the overall state of the atmospheric environment, as its operation will contribute to increasing electricity generation through renewable, environmentally friendly energy sources. The amount of electricity produced by the wind farms under study will positively contribute to the country's energy deficit, through the development of energy production from renewable resources and the coverage of part of the annual energy demand by avoiding the burning of fossil fuels that produce greenhouse gases. Specifically, the production of equivalent energy (22.7 GWh annually) from fossil fuels (lignite) leads to atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located quite far from human activities, noise pollution levels are expected to be negligible.

### **Positive Economic Investment**

The Molizeza I Wind Farm is an investment that utilizes an inexhaustible natural resource without burdening the environment, as it does not constitute a source of pollution and does not produce waste while promoting the improvement of productivity and competitiveness of the national economy and serving as a means for national energy autonomy. It also increases the energy autonomy of the wider area of the project and contributes to reducing the country's energy deficit. It contributes to fuel savings and avoids the use of other solid, liquid, or gaseous fuels that would otherwise be needed to produce an equivalent amount of electricity, which could also produce air pollutants with negative impacts on the environment (greenhouse effect, ozone depletion, acid rain, etc.).

**Wind Farm at the Location Mouriza – Petra Megali - Vranouli (21.6 MW)  
located in the D.E. of Karystos, P.E. of Evia.**

**NON-TECHNICAL STUDY**

**INTRODUCTION**

The project involves the installation of a Wind Farm, implemented by the company Energiaki Kafireos Evvias O.E., a subsidiary of Terna Energy S.A., located in the Municipality of Karystos, P.E. of Evia, in the Region of Central Sterea Hellas and under the Decentralized Administration of Thessaly and Central Sterea Greece. The project pertains to the installation and operation of a wind farm with a total installed capacity of 21.6 MW, consisting of six (6) wind turbines with a nominal capacity of 3.6 MW, along with associated works. The aim of the proposed project is to harness the high wind potential of the area for electricity generation and subsequently sell the produced electricity to the Public Power Corporation (DEI), channeling it into the National Electricity Transmission System (ESMIE).

Part of the total project falls within the boundaries of a Protected Area of the Natura 2000 network, with codes GR2420012 "Mount Ochi, coastal zone and islets" and GR2420001 "Mount Ochi, Karystos plain, River, Cape Kafireas, and coastal marine zone." The choice of location does not affect the environment and generally human activities as well as areas of protection of the natural environment. The proposed installation site of the wind farm is located far from settlements and inhabited areas (at distances greater than those prescribed by the current legislation). The environmental impact assessment study has been prepared in accordance with national legislation, specifically Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). The entire public consultation process was also followed in accordance with European and national legislation for the approval of the Environmental Impact Study (EIS).

**CLASSIFICATION OF THE PROJECT**

The entire project under consideration is classified according to national legislation for the classification of public and private projects and activities into categories and subcategories, falling into Group 10 and specifically into Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 areas or  $L \geq 20$  km, where P: installed power, L: length of the high-voltage interconnection line ( $\geq 150$  kV)].

**SIZE OF THE PROJECT**

The proposed project as presented in this Environmental Impact Study (EIS) consists of the following:

- Operation of the wind farm, where the installation of a total of 6 turbines is planned, with a total installed capacity of 21.6 MW and a total electricity production output of 21.6 MW.
- Road construction interventions (new openings and improvements) with a total length of 25.9 km (for the entire project).
- The interconnection of the turbines with substations will be achieved via an underground Medium Voltage network of 20 kV or 33 kV with a total length of 47.4 km (24 km on existing roads and 23.5 km on new roads).

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL & URBAN PLANNING COMMITMENTS**

The project and its associated works meet the criteria as defined in the Special Framework for Spatial Planning and Sustainable Development for Renewable Energy Sources (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has received all necessary legal permits. For the EIS approval process, all procedures (project disclosure and public consultation) will be followed to inform all interested parties as stipulated in Article 4 of Law 4014/2011 (Government Gazette 209A/21.10.2011). To mitigate impacts on the natural environment of the area, the Forestry Service will review and ensure the complete restoration of the site after the completion of construction works and the removal of all construction materials.

No impacts are expected on the climatic and bioclimatic characteristics of both the immediate and wider area due to the implementation of the project. The project is not expected to cause impacts on the soil and morphology of the study area during its operational phase. After the completion of the construction phase, the project area will be restored to its original state, taking into account the land morphology.

The impacts on the landscape and aesthetic environment during the construction phase due to the presence of construction sites and machinery are expected to be of low intensity and short-term, largely reversible after the completion of the construction phase, provided that the construction sites are restored and appropriate planting measures are implemented if required. Due to the appropriate distance, there is no visibility of the proposed wind farm from designated settlements. This makes the visual impact of the project on the landscape weak. During the construction and operational phases of the project, no impacts are expected on the water resources of the area, and the effect is characterized as negligible.

Regarding the impacts of the proposed project on the vegetation and flora of the project location, its operation is expected to have weak impacts on the plant species in the study area, which mainly consists of "thermophilic vegetation," pastures, and woody vegetation.

The operation of the project is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with the implementation of appropriate measures after the operational and restoration period.

Regarding the impacts of the proposed project on bird species, the wind farm is not expected to cause disturbance. Additionally, the type of installed turbines and their design comply with the latest technology, and their interconnection is done underground to minimize negative impacts on the avifauna of the area. A collision avoidance and monitoring system has been installed on the wind turbines, in accordance with the ornithological study and observation.

Regarding the impacts of the proposed project on animal species, they are local and temporary in nature and are expected to recover after the cessation of the park's operation.

The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is noteworthy that the forest roads and the area adjacent to the wind farm will not be restricted with fencing, allowing for continued use of the area. The proposed project is not expected to have any direct impact on the land uses in the study area, as the turbines will be constructed on undeveloped lands primarily characterized as pastures, outside settlement limits and at a sufficient distance from the boundaries of the settlements.

The installation sites of the proposed wind farms and their associated works are located outside declared archaeological sites; consequently, no impacts are anticipated on the historical and cultural environment of the construction area.

The installation and operation of the proposed wind farms are not expected to have any negative impact on the social and economic environment of the area, nor to disrupt any existing human activities. On the contrary, it is expected to positively influence the economic and social environment of the area. Specifically, the project will provide a total annual compensatory benefit that will be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe, as standard practices are in place to ensure that access to installation points that may pose risks (transformers, fields, and medium and high voltage lines) is prevented.

The park is expected to have a positive impact on the overall atmospheric environment, as its operation will contribute to increased electricity generation through renewable, environmentally friendly energy sources. The amount of electricity produced by the proposed wind farms will positively contribute to the country's energy deficit by developing energy production from renewable resources and covering part of the annual energy demand by avoiding the burning of fossil fuels that produce greenhouse gases. Specifically, the production of equivalent energy (22.7 GWh annually) from fossil fuels (lignite) results in atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located sufficiently far from human activities, the levels of disturbance from the generated noise are expected to be negligible.

### **Positive Economic Investment**

The Mouriza – Petra Megali - Vranouli Wind Farm is an investment that utilizes an inexhaustible natural resource without burdening the environment, as it does not constitute a source of pollution and does not produce waste, while promoting the improvement of productivity and competitiveness of the national economy and serving as a means for national energy autonomy. It also increases the energy autonomy of the wider area of the project and contributes to reducing the country's energy deficit. It

helps save fuels and avoids the use of other solid, liquid, or gaseous fuels that would otherwise be needed to produce a corresponding amount of electricity, which could also produce gaseous pollutants with negative environmental impacts (greenhouse effect, ozone depletion, acid rain, etc.).

## **Wind Farm Omaliés II (15 MW) Located in the Municipality of Karystos, of the Regional Unit of Evia.**

### **NON-TECHNICAL STUDY**

#### **INTRODUCTION**

The project concerns the installation of a Wind Farm, with the implementing agency being the company TERNA Energeiaki Omaliés MAE, a subsidiary of TERNA Energeiaki S.A., located in the Municipality of Karystos, Regional Unit of Evia, Central Sterea Greece Region, and under the Decentralized Administration of Thessaly and Central Sterea Greece.

The project involves the installation and operation of a wind farm with a total installed capacity of 15 MW consisting of five (5) wind turbines with a nominal power of 3 MW each, along with auxiliary works.

The purpose of the proposed project is to harness the high wind potential of the area for the production of electrical energy and subsequently sell the generated electrical energy to DEI (Public Power Corporation), channeling it into the National Electricity Transmission System (ESMHE).

Part of the project is developed scattered within the boundaries of the Protected Area of the Natura 2000 network, with codes GR2420012 "Mount Ochi, coastal zone and islets" and GR2420001 "Mount Ochi, Karystos plain, River, Cape Kafireas and coastal marine zone."

The choice of location does not affect the environment or generally human activities and areas for the protection of the natural environment. The proposed installation site of the Wind Farm is located far from settlements and inhabited areas (at distances greater than those specified by the current legislation). The environmental impact assessment study has been carried out taking into account national legislation and specifically Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). The approval process of the EIA also followed all public consultation procedures according to European and national legislation.

#### **CLASSIFICATION OF THE PROJECT**

The entire project under consideration is classified according to national legislation for the classification of public and private projects and activities into categories and subcategories in the 10th Group, specifically in Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 network areas or  $L \geq 20$  km, where P: installed power, L: length of high-voltage ( $\geq 150$  kV) transmission line].

#### **SIZE OF THE PROJECT**

The project consists of the following:

- Operation of a wind farm, where the installation of a total of 5 wind turbines with a total installed capacity of 15 MW is planned.

- Road construction works totaling 39.4 km (for the entire project).
- For the transfer of the generated electrical energy, the construction of the following is planned:
  1. Underground medium voltage network of 20 or 33 kV over a road length of approximately 70 km, aerial medium voltage network of 20 or 33 kV with a length of approximately 700 m,
  2. Underground alternating current high-voltage network of 150 kV over a road length of approximately 11.6 km,
  3. Aerial alternating current high-voltage network of 150 kV with a length of approximately 1.75 km,
  4. Underground direct current high-voltage network over a road length of approximately 1.5 km on the Evia side.

## **COMPATIBILITY OF THE PROJECT WITH LEGISLATED SPATIAL & URBAN PLANNING COMMITMENTS**

The project and its accompanying works meet the criteria as specified in the Special Spatial Planning Framework for Renewable Energy Sources (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has received all the necessary legal permits. The approval process of the EIA will also follow all procedures (project publicity and public consultation) to inform all interested parties as stipulated in Article 4 of Law 4014/2011 (Government Gazette 209A / 21.10.2011).

To reduce the impacts on the natural environment of the area, the Forestry Service will examine and ensure full restoration of the environment after the construction works are completed and the removal of all remaining construction materials.

The implementation of the project is not expected to impact the climatic and bioclimatic characteristics of both the immediate and wider area. The project under study is not expected to cause impacts on the soil and the morphology of the study area during its operational phase. After the completion of the construction phase, the project area will be restored to its original state, taking into account the landform.

The impacts on the landscape and aesthetic environment during the construction phase of the project from the presence of construction sites and machinery could be characterized as low-intensity and short-term impacts that will largely become reversible after the completion of the construction phase, provided that the construction sites are restored and appropriate landscaping is implemented, if required. Due to the appropriate distance, there is no possibility of visibility of the proposed wind farm from designated settlements. The above make the visual burden of the landscape from the installation of the project low. During both the construction and operation phases of the project, no impacts are expected on the water resources of the area, and the effect is characterized as negligible.

Regarding the impacts of the project under study on the vegetation and flora of the area where the works are located, the operation of the project is expected to have low

impacts on the flora species of the study area, which mainly concerns "thermophilic vegetation", pastures, and woody vegetation.

The operation of the project is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with the adoption of appropriate measures after the operational and restoration period of the site.

Regarding the impacts of the project under study on bird species, the wind farm is not expected to cause disturbance. Additionally, the type of installed wind turbines and their design are in accordance with new technology, while their interconnection is carried out underground to minimize negative effects on the bird population of the area. Finally, a collision detection and deterrence system has been installed on the wind turbines according to the ornithological study and observation.

Regarding the impacts of the project under study on fauna species, they are local and temporally limited and are expected to recover after the operation of the park.

The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is worth noting that the forest roads and the area adjacent to the wind farm will not be fenced, thus allowing the use of the area. The proposed project is not expected to have any direct impact on land uses in the study area as the wind turbines will be constructed on undeveloped areas primarily consisting of pastures, located outside of boundaries and at a sufficient distance from the limits of the settlements.

The installation sites of the proposed wind farms and their accompanying works are located outside declared archaeological sites, and consequently, no impacts on the historical - cultural environment in the project construction area are expected.

The installation and operation of the proposed wind farms are not expected to result in any negative impacts on the social and economic environment of the area, nor disrupt any of the existing human activities. On the contrary, it is expected to positively impact the economic and social environment of the area. Specifically, the project will contribute a total annual compensatory benefit that will be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe because, according to usual practice, all necessary measures are taken to prevent access to areas of installation that may pose risks (transformers, fields, and medium and high-voltage lines).

The park is expected to have a positive impact on the overall state of the atmospheric environment, as its operation will contribute to the increase of electricity generation through renewable, environmentally friendly energy sources. The amount of electricity produced by the proposed wind farms will positively contribute to the energy deficit of the country, with the development of energy production from renewable resources and the coverage of part of the annual energy demand through the avoidance of burning fossil fuels that produce greenhouse gases. More specifically, the production of equivalent energy (22.7 GWh annually) from fossil



fuels (lignite) leads to atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located quite far from human activities, noise disturbance levels from the generated noise are expected to be negligible.

### **Positive Economic Investment**

The Omaliés II Wind Farm is an investment that utilizes an inexhaustible natural resource without burdening the environment, as it does not constitute a source of pollution and does not produce waste while promoting the improvement of productivity and competitiveness of the national economy and serving as a means for national energy autonomy. It also increases the energy autonomy of the wider area of the project and contributes to the reduction of the energy deficit of the country. It helps save fuels and avoid the use of other solid, liquid, or gaseous fuels that would otherwise be needed to produce an equivalent amount of electricity, which could also produce gaseous pollutants with negative impacts on the environment (greenhouse effect, ozone depletion, acid rain, etc.).

**Wind Farm Omaliés (30 MW) located in the Municipality of Karystos, in the Regional Unit of Euboea.**  
**NON-TECHNICAL STUDY**

## **INTRODUCTION**

The project concerns the installation of a Wind Farm, implemented by the company TERNA Energy Omaliés MAE, a subsidiary of Terna Energy S.A., located in the Municipality of Karystos, Regional Unit of Euboea, in the Region of Central Sterea Greece, under the Decentralized Administration of Thessaly and Central Sterea Greece.

The project involves the installation and operation of a wind farm with a total installed capacity of 30 MW, consisting of ten (10) wind turbines with a nominal capacity of 3 MW, along with accompanying works.

The purpose of the proposed project is to utilize the high wind potential of the area for the production of electricity and subsequently to sell the generated electricity to the Public Power Corporation (PPC), channeling it into the National Electric Energy Transmission System (NEETS).

Part of the project is developed scattered within the boundaries of the Protected Area of the Natura 2000 network with codes GR2420012 "Mount Ochi, coastal zone, and islets" and GR2420001 "Mount Ochi, Karystos plain, River, Cape Kafireas, and coastal marine zone."

The choice of location does not affect the environment and generally human activities as well as areas for the protection of the natural environment. The proposed installation site of the Wind Power Plant (WPP) is far from settlements and inhabited areas (at distances greater than those defined by the applicable legislation). The environmental impact assessment study has been conducted taking into account national legislation, particularly Article 4 of Law 4014/2011 (Official Gazette 209A / 21.09.2011). The entire public consultation procedures according to European and national legislation were also followed for the approval process of the environmental study (ES).

## **CLASSIFICATION OF THE PROJECT**

The entirety of the project under examination, according to national legislation for the classification of public and private projects and activities into categories and subcategories, is classified in the 10th Group and specifically in Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 network areas or  $L \geq 20$  km, where P: installed power, L: length of the high voltage ( $\geq 150$  kV) interconnection line].

## **SIZE OF THE PROJECT**

The project consists of the following:

- Operation of the wind farm, where the installation of a total of 10 turbines is foreseen, with a total installed power of 30 MW.
- Road construction interventions with a total length of 39.4 km (for the entire project).
- For the transportation of the generated electricity, the construction of the following is planned:
  1. An underground medium voltage network of 20 or 33 kV over a road of approximately 70 km, an overhead medium voltage network of 20 or 33 kV with a length of approximately 700 m.

2. An underground alternating current high voltage network of 150 kV over a road of approximately 11.6 km.
3. An overhead alternating current high voltage network of 150 kV with a length of approximately 1.75 km.
4. An underground direct current high voltage network over a road on the Euboean side with a length of approximately 1.5 km.

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL & URBAN PLANNING COMMITMENTS**

The project and its accompanying works meet the criteria as defined in the Special Framework of Spatial Planning and Sustainable Development for Renewable Energy Sources (Official Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has received all the legal permits required. For the approval process of the environmental study, all procedures (project publicity and public consultation) will also be followed to inform all interested parties as provided in Article 4 of Law 4014/2011 (Official Gazette 209A / 21.10.2011).

In order to minimize the impacts on the natural environment of the area, the Forestry Service will review and check to ensure the complete restoration of the environment after the construction works, and the removal of all remaining construction materials. The implementation of the project is not expected to have impacts on the climatic and bioclimatic characteristics of both the immediate and broader area. The project under study is not expected to cause impacts on the soil and morphology of the study area during its operational phase. After the completion of the construction phase, the project area will be restored to its original state, taking into account the morphology of the land.

The impacts on the landscape and the aesthetic environment during the construction phase of the project from the presence of construction sites and machinery could be characterized as weak intensity impacts and short-term, which will largely become reversible after the completion of the construction phase, provided that the construction sites are restored and appropriate phytotechnical arrangements are implemented, if required. Due to the appropriate distance, there is no possibility of viewing the studied wind turbines from a designated settlement. The above makes the visual burden of the landscape from the installation of the project weak. During the construction and operation phases of the project, no impacts are expected on the water resources of the area, and the impact is characterized as negligible.

Regarding the impacts of the project on the vegetation and flora of the area where the works are located, its operation is expected to have weak impacts on the plant species of the study area, most of which concern “thermophilic vegetation,” pastures, and woody vegetation.

The operation of the project is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with the implementation of appropriate measures after the operation and restoration period of the site.

Regarding the impacts of the project on bird species, the wind farm is not expected to cause disturbance. Additionally, the type of installed turbines and their design is in accordance with new technology, and their interconnection is done underground to minimize negative effects on the avifauna of the area. Finally, a system for recording and preventing collisions with wind turbines has been installed, according to the ornithological study and observation.

Regarding the impacts of the project on wildlife species, they are local and temporally

limited and are expected to recover after the park's operation ceases.

The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is worth noting that the forest roads and the area adjacent to the Wind Farm will not be restricted by a fence, thus allowing the use of the area. The proposed project is not expected to have any direct impact on the land uses of the study area since the wind turbines will be constructed on undeveloped lands mainly characterized as pastures, outside boundaries, and at a sufficient distance from the limits of settlements.

The installation sites of the proposed wind farms and their accompanying works are located outside declared archaeological sites, and therefore no impacts are expected on the historical and cultural environment in the construction area of the project.

The installation and operation of the proposed wind farms are not expected to have any negative impact on the social and economic environment of the area, nor disrupt any existing human activities. On the contrary, it is expected to positively affect the economic and social environment of the area. Specifically, the project will contribute a total annual reciprocal benefit that will be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe as, according to standard practice, all necessary measures are taken to prevent access to points of installation that may pose risks (transformers, fields, and medium and high voltage conductors).

The park is expected to have a positive effect on the overall state of the atmospheric environment, as its operation will contribute to increasing electricity generation from renewable, environmentally friendly sources of energy. The amount of electricity generated by the proposed wind farms will positively contribute to the country's energy balance, through the development of energy production from renewable resources and covering part of the annual energy demand by avoiding the combustion of fossil fuels that produce greenhouse gases. Specifically, the production of equivalent energy (22.7 GWh annually) from fossil fuels (lignite) leads to atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, since the wind farm is located far from human activities, the levels of disturbance from the generated noise are expected to be negligible.

### **Positive Economic Investment**

The Omaliés Wind Farm is an investment that exploits an inexhaustible natural resource without burdening the environment, as it is not a source of pollution and does not produce waste while promoting the improvement of productivity and competitiveness of the national economy and serves as a means for national energy autonomy. It also increases the energy autonomy of the broader area of the project and contributes to reducing the energy deficit of the country. It helps save fuels and avoid the use of other solid, liquid, or gaseous fuels that would otherwise be needed to produce an equivalent amount of electricity, which could also produce gaseous pollutants with negative impacts on the environment (greenhouse effect, ozone depletion, acid rain, etc.).

## **Praro Wind Farm (36 MW)**

Located in the Municipality of Karystos, Evia Prefecture.

## **NON-TECHNICAL STUDY**

### **INTRODUCTION**

The project involves the installation of a Wind Farm, implemented by the company TERNA Energy Omalias MAE, a subsidiary of Terna Energy SA, located in the Municipality of Karystos, Evia Prefecture, in the Central Sterea Greece region, under the Decentralized Administration of Thessaly and Central Sterea Greece. The project concerns the installation and operation of a wind farm with a total installed capacity of 36 MW, consisting of twelve (12) wind turbines with a nominal power of 3 MW, along with accompanying works. The purpose of the proposed project is to utilize the high wind potential of the area for the production of electricity and subsequently sell the produced electricity to the Public Power Corporation (PPC), channeling it into the National Electricity Transmission System (NETS). Part of the project is developed scattered within the boundaries of the Protected Area of the Natura 2000 network, with codes GR2420012 “Mount Ochi, coastal zone, and islets” and GR2420001 “Mount Ochi, Karystos plain, River, Cape Kafireas, and coastal marine zone.” The choice of location does not affect the environment and generally human activities, as well as areas for the protection of the natural environment. The proposed installation site of the Wind Power Plant is located far from settlements and inhabited areas (at distances greater than those specified by existing legislation). The environmental impact assessment study has been conducted considering national legislation, particularly Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). The entire public consultation procedures have also been followed for the approval process of the Environmental Impact Study (EIS) according to European and national legislation.

### **CLASSIFICATION OF THE PROJECT**

The entire project under examination, according to national legislation for the classification of public and private projects and activities into categories and subcategories, is classified in Group 10, specifically in Subcategory A1 [for  $P > 45$  or  $P > 35$  and within Natura 2000 areas or  $L \geq 20$  km, where P: installed power, L: length of the high-voltage interconnection line ( $\geq 150$  kV)].

### **SIZE OF THE PROJECT**

The project consists of the following:

- Operation of a wind farm, where a total of 12 wind turbines are planned, with a total installed power of 36 MW.
- Control Cabin (250 m<sup>2</sup>).
- Road construction interventions totaling 39.4 km (for the entire project).

To transport the generated electricity, the construction of the following is planned:

1. Underground medium-voltage network 20 or 33 kV over a road length of approximately 70 km, aerial medium-voltage network 20 or 33 kV approximately 700 m in length.

2. Underground high-voltage alternating current network 150 kV over a road length of approximately 11.6 km.
3. Aerial high-voltage alternating current network 150 kV approximately 1.75 km long.
4. Underground high-voltage direct current network over a road length on the Evia side of approximately 1.5 km.

### **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL AND URBAN PLANNING RESTRICTIONS**

The project and its accompanying works meet the criteria as defined in the Special Framework for Spatial Planning and Sustainable Development for Renewable Energy Sources (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **ENVIRONMENTAL IMPACT ASSESSMENT**

The project has received all the necessary legal permits. The approval process for the Environmental Impact Study will also follow all procedures (project publication and public consultation) to inform all interested parties as provided in Article 4 of Law 4014/2011 (Government Gazette 209A/21.10.2011). To mitigate the impacts on the natural environment of the area, the Forest Service will review and ensure the full restoration of the environment after the completion of construction works and the removal of all construction materials. No impacts on the climatic and bioclimatic characteristics are expected from the project, both in the immediate and broader area. The project under study is not expected to cause impacts on the soil and morphology of the study area during its operational phase. After the completion of the construction phase, the project area will be restored to its original state with consideration of the landform. The impacts on the landscape and aesthetic environment during the construction phase due to the presence of construction sites and machinery could be characterized as low-intensity impacts and short-term, which will largely become reversible after the construction phase is completed, provided that construction sites are restored and appropriate landscaping measures are implemented, if required. Due to the appropriate distance, there is no possibility of seeing the proposed wind turbine from any designated settlement. The above makes the visual burden of the landscape from the installation of the project weak. In both the construction and operation phases of the project, no impacts on the water resources of the area are expected, and the effect is characterized as negligible.

Regarding the impacts of the project under study on the vegetation and flora of the project area, the operation is expected to have weak impacts on the plant species of the study area, which mainly consists of 'thermophilic vegetation,' pastures, and woody vegetation. The operation of the project is expected to have negligible negative impacts on the vegetation and flora of the area, reversible with the adoption of appropriate measures after the operational period and restoration of the area.

Regarding the impacts of the project under study on bird species, the wind farm is not expected to cause disturbance. Additionally, the type of installed wind turbines and their design are in accordance with new technology, while their interconnection is done underground to minimize negative effects on the local bird species. Finally, a collision detection and prevention system has been installed on the wind turbines, according to the ornithological study and observation.

Regarding the impacts of the project under study on wildlife species, they are local in nature and time-limited and are expected to be restored after the operation of the park. The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is noteworthy that the forest roads and the area adjacent to the wind farm will not be fenced, thus allowing for the continued use of the area. The proposed project is not expected to have any direct impact on the land uses of the study area, as the wind turbines will be constructed in undeveloped areas, primarily of pastures, outside boundaries, and at a sufficient distance from the boundaries of settlements.

The installation sites of the wind farms under study and their accompanying works are located outside declared archaeological sites, and therefore no impacts on the historical-cultural environment of the project construction area are expected. The installation and operation of the wind farms under study are not expected to have any negative impacts on the social and economic environment of the area, nor to disrupt any of the existing human activities. On the contrary, it is expected to positively influence the economic and social environment of the area. Specifically, the project will contribute a total annual compensation benefit that will be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe, as according to standard practice, all necessary measures are taken to prevent access to installation points that may pose risks (transformers, fields, and medium- and high-voltage lines).

The park is expected to have a positive effect on the overall atmospheric environment, as its operation will contribute to increasing electricity generation through renewable, environmentally friendly energy sources. The amount of electricity produced by the wind farms under study will positively contribute to the country's energy deficit, through the development of energy production from renewable resources and the coverage of part of the annual energy demand by avoiding the burning of fossil fuels that produce greenhouse gases. Specifically, the production of equivalent energy (22.7 GWh annually) from fossil fuels (lignite) leads to atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding the impacts on the acoustic environment of the area, given that the wind farm is located quite far from human activities, noise pollution levels are expected to be negligible.

### **Positive Economic Investment**

The Praro Wind Farm is an investment that utilizes an inexhaustible natural resource without burdening the environment, as it does not cause pollution or produce waste while promoting the improvement of productivity and competitiveness of the national economy and serving as a means for national energy autonomy. It also increases the energy autonomy of the broader project area and contributes to reducing the country's energy deficit. It helps save fuels and avoids the use of other solid, liquid, or gaseous fuels that would otherwise be needed to produce an equivalent amount of electricity that could also produce gaseous pollutants with negative environmental impacts (greenhouse effect, ozone depletion, acid rain, etc.).

## **Wind Farm at Tsouka - Skoura (32.4 MW) located in the Municipal Unit of Karystos, Regional Unit of Evia.**

### **NON-TECHNICAL STUDY**

#### **INTRODUCTION**

The project involves the installation of a Wind Farm, implemented by the company Energiaki Kafireos Evias O.E., a subsidiary of Terna Energy S.A., located in the Municipality of Karystos, Regional Unit of Evia, Region of Central Sterea Hellas, under the Decentralized Administration of Thessaly and Central Sterea Hellas. The project concerns the installation and operation of a wind farm with a total installed capacity of 32.4 MW, consisting of nine (9) wind turbines with a nominal power of 3.6 MW, along with the accompanying works.

The purpose of the proposed project is to utilize the high wind potential of the area for the production of electricity and subsequently sell the generated electricity to the Public Power Corporation (PPC), channeling it into the National Electricity Transmission System (NETS). Part of the project falls within the boundaries of a Protected Area of the Natura 2000 network, with codes GR2420012 "Mount Ochi, coastal zone, and islets" and GR2420001 "Mount Ochi, Karystos plain, River, Cape Kafireas, and coastal marine zone."

The selection of the site does not affect the environment or generally anthropogenic activities, as well as areas protecting the natural environment. The proposed site for the Wind Farm is located far from settlements and inhabited areas (at distances greater than those defined by current legislation). The environmental impact assessment study has been prepared in accordance with national legislation, particularly Article 4 of Law 4014/2011 (Government Gazette 209A / 21.09.2011). The approval process of the EIA also followed all public consultation procedures as per European and national legislation.

#### **PROJECT CLASSIFICATION**

The entire project under consideration, according to national legislation for classifying public and private projects and activities into categories and subcategories, falls under Group 10, specifically in Subcategory A1 [for  $P > 45$  or  $P > 35$  within Natura 2000 areas or  $L \geq 20$  km, where P: installed power, L: length of the high voltage ( $\geq 150$  kV) interconnection line].

#### **PROJECT SIZE**

The proposed project in this Environmental Impact Study (EIA) consists of the following:

- Operation of a wind farm, which includes the installation of a total of 9 wind turbines with a total installed capacity of 32.4 MW and a total electricity generation capacity of 32.4 MW.
- Road interventions (new openings and improvements) with a total length of 25.9 km (for the entire project).



- The interconnection of the wind turbines with substations will be done via an underground Medium Voltage Network of 20 kV or 33 kV, with a total length of 47.4 km (24 km on existing roads and 23.5 km on new roads).

## **COMPATIBILITY OF THE PROJECT WITH ESTABLISHED SPATIAL AND URBAN PLANNING RESTRICTIONS**

The project and its accompanying works meet the criteria as defined in the Special Spatial Planning Framework for Renewable Energy Sources (Government Gazette 2464B / 03.12.2008, Articles 5 and 6).

### **Environmental Impact Assessment**

The project has received all necessary legal permits. For the EIA approval process, all procedures (project publication and public consultation) will also be followed to inform all interested parties as provided in Article 4 of Law 4014/2011 (Government Gazette 209A/21.10.2011).

To reduce impacts on the natural environment of the area, the Forestry Service will examine and ensure the complete restoration of the surrounding environment after the completion of construction works and the removal of all remaining construction materials.

The implementation of the project is not expected to have impacts on the climatic and bioclimatic characteristics of both the immediate and broader areas. The project under consideration is not expected to affect the soil and morphology of the study area during its operational phase. After the completion of the construction phase, the project area will be restored to its original condition with consideration of the terrain's morphology.

Impacts on the landscape and aesthetic environment during the construction phase from the presence of construction sites and machinery are considered to be of low intensity and short-term, largely reversible after the completion of construction, provided that the construction sites are restored and appropriate landscaping measures are implemented, if required. Due to the appropriate distance, there is no visibility of the proposed wind farm from designated settlements. These factors make the visual impact of the project's installation on the landscape minimal. During the construction and operation phases of the project, the region's water resources are not expected to be affected, and the impact is characterized as negligible.

Regarding the effects of the project on the vegetation and flora of the project site, its operation is expected to have minimal impacts on the plant species of the study area, which mainly consists of "thermophilous vegetation," pastures, and woody vegetation. The operation of the project is expected to have negligible negative effects on the vegetation and flora of the area, which are reversible with appropriate measures taken after the operational and restoration period of the site.

As for the impacts of the project on bird species, the wind farm is not expected to cause disturbance. Additionally, the type of installed wind turbines and their design comply with new technology, and their interconnection is underground to minimize negative impacts on the avifauna of the area. Finally, a collision monitoring and deterrent system

has been installed on the wind turbines, according to the ornithological study and observations.

Concerning the impacts of the project on fauna species, they are of a local nature and temporally limited, and it is expected that they will recover after the operation of the park concludes. The project is not expected to have significant impacts on existing land uses, which are of minor importance. It is noteworthy that forest roads and areas adjacent to the Wind Farm will not be restricted by fences, thus allowing for the continued use of the area. The proposed project is not expected to have any direct impacts on land uses in the study area since the wind turbines will be constructed on undeveloped lands primarily characterized as pastures, outside settlement boundaries and at a sufficient distance from the boundaries of settlements.

The sites for the proposed wind farms and their accompanying works are located outside declared archaeological sites, and therefore no impacts on the historical-cultural environment in the project construction area are expected.

The installation and operation of the proposed wind farms are not expected to have any negative impact on the social and economic environment of the area, nor to disrupt any existing anthropogenic activities. On the contrary, it is expected to positively affect the economic and social environment of the area. Specifically, the project will contribute a total annual compensation benefit which will be distributed to the local community and the Municipal Unit of Karystos.

Regarding human health, it should be noted that the operation of wind farms is extremely safe, as the usual practices involve taking all necessary measures to prevent access to potentially dangerous installation points (transformers, fields, and medium and high voltage lines).

The park is expected to have a positive effect on the overall atmospheric environment, as its operation will contribute to increasing electricity production through renewable, environmentally friendly energy sources. The amount of electricity produced by the proposed wind farms will positively contribute to the country's energy deficit, by developing energy production from renewable resources and covering part of the annual energy demand by avoiding the burning of fossil fuels that produce greenhouse gases. Specifically, the production of equivalent energy (22.7 GWh annually) from fossil fuels (lignite) leads to atmospheric emissions as follows: 19,337.5 t CO<sub>2</sub>, 352.6 t SO<sub>2</sub>, 27.3 t NO<sub>x</sub>, 18.2 t PM.

Regarding impacts on the acoustic environment of the area, given that the wind farm is located quite far from anthropogenic activities, the levels of disturbance from the produced noise are expected to be negligible.

### **Positive Economic Investment**

The Tsouka - Skoura Wind Farm is an investment that utilizes an inexhaustible natural resource without burdening the environment, as it does not constitute a source of pollution and does not produce waste, while promoting the improvement of productivity and competitiveness of the national economy and serving as a means for national energy autonomy. It also increases the energy autonomy of the broader area of

the project and contributes to reducing the country's energy deficit. It aids in fuel conservation and the avoidance of using other solid, liquid, or gaseous fuels that would otherwise be required for the production of an equivalent amount of electricity, which could also produce gaseous pollutants with negative impacts on the environment (greenhouse effect, ozone depletion, acid rain, etc.).