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# 1 Investment Proposal

## 1.1 Introduction

This Non Technical Summary (NTS) document provides a summary of the findings of the ES relating to the Investment Proposal: Construction of Wind farm on the land of the Villages of Bulgarevo, Sveti Nikola, Hadji Dimitar, Rakovski and Porouchik Chounchevo, Municipality of Kavarna (hereafter referred to as the Project). GeoPower, a Bulgarian-German joint venture company, initiated Project development in 2004. In 2006, AES, the international power company, formed a joint venture with GeoPower called AES GEO Energy OOD (AGE) to complete the development and own and operate the Project. The ownership of AGE is 89% AES and 11% GeoPower.

The Project is classified (both from the point of view of EU and Bulgarian legislation) as one which may be required to undergo Environmental Impact Assessment (EIA) process. An EIA was undertaken for the Project in accordance to EU and Bulgarian EIA requirements and the Bulgarian Environmental Protection Act 1991 (as amended). The Project has been approved by the competent authorities in Bulgaria in March 2007 and this NTS summarizes the findings of the EIA process undertaken in 2006-2007 and supplemented with additional data.

The NTS, which provides a brief overview of the Project has been developed for the purpose of meeting Equator, EBRD and IFC environmental policies, which go beyond European Union and Bulgarian legal requirements. It then provides a summary of the assessment findings which considers each individual environmental topic in turn, as presented in the ES before providing a summary of the environmental management arrangements to be implemented for the Project to ensure all mitigation is carried forward to construction, operation and decommissioning.

The NTS is being published as part of the wider EIA Disclosure package which forms part of the overall financial disclosure process relating to the Project.

Copies of the full Environmental Statement (ES) may be reviewed at the Kavarna Municipality and obtained at <http://geopowerbg.com>. Copies can be obtained from Geopower/AGE. Contact details are shown below:

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In accordance with Bulgarian requirements all applications and environmental reports are publicly available at the Kavarna Municipality at the Directorate “Land Development, Property, Tourism and Economical Activities”.

In addition to the NTS and other disclosure documents, as part of ongoing development of the Project, it is intended that further works will be undertaken to supplement the assessment reported in the ES and enable better development of future management and monitoring plans. The objective of this additional work is to provide a greater depth of investigation than was required under EU and Bulgarian EIA requirements in order to:

- Inform the development of further refinement of mitigation measures in detail;
- Inform the Project detailed design; and
- Formulate and detail procedures and plans required for environmental management purposes.

## 1.2 Key Components of the Project

The site of the Project is situated on the community land of the villages of Bulgarevo, Sveti Nikola, Hadji Dimitar, Rakovski and Porouchik Chounchevo, Kavarna Municipality (see Figure 1 below).

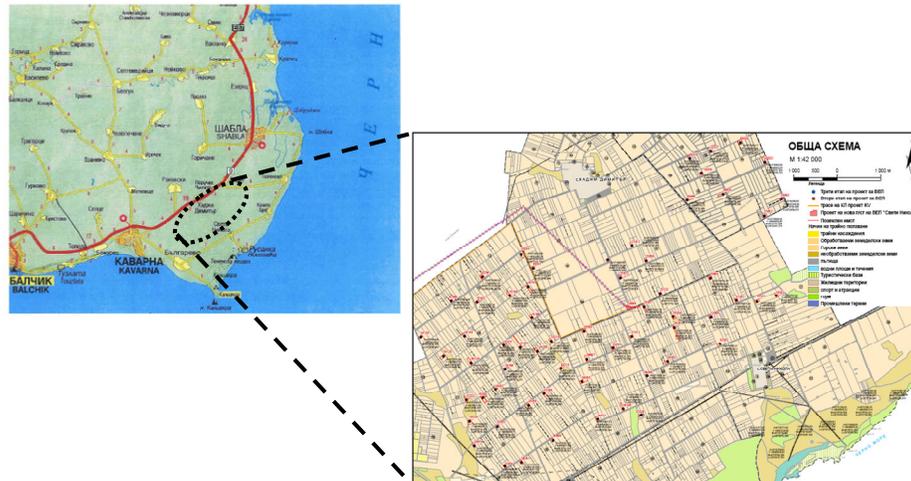


Figure 1: Map of the Project site

The Project covers a total area of about 60 km<sup>2</sup>, although only 6 hectares (60 decares) will be used permanently for the operation of the wind farm in total (equivalent to 0.09% of the total area of the site).

Including for construction and operational structures, the Project consists of the following key components:

- Up to 52 Vestas V90 wind turbines and foundations (62 turbines were originally planned but were subsequently reduced due to environmental mitigation measures introduced by the relevant authority);

- An electrical sub-station;
- Underground 33 kV electricity cables from the turbines to the sub-station;
- An overhead 110 kV electricity cable from the substation the wider network Kavarna sub-station;
- Temporary access tracks to the site and between the turbines; and
- Temporary construction components including a construction and storage areas.

The turbines will have a capacity of 3 MW each, with an overall height to blade tip not exceeding 150 metres (m). The turbines would be of a typical modern design incorporating tubular towers and three blades attached to a nacelle housing the generator, gearbox and other operating equipment. Closed systems will be used to prevent operational spillages and protect construction and maintenance staff. A minimum distance between the turbines of 500m has been employed, with a maximum distance of 2 kilometres (km). The detailed design specification for each foundation will depend on the ground conditions at the location of the turbines. It is anticipated, however, that each turbine foundation would require an area of approximately 900m<sup>2</sup>. This excavation would provide for a reinforced concrete foundation. Pictured below is the Vestas V90 – 3 MW turbine, which is the latest and most advanced technology in Vestas' product offering. Vestas is the world's largest wind turbine manufacturer



The sub-station compound will occupy a permanent area of approximately 6,000 m<sup>2</sup> and will incorporate the switchgear and metering building. All power and cabling on site from and between the wind turbines and up to the sub-station will be laid in trenches which will then be backfilled with excavated subsoil and topsoil.

It is proposed that 42km of existing municipality-owned dirt roads will be repaired to facilitate construction of the turbines and their foundations and sub-station. Once construction is completed, it is intended to maintain the roads to enable maintenance activities. The site is also crossed by third class roads which will be used for cabling purposes and returned to original state after cable installation.

Construction and storage areas will occur only on Project-owned land to facilitate localised servicing of the construction of the turbines (up to 15 different plots may be used). Chemicals and materials stored in these locations will be held securely and in accordance with the relevant Bulgarian and IFC Environment, Health and Safety Guidelines (see Section 3).

It is intended that the Project will be implemented in one stage involving construction of a substation, electric power network and 52 wind generators with installed capacity of 156 MW in 2009.

The proposed site has been allocated under the current territorial structural plan as land designated for farming and other compatible production activities. As only 6 hectares of land will be permanently required for the development footprint of the Project, the predominant land use will as a consequence continue as agriculture apart from the limited physical exclusion of the turbine structures and sub-station building. It is also proposed that the construction of the Project will also be phased to avoid key farming activities and thus times of highest productivity.

## 2 Environmental & Social Impacts and Mitigation

### 2.1 Introduction

This section of the NTS provides a summary of the assessment findings taking each individual environmental topic in turn as presented in the ES document. The key constraints identified as part of the EIA are shown in Figure 1 and described below.

### 2.2 Ambient Air

No ambient air quality data is available for the site of the Project as it has not been subject to air quality monitoring by the relevant Bulgarian public authorities (i.e. no systematic monitoring has been set up within the vicinity of the Project site). Whilst this is the case, occasional pollution control measurements have been taken by public authorities with no exceedance of permissible limits are recorded to date.

The main sources of air pollution in the region are wood and coal burning, dust from roads, agricultural practice and dry winds. For this reason, whilst most air pollutants are considered to be lower than the Permissible Limit Values (PLV - as defined by Bulgarian legislation), in terms of background levels, fine dust particles (FDP) are considered to be naturally high in the local area and frequently exceed the PLV.

It is considered that, with the ground disturbance activities and vehicle movements associated with construction that PLV for FDP could be exceeded. However, with the closest sensitive receptor located approximately 1.2km away from the wind farm site, and localised temporary nature of the impact the impact is considered unlikely to be significant. A calculation of construction plant and vehicle emissions on site also predicts that whilst emissions will result from construction activity such impacts will also be localised and not significant.

Whilst predicted impacts are considered unlikely to be significant, mitigation measures have been proposed which will assist in minimising emissions from site. Measures will include the use of damping techniques to suppress potential dust emissions, re-cultivation of disturbed areas following construction, and a defined hygiene zone of 500 metres from dwellings.

### 2.3 Climate

The region according to the climatic classification is located in the Climatic region the northern Black sea coast of the Black sea climatic area of the Continental – Mediterranean climatic sub-area. This is a narrow strip of land by the sea coast, from the Romanian border to the north to the cape Emine to the south. The winter and the spring are cool and cold with strong winds, the summer is warm to hot and the autumn is long and warm.

It is considered that the wind farm will have no direct impact upon the climate of the local area from its construction. In fact, it is widely considered and recognised that the promotion of

renewable energy sources in preference to fossil fuels will have positive benefits in terms of the wider climate issues. The Project will save nearly 6 million tonnes of CO<sub>2</sub> emissions over its 20 year lifetime. The development of a wind farm will have positive impacts in this regard.

## **2.4 Water**

There is a known watercourse in the vicinity of the Project site. In addition, it is recognised that, during dry conditions, surface water is readily absorbed into the ground. Conversely, when the ground is saturated, excess water runs off to existing gullies. However, the nature of these run off events are seasonal in nature and are not permanent surface water features. No ground water flows have been identified on site following surveys reaching to depths of 10 m below ground level.

During the construction, the foundations will be laid to the depth of 2.7 metres. Therefore no groundwater is expected to be encountered as part of the construction works. It is not, therefore, anticipated that there will be any direct effect on groundwater resources on site, from the construction of the Project.

However, it is recognised that during construction of the foundations and installation of the turbines there is the potential for negative impacts on surface and ground water resulting from possible oil (or other hydrocarbon) spillage. Once the project is operational, there will be very limited pollution risk from the Project due to the closed systems used within the turbines (thus containing lubricants) and limited site activities.

In terms of mitigation measures it is proposed that there will be no groundwater or surface water abstraction and that chemical toilets will be provided on site. All grey water from sinks will be disposed of to ground. Measures will be put in place to ensure that no chemicals will be spilled thus minimising the risk of ground and surface water pollution. Following the implementation of these measures, it is considered that there will be no significant impacts.

As discussed in Section 1.1, further work will be undertaken during the disclosure process to develop site specific mitigation measures and particular attention will be paid to the management of chemicals and materials on site, management of water resources, and construction practices. All these measures will be captured within the Project Environmental Management and Monitoring Plan (EMMP) as discussed in Section 3.

## **2.5 Geological Environment**

As discussed in Section 1.2 above, the foundations of the turbines occupies a small area both individually and collectively. It is therefore considered that the magnitude of impact on the underlying geology will be localized and no significant impacts are therefore expected.

## **2.6 Natural Underground Deposits**

The Project site affects only agricultural lands and does not fall within the borders of any concession areas for yield both of oil and gas and for production of fractured and crushed stone. The planned activities in the implementation of the Project will not therefore affect the

extraction of any natural resources from the territory of the region and will not exert any adverse effect on them.

## 2.7 Lands and Soils

It is estimated that development of the Project, and impacts on soils, will affect a very limited area of 20 hectares. Furthermore, the construction of the turbines will not impose a material change in the permanent use of the agricultural lands in which they are located.

It is recognised, however, that there will be some disturbance of soils in areas adjacent to the turbine foundations during the construction and installation works. Furthermore there is a risk of secondary compaction of the soils resulting from the use of heavy machinery. Therefore, although the area lost due to the development will be kept to a minimum, there is a potential to cause a downgrading of the quality of the soils.

In order to mitigate for these potential effects, measures have been proposed which include construction being undertaken only when the soil moisture content is appropriate for handling and trafficking, the employment of deep ameliorative scarifying during reinstatement, shaping excavated soils to minimise the potential for erosion, and employment of measures to minimise soil erosion. With the employment of such measures, no significant impacts are anticipated.

## 2.8 Vegetation

The Project site falls within the area of the Northern Black Seaside, characterized by the fact that no erosion is not significant, however there is wide area deflation (surface carrying away of the soil layer by the hot dry winds). The most widely encountered vegetation type comprises cultivable agricultural areas, on former oak forest. The agricultural lands have very high natural fertility with the main crops including wheat, soya, beetroot, and coriander. The forest shelter belts on site are considered have the highest ecological value. The Project does not directly affect any areas of steppe habitat.

Following construction, the site will be reinstated and returned to agricultural use with measures identified to ensure that soil compaction is minimised. None of the shelter belts will be directly affected by the construction or operation of the Project and so no temporary or permanent loss of this type of habitat will occur. It is therefore considered that there will be no significant impact upon the vegetation or habitats that lies within or adjacent to the site.

## 2.9 Animals

### *Ornithology (birds)*

A comprehensive range of baseline bird surveys has been undertaken for the purposes of the EIA, starting in 2004 and running to current day (i.e., there are seven seasons of migration surveys completed (four for the autumn migration) from several positions around the Project site).

The results of the survey show that both breeding and migratory bird species occur within the site boundaries of the Project. With respect to breeding birds, it is considered that the species composition overall is poor, with species primarily associated with either the shelter belts on site or sown agricultural fields. Species associated with the sown fields include species of skylark, yellow wagtail, quail and partridge, with species associated with the shelterbelts including flycatchers, warblers and whitethroats.

The area in which the Project is located is considered important for certain species of migrating birds (the route is commonly referred to as “Via Pontica”) and represents a significant bird migration route and one of the two major migration routes in Europe. Large numbers of migrants are known to pass through the area although the migration volume is highly variable, both in terms of total numbers and the routes used. Migrant Annex 1 species that were recorded during the surveys include great white and Dalmatian pelicans, white stork, marsh, pallid and Montagu’s harriers and common crane. In addition, flocks of migrant quail provide an important hunting resource. However, the agricultural areas, including the Project site, are considered as not characteristic habitats for them and not important to them during migration.

Impacts in relation to breeding bird species are predicted as unlikely to be significant both in terms of disturbance during construction and operation. However, migration is considered the time of highest risk to bird species from the Project, due primarily to collision risks. In this regard, an assessment of the potential for collision with the Project turbines predicts that the key bird groups recorded during the survey were reported as flying mostly above 150m (the maximum rotor height), and thus exhibiting avoidance behaviour. Allied to a commitment to shut down turbine operation during critical migration periods, it is concluded that no significant impacts will result.

The assessment of the project was also undertaken in accordance with EU Guidance on the Assessment of plans and projects significantly affecting Natura 2000 sites (Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC), relative to the proposed Natura 2000 Special Protection Area to the south of the site. As the Project does not lie within its boundaries, and impacts upon both breeding bird species and migrating species are considered not likely to be significant, no significant impact upon this site is anticipated.

A range of mitigation measures have been proposed, the most important of which is the temporary shut-down of turbines in peak migration periods, when concentrations of bird migrate on a narrow front through the wind farm. This would include a combination of professional ornithologist observers and a radar system to give early warning of approaching migrant flocks. In addition to this measure, subsequent to the consent to construct and operation the Project, AES has committed to refrain from the construction of turbines which lie close to the coastline and thus within a sensitive part of the region in respect of migrating bird species.

As discussed in Section 1.1, further environmental work will be undertaken during the forthcoming months. With respect to ornithology, it is proposed that further detailed collision risk analysis will be undertaken in order to further define site specific mitigation measures.

The output from this assessment will be captured within the Project Environmental Management and Monitoring Plan (EMMP) as discussed in Section 3.

### ***Non bird species***

The Project site is located in cultivable agricultural lands with forest shelter belts and dirt roads. This type of artificial agro-ecosystem maintains low biological diversity. However, the forest shelter belts play the role of natural corridors and main habitats of interest in terms of animal species in the area.

The ecological assessment identified, through surveys, a comprehensive list of species existing within the Project site including a number of species of bats including Serotine, greater horseshoe, lesser horseshoe, and pipistrelle. A number of other mammal species were recorded from mice, rats and ferrets to polecat marten and badger. Reptile and amphibian species were also recorded including snakes, lizards and tortoise, and frogs and toads.

Potential impacts are recognised as disturbance and displacement during construction. However, it is considered that all species affected would experience short term disruption and would have the capacity to adapt to such changes without significant affects. It is considered, with respect to bat species, that the richness in species and number of bats within the territory is low and any potential negative effects would be within the admissible limits due primarily to the avoidance behaviour of the species.

Mitigation measures will be implemented to ensure that potential impacts are minimised. Such measures will include appropriate reinstatement of the habitats on site, avoidance of construction at night time, fencing off sensitive habitat to protect the habitat and animal species where appropriate, siting of construction infrastructure to avoid the most sensitive habitats, and to limit vehicle speeds on site.

## **2.10 Landscape**

The region of the wind farm falls within the region of Dobrudja elevation, near the Black Sea. In conformity with the division of the landscapes into subsystems and regions, the Project of the wind farm belongs to the Black Seaside landscape subsystem, respectively to the Northern Black Seaside landscape region. This kind of landscape is distinguished for its flat relief and poor natural forest vegetation. It is considered however that the landscape in which the Project is sited is one which has been subject to previous anthropogenic factors which has not necessarily detracted from the natural components of that landscape.

With respect to potential visual receptors the settlements of Bulgarevo, Sveti Nikola, Hadji Dimitar, Rakovski and Porouchik Chounchevo as well as the roads in the local area are considered the most sensitive receptor to the proposed Project.

It is considered that there will be landscape and visual impacts in the immediate environment with particular regard to changes to the local landscape character, effects on landscape fabric and visual impacts to road users. It is also considered that there are potential cumulative

landscape and visual impacts together with other existing permitted and proposed wind farm developments within the wider landscape. Overall, however, whilst impacts are likely, they are not considered to be significant.

Representative pictures of the agricultural land intended for Project usage are below:



A number of mitigation methods have been prescribed relating to the consideration of appropriate colour and finishes of the turbines in order to minimise visual effects, and considering the layout of the turbines, tracks, substation etc. to avoid sensitive landscape features such as shelterbelts, and replacing soils disturbed by construction.

## 2.11 Cultural Heritage

The territory within which the Project is located is a part of Dobroudja Black Seaside, rich in monuments of culture and archeological settlements of the antique and Medieval epochs, sepulchral Thracian mounds and hill necropolises, antique and Medieval necropolises. All the archeological settlements and the smaller mounds fall in cultivable land. Of the cultural heritage resources identified in the territory, five sites were considered as of potential interest with respect to the potential impacts of the Project. A further fifty sepulchral Thracian mounds and demolished stone tombs were also recognised as part of the assessment.

Following the assessment of impacts, and given the location of the known archaeological sites against the current proposed turbine locations, it is concluded that there is no significant direct impact on the cultural heritage resource. Mitigation measures will however be adopted which relate to keeping the turbines and infrastructure away from the mounds. In accordance with the Lenders requirements a chance finds procedure will be employed.

## 2.12 Waste Matter

There are a number of potential receptors for receiving waste products resulting from the construction and operation of the Project in the Kavarna region. However, it is acknowledged that most of these sites are not regulated and are open to access to the public and so due care and attention will be required when disposing of such wastes to ensure that they are appropriately managed and treated (in light of proposed changes to the control of wastes planned for 2008).

The project is predicted to produce a number of different types of waste including domestic waste, packaging, agricultural waste, and construction matter wastes. In addition to these municipal wastes a number of wastes considered as hazardous will also be generated these primarily being batteries, paints, inks, adhesives and resins (primarily anti-corrosion substances).

Whilst the volumes of waste are not considered likely to be significant, AGE propose to employ a specialised contractor during construction who will hold responsibility to manage, store and treat the waste generated from the Project in accordance with the relevant Bulgarian regulations. Disposal will be to the regional disposal area but will be agreed before construction with RIEW in Varna (regional environmental regulator). During operation, yearly oil and grease (lubricants) changes may be made and storage and disposal of these wastes will also be undertaken in line with Bulgarian regulation requirements.

As discussed in Section 1.1, further work will be undertaken during the disclosure process to develop site specific mitigation measures and particular attention will be paid to the management of waste produced by the Project. All these measures will be captured within the Project EMMP as discussed in Section 3.

## **2.13 Harmful Physical Factors (Noise and Vibration)**

No background noise data is available for the site of the Project as it has not been subject to noise monitoring by the relevant Bulgarian public authorities (i.e. no systematic monitoring has been set up within the vicinity of the Project site). However, it is known that the key sources of background noise in the area relate to town, road, agriculture, and domestic noise. For the Project site in particular it is considered that road noise, primarily from the E87, is a key source. Indeed, from previous investigations in the area readings of 65dB(A) and 55dB(A) for day and night respectively had been recorded (20m from the road), which could be considered as an environment unfavourable to live in.

The closest residential properties and sensitive receptors are located approximately 1.2km from the Project and, following the assessment, it has been identified that the predicted noise levels will not exceed the standard values of 35/40dB(A)<sup>1</sup> at these receptors. The predicted noise levels, therefore lie within acceptable limits. Whilst no significant impacts are predicted a 500m hygienic zone has been defined in order to ensure noise level impacts on sensitive receptors are kept within acceptable limits. In addition, noise monitoring will be undertaken in order to ensure that levels remain within predicted limits.

With respect to vibration, no significant impacts are anticipated as the vibration predicted is small in magnitude and the distance to sensitive receptors is large. Whilst no impact is predicted vibration monitoring will be undertaken in order to ensure that levels remain within predicted limits.

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<sup>1</sup> As defined within Bulgarian legislation and guidance (informed by WHO criteria for noise disturbance)

## 2.14 Health and Hygienic Aspects of the Environment

### ***Ionising Radiation (IR)***

There are no tangible man made sources of IR in the Kavarna region therefore only natural background levels will persist. Project activities will not introduce new sources of IR to the region therefore it is determined that there will be no significant impacts as a result of the Project.

### ***Non-Ionising Radiation (NIR)***

Two specific issues relating to NIR have been identified as part of the EIA of the Project. The first relates to NIR that may be produced by the Project and its component parts, primarily overhead power lines. The second relates to the potential for wind turbines to produce electromagnetic interference (EMI) effects on communications, equipment and aviation.

With respect to potential NIR produced by the Project and its components, hygienic zones have been applied and agreed with the relevant authorities and so, in terms of public exposure to NIR it is concluded that there will be no significant risks to the public.

With respect to EMI effects resulting from the Project interfering with communications, equipment and aviation, there is currently no national monitoring of such transmission links. In the absence of such information, mitigation has been proposed which will seek to address any issues of transmission jamming interference on a case by case basis should issues arise. Consultations will be held with the local population before the Project is constructed in order issues can be raised and rectified appropriately. In this way, it is anticipated that there will be no significant impacts

### ***Impacts on workers/employees***

Protection of employees is recognised as a key priority in construction and operation of the Project. Measures have been outlined in terms of protection of employees during the construction of the Project including: only qualified personnel undertaking tasks relevant to their duties, provision of suitable Personal Protection Equipment (PPE), no activities to be undertaken in adverse weather conditions, provision of sanitary services and welfare amenities on site, and risk assessments and identification. These measures together with the commitment to abide by Bulgarian health and safety laws will provide the foundation on which the welfare of the employees and workers health and safety would be based.

### ***Shadow Flicker, Blade Glint and Icing***

Due regard has also been paid to the potential for wind farm issues relating to shadow flicker (a strobing affect that can be experienced by the nearby residents/public due to the reflect of the sun) and icing (Ice forming on turbines blades and then falling off causing a hazard). It is considered that, due to the prevailing climate, significant risks from icing are unlikely. With respect to shadow flicker and blade glint it is acknowledged that, at certain times of the year it effects maybe felt by nearby residents or traffic along local roads. Measures have been

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outlined to manage these issues including warnings to drivers about the risks of dazzling (blade glint) from the blades. No significant impacts are considered likely.

## **2.15 Socio-economic**

Unemployment in the Kavarna region is a little greater than for the rest of Bulgaria, but not significantly so. It is considered that the wind farm will provide construction jobs and some operational work for the local population with special training required for certain tasks.

In addition, landowners affected by the project have been appropriately compensated for sterilisation of their land for when the Project is implemented. The process included identifying and negotiating with multiple landowners across the Project site the acquisition of plots of land enabling optimal site design and layout. Prices paid for the plots of land exceeded their intrinsic agricultural land value by factors of 2 times and greater. The farmers will continue to cultivate the land in between wind turbines and, in most cases, will be able to cultivate the land owned by the Project that borders the foundations. The process has been undertaken in line with the Lenders environmental and social policy requirements.

The general benefits to the local community are considered to be:

- Increased economic activity and employment;
- Additional local tax revenue;
- Minimal sterilisation of agricultural land and appropriate compensation to affected landowners/occupiers.

With this in mind, whilst benefits are not considered likely to be significant, they will provide a positive input to the region.

### 3 Environmental Management and Monitoring Plan

One of the key mechanisms for environmental management during the detailed design and construction stages of the Project will be the development of a Social and Environmental Management System (SEMS) specific to the Project. The SEMS will set out the policies and procedures required to manage environmental and social impacts of the project to comply with applicable Bulgarian and EU legislation and the requirements of performance standards and policy requirements contained within a Project Environmental Management and Monitoring Plan (EMMP).

The EMMP describes and prioritises the actions needed to implement mitigation measures, corrective actions and monitoring measures necessary to manage the impacts identified within the ES. The primary purpose of the EMMP will be to:

- Transpose the commitments made within the ES and consent conditions with respect to mitigation measures, monitoring and consultations;
- Provide a mechanism for ensuring compliance with environmental legislation and statutory consents;
- Ensure that good construction practices and standards are adopted throughout the construction of the Project, primarily in line with Bulgarian and European legislative requirements and best practice, and World Bank Group Environmental Health and Safety Guidelines (EHS Guidelines<sup>2</sup>);
- Provide a framework for mitigating unexpected impacts during construction;
- Provide assurance to third parties that the Project's requirements with respect to environmental performance will be met; and
- Provide a framework for compliance auditing and inspection to enable AGE and EBRD to be assured that their aims with respect to environmental performance are being met.

Some of the key elements of the EMMP will include:

- Establishment of a monitoring plan over 3 years from constructing the project to study the impact of the project on local avifauna and share the results of this study with local regulators and interested stakeholders.
- Install a radar system, which together with visual observation will allow for turbines to be switched off in case of adverse conditions which could impact result in a risk of bird collision with the turbines. This process will be documented and a transparent management system developed for the project as part of an environmental management system.

<sup>2</sup> Environmental, Health, and Safety Guidelines, International Finance Corporation, April 30<sup>th</sup> 2007

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- Commitment to work with the local authorities and stakeholders to develop a bird sanctuary in this area and not to develop wind turbines in sensitive areas (particularly close to the coast).. Furthermore, the Company will provide financial support to maintain such bird sanctuary.
  - Development of a renewable energy information centre in the project area.

The EMMP will be a dynamic working document, which will continuously evolve over the course of the Project detailed design, construction, operation and decommissioning. As part of the EMMP, further plans will be produced to include the management of the following issues:

- Emergency preparedness and response;
- Waste Management;
- Pollution Prevention (including materials storage and handling arrangements);
- Water Management;
- Traffic Management;
- Reinstatement; and
- Decommissioning.

Along with the overarching EMMP, these plans will provide a system against which to monitor and audit environmental performance. Periodic yearly reports on the implementation of the EMMP and any other environmental requirements will be produced and disclosed locally. The plans will be developed and agreed in consultation with the relevant Bulgarian authorities and relevant stakeholders.

## 4 Permitting and Disclosure

The project was structured in accordance with Bulgarian legislation consisting of securing land and grid interconnection capacity with NEK, performing a rigorous EIA process that included public consultation and addressing stakeholder concerns, and Project design to both Bulgarian and European standards. The Project is now in the final stages of permitting and licensing.

The Project has been developed in accordance with the relevant Bulgarian legislation. The overarching piece of legislation which governs EIA in Bulgaria is the Environmental Protection Act 1991 (as amended), which transposes Directive 85/337/EEC (as amended by 97/11/EC and 2003/35/EC) and provides the framework around which the ESIA should be carried out. Further guidance is provided by the Regulation on the terms and conditions for carrying out Environmental Impact Assessment. The individual components have been carried out in accordance with relevant legislation and include the Monuments of Culture and Museums Act, 1969, the Biological Diversity Act, 2002 and the Nature Protection Act, 1967.

The plot of land under consideration has been allocated under the operating territorial structural plan that targets farming and other compatible production activities. Wind energy production and farming are considered compatible activities and can be conducted without the creation of conflicts regarding the land use and the type of crops grown there up to now and after the implementation of the investment intention. Notwithstanding that the plan policy provides a presumption in favour of the mix of land uses, the decision to design and build the proposed windfarm triggered the requirements for EIA, which commenced in 2006.

As part of the EIA process, the municipality authorities notified potentially interested parties which included which included local residents administrative units responsible for energy distribution, aviation, telecommunication, surface water bodies and drainage, and nature conservation. A public meeting was also held (advertised in local papers as well as at offices of local authorities). Discussions were undertaken throughout the ongoing EIA process with local authorities, NGOs and other relevant stakeholders and issues raised were dealt with as part of the EIA.

Following public hearing and consultation process, the EIA was approved in March 2007 (decision no: BA 1 - 2(114)/2007).

A Public Consultation and Disclosure Document (PCDP) has been produced and is provided in conjunction with this NTS and the ES for the Project. This plan will be a dynamic working document, which will continuously evolve over the course of the Project detailed design, construction, operation and decommissioning. The PCDP provides a summary of the consultations and disclosure that took place during the EIA of the Project and sets out how consultations and communication will be conducted with all relevant stakeholders over the lifetime of the Project.

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All responses and comments to this NTS and the disclosure process should be sent directly to AGE, at the following address:

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