2012

EHS Annual Monitoring Report



WIND FARMS

SOLAR PV

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<u>Introduction</u>

EDP Renewables is a world leader in the renewable energy sector and is the world's fourth largest wind energy company. The EDP Group is EDP Renewables' major shareholder. Besides its leadership position on the Iberian Peninsula, EDP Group also holds a significant position in the Brazilian electricity sector.

Among other countries, like UK, USA, France, Belgium, Italy, Poland, etc EDP Renováveis (further referred to as **EDPR**) develops and operates wind farms in **Romania**.

One of the main strategic initiatives defined in EDPR's growth plan entering new markets and new technologies. In this regard, in 2012 EDPR took the imitative to enter the solar PV market in Romania.

For the wind farms developed in Romania that are currently under operation: Pestera, Cernavoda, Sarichioi and Vutcani EDPR was granted with financial support from the EBRD and other banks of International Finance Corporation. The financial involvement of the banks was preceded with the Environmental and Social Due Diligence (ESDD) and elaboration of ESIA documentation.

- In 2010 an Environmental and Social Due Diligence was carried out for Pestera and Cernavoda WFs according with EBRD and IFC requirements
- In 2012 an Environmental and Social Due Diligence was carried out for Sarichioi and Vutcani WFs according with EBRD requirements
- In 2012 an Environmental and Social Due Diligence was carried out for 8 solar PV Plants according with EBRD requirements

WSP Environmental UK Ltd (WSPE) has been commissioned by EDPR to undertake top level Environmental and Social Due Diligences (ESDDs) for the investments addressed above.

This reports has been prepared in order to present to the Banks the status of the project and EHS issues as well as the level of implementation of SEP and ESAP in 2012. Following the Bank's expectations, the report presents:

- Information on the status of the projects, any changes to the projects as well as information on environmental performance, mainly compliance with the contractual specifications as well as National and EU environmental standards
- Information on compliance with the ESAP and on any new projects or changes to planned investment
- Information on post-construction monitoring results
- Summary of any material changes in law significantly affecting Environmental or Social Matters

Main chapters of this report are:

I. Projects details

II. Contact authorised representative

III. Summary of compliance evaluation

- II. 1 Compliance with EMMP requirements
- II. 2 Compliance with ESAP requirements
- II. 3 Compliance with SEP requirements
- II. 4 Compliance with applicable requirements of the Performance Standards
- II. 5 Compliance with applicable S&E law
- II. 6 Major environmental and social achievements
- II. 7 Major challenges and issues for the Company

IV. Compliance with ESAP and EMMP

V. Compliance with IFC Performance standards on Social and Environmental Sustainability and applicable EU and Romanian Laws

- IV. 1 PS 1. Social and Environment Assessment and Management System
- IV. 2 PS2. Labour and working conditions
- IV. 3 PS3. Pollution Prevention and Abatement
- IV. 4 PS4. Community, Health, Safety and Security
- IV. 5 PS5. Land Acquisition and Involuntary Settlement
- IV. 6 PS6. Bird Monitoring and turbine shutdown system

This report will be posted on EDPR website, Sustainability section.

I. <u>Projects details</u>

I.1. Location of Solar PV Projects

In 2012 EDP R Romania planned to construct and operate eight solar photovoltaic parks ("PV plants") in southern and southwest Romania, specifically in Mehedinti (four plants), Dolj (two plants), and Olt (two plants) counties. The total generating capacity will be 65MW with individual plants ranging from 4.1MW to 12MW. The Company will on-lend Bank funds to eight wholly-owned special purpose vehicles that will be established for the eight PV plants.

EDPR has approached the European Bank for Reconstruction and Development ("EBRD," or "the Bank") for financing. The EBRD has determined the project qualifies as **Category B** under Appendix 1 to the Bank's 2008 Environmental and Social Policy. The Bank requires the services of a consultant to assist with Environmental and Social Due Diligence (ESDD) of the Project, including all eight solar PV plants. The benchmark for the assessment will be the EBRD's 2008 Environmental and Social Policy and associated Performance Requirements.

PV Plant	Capacity (MW)	Status 2012
Cujmir	12	Construction
Dabuleni	7.5	Construction
Grojdibodu	9.93	Construction
Vanju Mare	9.35	Construction
Burila Mica	7.5	In Development
Gruia	7.5	In Development
Bailesti	4.1	In Development
Dobrosloveni	7.5	In Development

A summary of the capacity of each PV Plant is presented as follows.

EDP R Romania has purchased until December 2012 six of the solar PV Plants, listed above except projects Gruia and Doborsloveni. This report will refer only to the 6 projects constructed/developed/ operated in 2012.



Location of Solar PV Plants:

The sites are located in rural areas and the terrain is generally flat, in the case of the Gruia site there is a shallow valley running across the site which may require some re-profiling. There are very few trees and shrubs apart from those found around the boundaries of certain sites.

Description of Equipment and Infrastructure

The assumed photovoltaic module model is STP245-20/WD – 245 Wp produced by Suntech and the modules will be constructed in rows of seven to 30 blocks of 21 panels (seven modules in series and three landscape oriented). Each row shall be connected to a separate inverter off 500 or 1000 kVA. Distance between the rows will be 10 m (9 m on the Vanju Mare Site). The panels are set at a fixed tilt of 350 and are static. The panels will be screwed into metal structures and will, therefore, be easily removable. The set-up of the structures is shown below.

Set-up of the Photovoltaic Structures.



I.2. CUJMIR 12 MW PV Plant: specific environmental issues

The site is located approximately 2.5 km to the west of the village of Cujmir in Mehedinti County. The overall area of the site is 34.2 ha (341,724 m2) and comprises of generally flat, former agricultural fields. A disused irrigation channel is located adjacent to the northern boundary of the site. Access to the site is via an un-named local road which connects to the DN56A (National Road).



Location of Cujmir Photovoltaic Plant, Mehedinti County.

Landscape and Visual Impact

The landscape on and in the general area of the site comprises open, former agricultural land, which has become overgrown with grass and scrub. The nearest residential properties to the site are located approximately 2.59 km to the east in Cujmir village). An extensive tree belt of trees lies on the western boundary of the village resulting in views to the site from the village being very limited. There are no direct views of the site from any county or national roads. Given the existing site conditions and the distance and existence of a visual screen between the village and the site, it is considered that the landscape and visual impact of the proposed solar farm is negligible.

Ecology

The closest ecologically designated areas to the site are SCI and SPA to the location of the solar park is ROSCI0299 Dunărea la Gârla Mare – Maglavit SCI and ROSPA0046 Gruia – Gârla Mare which are located approximately 5.25 km from the south-west.

During the site visit, no protected/red book species were encountered on the site. A small flocks of Common Starlings (Sturnus vulgaris) observed crossing over the site. The constant flat terrain formerly used for agriculture with no shading, along with its location near the road, is unlikely to provide nesting, feeding or resting conditions for protected bird species. Therefore, solar panels should provide no impact on local bird species.

Archaeology and Cultural Heritage

As part of the Environmental Permitting process, the Cultural Departments of the local authority was consulted in relation to any aspects of cultural heritage in the proximity of the sites. No sites or features of interest were identified as part of this process. During the site visits no above-ground features were identified.

Security and Lighting

During the construction phase security lighting was present on the construction compound. This will be directionally-controlled into the compound to minimise any potential impacts on local ecological or human receptors as a result of light spill or glare.

When operational, it is proposed that security at the Cujmir site will be managed remotely and that motion detection sensors, CCTV and lighting will be installed on and adjacent to a three metre high perimeter fence.

Drainage, Surface Water Run-Off and Flooding

No water features were identified on the site. The nearest water feature to the site is a disused irrigation channel located adjacent to the northern boundary of the development.

I.3. Dabuleni 7.5 MW PV Plant: specific environmental issues

The site is located approximately 8 km to the north-west of the village of Dăbuleni and 20 km to the north of the River Danube in Dolj County. The overall area of the site is 24.1 ha (241,486 m2) and comprises of three generally flat, former agricultural fields. A disused irrigation channel and pumping station are located adjacent to the eastern boundary of the site. Access to the site is via an unnamed local road which connects to the DJ542 (Country Road).



Landscape and Visual Impact

The site comprises three former agricultural field bordered on all sides by existing tree lines. The nearest residential property to the site is located approximately 8 km to the east and has no views of the development. The PV arrays to be erected on the site will be static thereby limiting potential glint and glare impacts and there are no airports in close proximity to the site. Given the location of the site and the lack of any visual receptors, it is considered that the landscape and visual impact of the proposed solar farm is negligible.

Ecology

The closest SCI to the location of the solar park is ROSC10045 Coridorul Jiului, located approximately 11 km west of the site, while the closest SPA is ROSPA0023 Confluența Jiu-Dunăre, located approximately 13.4 km to the west.

During the site visits, no protected/red book species were encountered. Three common buzzards (Buteo buteo) were observed gliding in circles at high altitude above the area, as they were heading south for migration. Protected species that may cross the area are most likely migratory species that usually travel for long distances at high altitude and have few stops. The constant flat terrain formerly used for agriculture with no shading, is unlikely to provide nesting, feeding or resting conditions for protected bird species. Therefore, solar panels should not provide any impact on local bird species.

Archaeology and Cultural Heritage

As part of the Environmental Permitting process, the Cultural Departments of the local authority was consulted in relation to any aspects of cultural heritage in the proximity of the sites. No sites or features of interest were identified as part of this process. During the site visits no above-ground features were identified.

Security and Lighting

During the construction phase security lighting was present on the construction compound. This will be directionally-controlled into the compound to minimise any potential impacts on local ecological receptors as a result of light spill.

Drainage, Surface Water Run-Off and Flooding

No water features were identified on the site. The nearest water feature to the site is a disused irrigation channel located adjacent to the eastern boundary of the development.

I.4. Grojdibodu 9.93 MW PV Plant: specific environmental issues

The site is located approximately 1.25 km to the north-west of the village of Grojdibodu and 2 km to the north of the River Danube in Olt County. The overall area of the site is 31.7 ha (317,800 m2) and comprises of former agricultural fields. The northern and western boundaries of the site are delineated by rows of trees and a disused irrigation channel is located adjacent to the northern boundary. Access to the site is via an un-named local road which connects to the DN54A (Country Road).



Landscape and Visual Impact

The landscape on and in the general area of the site comprises of open, former agricultural land. The nearest residential properties to the site are located approximately 1.2 km to the east in Grojdibodu village. The northern and western boundaries of the site are defined by trees. The fields on the intervening land between the site and the village are also tree-lined. Given the distance and existence of a visual screening provided by the tree-lines between the village and the site, it is considered that the landscape and visual impact of the proposed solar farm is negligible.

Ecology

The closest SCI to the location of the solar park is ROSCI0376 Râul Olt între Mărun ei i Turnu Măgurele, located approximately 10,4 km to the north-west,

while the closest SPA is ROSPA0135 Nisipurile de la Dăbuleni located at approximately 3,15 km to the south-west

Among bird species for which the site ROSPA0135 Nisipurile de la Dăbuleni (located at approximately 3,15 kilometers far) was designated, there are 9 protected species that prefer the open field – meadow habitat: White Stork (Ciconia ciconia), Red-footed Falcon (Falco vespertinus), Barred Warbler (Sylvia nisoria), Tawny Pipit (Anthus campestris), European Nightjar (Caprimulgus europaeus), European Roller (Coracias garrulus), Lesser Grey Shrike (Lanius minor), Ortolan Bunting (Emberiza hortulana) and Red-backed Shrike (Lanius collurio). All these species are migratory bird species and occur only in warm seasons. Due to the small surface of the solar park and north positioning from the protected area, it is unlikely that it provides any impact such as habitat loss or feeding/resting area for any protected bird species.

During the site visit, no protected/red book species were encountered. One Common Kestrel (Falco tinnunculus), a number of Rooks (Corvus frugilegus) and Western Jackdaws (Corvus monedula) were observed in the area. The constant flat terrain shouldn't provide any impact on bird species that may occur on the site.

Archaeology and Cultural Heritage

As part of the Environmental Permitting process, the Cultural Departments of the local authority was consulted in relation to any aspects of cultural heritage in the proximity of the sites. No sites or features of interest were identified as part of this process. During the site visits no above-ground features were identified.

Security and Lighting

During the construction phase security lighting was present on the construction compound. This will be directionally-controlled into the compound to minimise any potential impacts on local ecological or human receptors as a result of light spill or glare.

Drainage, Surface Water Run-Off and Flooding

No water features were identified on the site.

I.5. Vanju Mare 9.36 MW PV Plant: specific environmental issues

The site is located approximately 2 km to the south-west of the village of Bucura and 2 km to the east of the River Danube in Mehedinti County. The overall area of the site is 23.4 ha (234,052 m2) and comprises of former agricultural fields. An earth embankment is located on the south-western boundary of the site beyond which is a small stream. Access to the site is via a track road which connects to the Dj562 (Country Road).



Landscape and Visual Impact

The landscape on and in the general area of the site comprises of open, former agricultural land, which has become overgrown with grass and scrub. The nearest residential properties to the site are located approximately 1.94 km to the northeast in the village of Bucura. There are intermittent stands of trees along the southwest border of the village allowing limited views directly to site. Given the existing condition of the site and the distance and existence of a visual screen between the village and the site, it is considered that the landscape and visual impact of the proposed solar farm is negligible.

Ecology

The closest SCI to the location of the solar park is ROSCI0299 Vânju Mare, located approximately 0.85 km to the north-east, while the closest SPA is ROSPA0011 Blahnita and is located approximately 7.2 km to the east.

During the site visit, no protected/red book species were encountered. Several White Wagtails (Motacilla alba) were observed at the edge of the site, as they were heading south for fall migration. Some small flock of Common Starlings (Sturnus vulgaris) and Rooks (Corvus frugilegus) were encountered at distances over 1 km of the emplacement. The constant flat terrain formerly used for agriculture with no shading, along with its location near the road, is unlikely to provide nesting, feeding or resting conditions for protected bird species. Therefore, solar panels should provide no impact on local bird species.

Archaeology and Cultural Heritage

As part of the Environmental Permitting process, the Cultural Departments of the local authority was consulted in relation to any aspects of cultural heritage in the proximity of the sites. No sites or features of interest were identified as part of this process. During the site visits no above-ground features were identified.

Security and Lighting

During the construction phase security lighting was present on the construction compound. This will be directionally-controlled into the compound to minimise any potential impacts on local ecological receptors as a result of light spill.

Drainage, Surface Water Run-Off and Flooding

No water features were identified on the site. The nearest water feature to the site is a stream located adjacent to the south-western boundary of the development.

I.6. Burila Mica 7.5 MW PV Plant: specific environmental issues

The site is located approximately 1 km to the south-east of the village of Burila Mica and 3 km to the north-east of the River Danube in Mehedinti County. The overall area of the site is 22.7 ha (227,394 m2) and comprises of former agricultural fields. An earth embankment is located on the northern boundary of the site beyond which is a disused irrigation channel. A block of woodland is located adjacent to the south-western corner of the site. Access to the site is via a track road which connects to an un-named road connecting the villages of Burila Mica and Gogosu.



Landscape and Visual Impact

The landscape on and in the general area of the site comprises of open, former agricultural land, which has become overgrown with grass and scrub. The nearest residential properties to the site are located approximately 0.74 km to the north-west in Burila Mica. The disused irrigation channel which runs parallel to the northern boundary of the site is approximately 3m higher in elevation than both the site and the residential property and significantly limits the views of the site from this are. Given the existing condition of the site and the distance and existence of a visual screen between the village and the site, it is considered that the landscape and visual impact of the proposed solar farm is negligible.

Ecology

The closest SCI to the location of the solar park is ROSCI0306 Jiana. Burila Mică solar park is located in ROSPA0011 Blahnia. The present site is located on dry flat land, formerly used for agriculture and it has a considerable distance to the nearest water body or wetland. From all the species for which ROSPA0011 Blahnia was desgnated for, only two of them may occur on the present emplacement: Marsh Harrier (Circus aeruginosus) and European Roller (Coracias garrulus).

Due to site survey, no red book/protected species were encountered. The small surface of the solar, as well as it's distance from any water bodies represents no threat to bird species that may cross the emplacement.

Archaeology and Cultural Heritage

As part of the Environmental Permitting process, the Cultural Departments of the local authority was consulted in relation to any aspects of cultural heritage in the proximity of the sites. No sites or features of interest were identified as part of this process. During the site visits no above-ground features were identified.

Security and Lighting

During the construction phase security lighting was present on the construction compound. This will be directionally-controlled into the compound to minimise any potential impacts on local ecological or human receptors as a result of light spill or glare.

Drainage, Surface Water Run-Off and Flooding

No water features were identified on the site. The nearest water feature to the site is a disused irrigation channel is located adjacent to the northern boundary of the development.

I.7. Bailesti 4.1 MW PV Plant: specific environmental issues

The site is located approximately 1km to the east of the village of Builesti and 17 km to the north of the River Danube in Dolj County. The overall area of the site is 14.2 ha (144,203 m2) and comprises of former agricultural fields. A railway line runs parallel and adjacent to the southern boundary and a small holding including brick-built barn/stable is located adjacent to the south-west corner of the site. Access to the site is via a track road which connects to the Dj561A, which connects Bailesti and Giurgita. The nearest residential property to the site is located approximately 0.9 km to the west.



Landscape and Visual Impact

The landscape on and in the immediate area of the site comprises of open, former agricultural land, which has become overgrown with grass and scrub and on which there is evidence of fly-tipping. The general character of the area surrounding the site is industrial and there are disused and operation facilities located in close proximity to the eastern and western boundaries. The nearest residential properties to the site are located approximately 0.9 km to the southwest in Bailesti. Views to the site from these properties are partially screened by

existing industrial facilities and a belt of trees in the intervening land. Given the existing condition of the site, the general industrial character of the surrounding area, and the distance to the nearest residential receptor, it is considered that the landscape and visual impact of the proposed solar farm is negligible.

Ecology

The closest SCI to the solar park is ROSCI0202 Silvostepa Olteniei, located at approximately 12.5 km to the north-east, while the closest SPA is ROSPA0074 Maglavit located approximately 22 km the west.

During the site visit, no protected/red book species were encountered on or in close proximity to the site. Some small flocks of Crested Larks (Galerida cristata) and Common Starlings (Sturnus vulgaris) were observed crossing over the site. The constant flat terrain formerly used for agriculture with no shading, along with its location near the road, is unlikely to provide nesting, feeding or resting conditions for protected bird species. Therefore, solar panels would also have a zero impact on local bird species.

Archaeology and Cultural Heritage

As part of the Environmental Permitting process, the Cultural Departments of the local authority was consulted in relation to any aspects of cultural heritage in the proximity of the sites. No sites or features of interest were identified as part of this process. During the site visits no above-ground features were identified.

Security and Lighting

During the construction phase security lighting will be present on the construction compound. This will be directionally-controlled into the compound to minimise any potential impacts on local ecological or human receptors as a result of light spill or glare.

Drainage, Surface Water Run-Off and Flooding

No water features were identified on the site.

I.8. 2012 Status of solar PV Plants

Year 2013 is the first operational year for 4 solar PV plants. The start of operation dates are presented below:

SOLAR PV Plant	2012 status	Start of operation date:	
Cujmir	In construction	March 2013	
Dabuleni	In construction	December 2012	
Grojdibodu	In construction	Februcary 2013	
Vanju Mare	In construction	April 2013	
Burila Mica	In development	August 2013	
Bailesti	In development	August 2013	

I.9. Pestera (90 MW) and Cernavoda I-II (139MW) Wind Farms - Operation

The Project sites are located in the Constanta County in the south-west region of Romania, approximately 33km (Pestera) and 45km (Cernavoda) respectively west of Constanta on the Black Sea coast. Both sites are located in rural areas and are located more than 600m from the closest residential properties.

The distance between the Pestera and Cernavoda sites is approximately 7km at the nearest point and approximately 15 km from the centre of each site. Figure 1 shows the approximate location of the Projects.



Pestera and Cernavoda WFs Sites Location (Source: Google Maps)

The site at Pestera is located approximately 2.5km south-west of Pestera town and 1km south of Ivrinezu Mic and to the south east of Rasova. The site is accessed via the DJ223b to the west and the DJ222 to the east. The eastern part of the site is located near the Irvinezului Valley and the Movila Lui Lipan. The Danube to Black Sea Navigable Canal, a tributary of the River Danube is located approximately 2km to the north of the site, with the River Danube being approximately 10km to the west. The Pestera site is approximately 38km west of the Black Sea coast.

The site at Cernavoda is located approximately 1km south west of Tibrinu and approximately 4km east of the town of Cernavoda. Access to the site is via the DJ225 county road and then via the existing roads associated with general activities in the area.

To the north of the Cernavoda site are Lake Tibrinu (including a fish farm), the villages of Tibrinu and Gherghina and the boundary of the Cernavoda administrative area. The village of Stefan cel Mare is located to the east and to the west is the boundary of the settlement of Micea Voda. The areas of Faclia and the outskirts of Mircea Voda and Saligny are present to the south. The Danube to Black Sea Navigable Canal is located approximately 5km to the south of the site, and the River Danube itself is located approximately 8km to the west. The Cernavoda site is located approximately 50km east of the Black Sea coast.

2012 status of Pestera and Cernavoda I-II Wind Farms

Pestera wind farm is composed from 30 wind turbines (VESTAS V90 3.0 MW) providing a total installed capacity of **90MW** and **Cernavoda** wind farm of 46 wind turbines (also VESTAS V90 3.0 MW) providing a total installed capacity of **138 MW**.

Year 2012 was second operational year of both wind farms. The start of operation dates are presented below:

	Start of operation date:
Pestera WF	October 2010
Cernavoda I WF	February 2011
Cernavoda II WF	September 2011

Summary Pestera WF stages:

- a) The civil works of Pestera Wind Farm were finished in September 2010
- **b) Connection** to the national grid was allowed by Transelectrica (National Grid Operator) and established in October 2010, with the condition of finishing the works needed in Medgidia Sud and Rasova substations until March 2011.
- c) Connection works consisting in additional works executed in Enel facilities (Rasova substation) and Transelectrica facilities (Medgidia Sud Substation) were executed according with the connection permits in force (issued by Enel and Translectrica) in January 2011. Pending works are foreseen for 2012. Communication works were required to ensure proper communication between Pestera substation and National Grid Dispatcher (DEN).
- d) Tests of wind turbines started immediately after the connection to the grid (October 2010). Special tests required by Transelectrica according to their Operational Procedure started in January 2010.

Summary Cernavoda WF stages:

- e) The civil works have finished in Cernavoda I and II Wind Farm in December 2010.
- f) Connection to the national grid of Cernavoda I WF was in February 2011 and of Cernavoda II WF in September 2011
- g) Connection works consisting in additional works executed in Enel and Transelectrica facilities (Ecluza 110 kV, Tortomanu 110 kV, Mircea Voda 110 kV, Mircea Voda Nord and Medgidia Nord substations) were executed according with the connection permits in force (issued by Enel and Transelectrica). Pending works are foreseen for 2012. Communication works were required to ensure proper communication between Cernavoda substation and National Grid Center.
- h) Tests of wind turbines Special tests required by Transelectrica according to their Operational Procedure started in March 2011.

I.10. Sarichioi (33MW) and Vutcani (24MW) Wind Farms - Operation

Sarichioi WF (33 MW) is located in Sarichioi WF, Tulcea County. The site is in rural area and situated more than 2 km N-E from Agighiol village. The access is made from DJ222-km 0=023.

Vutcani WF (24 MW) is located in Vutcani commune, Vaslui County. The site is situated 1 km East of Vutcani commune and 3,5 km West from Rosiesti Commune. The access is made from DJ 224b.



Sarichioi WF Site Location



Vutcani WF Site Location

2012 status of Sarichioi and Vutcani WFs - operation:

Sarichioi WF is composed from 11 wind turbines (turbine model VESTAS V90 3.0 MW), providing a total installed capacity of **33 MW** and **Vutcani WF** of 12 wind turbines (VESTAS V90 2.0 MW) providing a total installed capacity of **24 MW**.

i) The civil works of Sarichioi and Vutcani WFs have finished in February 2012

- j) Connection works for Vutcani WF consisting in additional works executed in EON facilities (Husi substation) and Transelectrica facilities (Munteni Substation) are executed according with the connection permits in force (issued by EON and Transelectrica) and are planned to be finished in March 2012. Communication works are required to ensure proper communication to National Grid Dispatcher (DEN) and are planned to be executed in March 2012.
- k) Connection works for Sarichioi WF consisting in additional works executed in Enel facilities (Zebil substation) and Transelectrica facilities (Tulcea Vest Substation) are going to be executed according with the connection permits in force (issued by Enel and Transelectrica) and are planned to be finished in March 2012. Communication works are required and are planned to be executed in March 2012.
- I) Tests of wind turbines of both wind farms are going to be started immediately after the connection to the grid. Special tests required by Transelectrica according to their Operational Procedure will be performed.

I.11. Cobadin (26 MW) and Vutcani Extension (28MW) Wind Farms - Construction

The **Cobadin** wind farm is located within Dobrogea area, and is approximately 3 km from Ciocarlia and Cobadin localities, as shown on Figure 2. These localities are rural in character and are situated along water courses, roads and farmland. The access is made using County Road DJ3.



Location of the Cobadin Wind Farm

The Site covers an area of ~200 ha and is on land which is privately owned by EDPR. The land has limited agricultural value and is used for crop production,

including wheat. Within the Site there are no forested areas or rare/sensitive plant species. Agricultural land use is not colonised other than by grasses and plants which are fast growing and tolerant to the environmental conditions. Water resources are limited, with no irrigation systems in place.

The **Vutcani Extension** wind farm is located within Moldova area, and is approximately 4.7 km from Albesti, 4 km from Oltenesti, 11 km from Costesti, 7 km from Codreni, and 5.5 km from Vutcani localities, as shown on Figure 2. These localities are rural in character and are situated along water courses, roads and farmland. The access is made using county road DJ224b and links with national road DN28b between lasi-Barlad and Vutcani.



The Site covers an area of ~83 ha and is on land which is privately owned by EDPR. The land has limited agricultural value and is used for crop production, including wheat. Within the Site there are no forested areas or rare/sensitive plant species. Agricultural land use is not colonised other than by grasses and plants which are fast growing and tolerant to the environmental conditions. Water resources are limited, with no irrigation systems in place.

Ecology

The **Cobadin** wind farm is not located within the boundary of any protected areas, including Natura 2000 sites such as Special Protected Areas (SPAs), Sites of Community Importance (SCIs) and International Bird Areas (IBAs).

The distances of Cobadin WF to Natura 2000 areas are:

- ROSCI0071 Dumbraveni-Valea Urluia-Lacul Vederosa: 11 km from WTG 6
- ROSCI0353 Pestera Deleni: 7 km from WTG 1; 0.5 km from WTG 7, 8 and 9
- ROSCI0083 Fantanita Murfatlar 10.79 km from WTG 13
- ROSCI0398 Straja Cumpana 16.7 km from WTG 13

- ROSPA0061 Lacul Techirghiol 26 km from WTG 6
- ROSPA0001 Adamclisi 12 km from WTG 1



The **Vutcani Extension** wind farm is not located within the boundary of any protected areas, including Natura 2000 sites such as Special Protected Areas (SPAs), Sites of Community Importance (SCIs) and International Bird Areas (IBAs).

The nearest Natura 2000 area is ROSCI 0213 raul Prut situated at approximately 30 km distance from Vutcani Extension WF. Raul Prut SCI supports species such as otter, mouse-eared bat and European ground squirrel.

The Vutcani Extension wind farm is not located within the boundary of any protected areas, including Natura 2000 sites such as SPAs, SCIs or International Bird Areas (IBAs).

2012 status of new projects Cobadin and Vutcani Extension - construction:

The Cobadin Wind Farm comprises 13 wind turbines (turbine model VESTAS V90 2.0MW), providing a total power of 26MW. Each wind turbine consists of a hollow steel tower with a generator nacelle which houses and protects the main components of the rotor blades, gear box, transformer and control systems. The turbines each have a total height of 150 m (comprising 105 m tower and 45 m rotor blade above the tower height). The turbines are connected via 33kV underground cables and junction stations which are connected to a transformer station within the wind farm that is in turn connected to the nearest Enel Dobrogea Facilities

The 13 2MW wind turbines associated with the Cobadin Wind Farm have already been constructed. The wind farm was connected to Enel Distribution Company on 30.01.2013. **The wind farm is estimated to become fully operational on May 2013**, after finishing mandatory compliance tests. The procedure for obtaining the environmental authorization (EA) was started. Estimative issuance date of EA: Mid of April 2013.

The Vutcani Extension wind farm comprises 14 wind turbines (turbine model VESTAS V100 2.0 MW), providing a total power of 28 MW. Each wind turbine consists of a

hollow steel tower with a generator nacelle which houses and protects the main components of the rotor blades, gear box, transformer and control systems. The turbines each have a total height of 145 m (comprising 95 m tower and 50 m rotor blade above the tower height). The turbines are connected, through 20kV underground cables and junction stations which are connected to a transformer station within the wind farm and this is then be connected to the nearest E.ON Romania transformers.

I.12. Facaeni (264MW) Wind Farm - Development

The **Facaeni** Wind Power Plant is situated in the county of Ialomita, on the territory of the communes Mihail Kogalniceanu, Vladeni, Saveni, Facaeni, Movila and Bordusani (county of Ialomita). The placement is situated in the south eastern part of Romania, at approximately 130 km from Bucharest, adjacent to the Ialomita commune.

The territory is characterized by the presence of low-lying areas, alternating with small hills, with a height that does not exceed 78 m. Population density in the area is low and there is little housing near the objective.

Access to the site is achieved from Bucharest on Highway A2 to Fetesti, after which we follow CR 212 to the locality of Movila, and from here, access to the station is achieved using dirt roads. The terrain on which the power plant is situated is arable land.



The area on which the project is located is the property of SC lalomita Power SRL. The total area is ~1380 ha, located in the unincorporated area of the communes Facaesti, Vladeni and M. Kogalniceanu, in the county of lalomita.

Ecology

The distances of Facaeni WF to Natura 2000 areas are:

• ROSCI0278 Bordusani-Borcea: 6.25 km from wtg TF49

- ROSPA0012 Bratul Borcea: 8 km from wtg TF46
- ROSPA0017 Canarele de la Harsova 11.77 km from wtg TK06
- ROSPA0120 Kogalniceanu-Gura Ialomitei 5.6 km from wtg TK06
- ROSCI0290 Coridorul Ialomitei 9.8 km from wtg TK04



II. <u>Contact authorised representative</u>

Authorised representatives to be contacted by IFC, EBRD and other Lenders on the AMR:

Name: Laura Lazar Tel: 0040-212010890 Name: Florentina Fasie Tel: 0040-212010890 Title: Project Manager/EMS Manager Email: lauralazar@edpr.com Title: Environmental Specialist Email: lauralazar@edpr.com

III. <u>Summary of compliance evaluation</u>

III.1 Compliance with ESAP, EMMP and SEP requirements

EDPR succeeded to implement and respect all measures foreseen for the wind farms developed in Romania that are currently under operation: Pestera, Cernavoda, Sarichioi and Vutcani EDPR, that were in construction during 2012: Cobadina nd Vutcani Extension WFs and that wre in development stage: Facaeni WF.

The financial involvement of the banks was preceded with the Environmental and Social Due Diligence (ESDD) and elaboration of ESIA documentation.

- In 2010 an Environmental and Social Due Diligence was carried out for Pestera and Cernavoda WFs according with EBRD and IFC requirements
- In 2012 an Environmental and Social Due Diligence was carried out for Sarichioi and Vutcani WFs according with EBRD requirements
- In 2012 an Environmental and Social Due Diligence was carried out for 8 solar PV Plants according with EBRD requirements

More details are described in:

- Chapter IV.1 Compliance with ESAP.
- Chapter III.2 Compliance with EMMP
- Chapter III.4. Information on SEP implementation

The **SEP** was elaborated in order to formalize communication of EDPR Romania with the project stakeholders. Following the SEP requirements, EDPR Romania maintained internal and external stakeholders dialogue. The internal dialogue was based on routine exchange of information between different organizational units of the Company and individuals involved in the project development. The email exchange, organization of periodical meetings and notifications posted on the information boards were commonly used to assure the flow of information between the employees.

The external communication was focused on building a good understanding of the projects among the local communities and competent authorities.

III.2. Compliance with applicable requirements of the Performance Standards

Information regarding compliance with following performance standards are presented in **Chapter V**:

- PS 1. Social and Environment Assessment and Management System
- PS2. Labour and working conditions
- PS3. Pollution Prevention and Abatement
- PS4. Community, Health, Safety and Security
- PS5. Land Acquisition and Involuntary Settlement
- PS6. Bird Monitoring and turbine shutdown system

III.3. Compliance with applicable S&E law

EDPR Renewables Romania acts in accordance with all applicable Romanian regulations and laws.

During the construction phases of new wind farms developed in 2012: Cobadin 26 MW and Vutcani Extension 28 MW, the company paid zero compensation/damages. No court trials against the company were instructed because of the construction damages. No other material non-compliances with environmental, social and H&S regulations or law appeared in 2011.

Details regarding applicable S&E Law are presented in **ChapterIV.3. PS3. Pollution Prevention and Abatement, PS 3 (i).**

III.4. Major environmental and social achievements

III.4.1. Memberships

EDPR Romania is a member of **RWEA – Romanian Wind Energy Association** since 2010 where EDPR is playing an important role supporting the development of renewable energy.

EDPR holds a position in the Board of Directors of the Romanian Wind Energy Association. The person appointed as a representative of EDPR is Mr. Jose Juan Canales Trenas.

Involvement of EDPR:

EDPR is an active member supporting the association in several fields of activity

- financial support for the internal budget of RWEA including events organization
- decisional support for the Board of Directors
- input for legislative framework, active role in the Task Force group established for proposing amendments to legislation
- participation in all events organized by RWEA.

EDPR Romania (EDPR RO PV Company) is a member of **RPIA** – **Romanian Photovoltaic Industry Association** since 2012. **EDPR** holds a position in the Board of Directors, the person appointed as a representative of EDPR is Mr. Jose Juan Canales Trenas.

Involvement of EDPR:

- Attending and actively participating at all board meetings to further the success of RPIA and to support RPIA's mission and goals;
- Assuming responsibilities for specific projects by volunteering, such as serving on Board committees, serving as liaisons to other organizations and authorities, representing the association at meetings, or preparing reports and statements;
- Chairing committees and/or task forces as requested by BoD Chairman;
- Representing RPIA at industry events, as agreed in the BoD;
- Promoting RPIA at every opportunity and representing the best interests of RPIA at all times;
- Regularly attending and actively participating in RPIA programs.

III.4.2. Recognition awards:

Global reporting Initiative (GRI):

Reporting on sustainability performance is an important way to manage the EDPR impact on sustainable development, environmental and social conditions.

By taking a proactive role to collect, analyze, and report important steps taken by the company to reduce potential business risk, EDPR promotes Transparency and Accountability. Putting information on the public domain allows stakeholders to track the company's performance on broad themes – such as environmental performance - or a particular issue - such as labor conditions on sites.

KPMG has confirmed the A+ GRI rating for EDPR 2011 Annual Report. GRI Standards are the most recognized benchmark for companies to report on their sustainability performance, and A+ is the top rate.

More details regarding recognition awards of EDPR for 2011 are available in the Company Annual Report published on company website.

Dow Jones Sustainability Index:

EDPR is focused on continuously improving its performance in Sustainability, and this is highlighted in its declaration of Vision and Mission, as a way to create value to our shareholders and to the society. As a leader in the renewable sector, EDPR plays a key role in EDP Group, as leader among Utilities on the Dow Jones Sustainability Index in 2012.

III.4.3. EMS ISO 14001 Certification

In 2012 EDPR implemented for Sarichioi and Vutcani WFs the EMS ISO 14001 and maintained EMS system certified for Pestera and Cernavdoa WFs. The certification was obtained in October 2012 and was issued by Lloyd's Register EMEA. According to this evaluation, during operation there were no registered uncompliances with the Romanian legislation in force. Due to this fact and because no complaints were received from local communities and no penalties were paid to competent authorities, no compensatory measures were taken during operation of these wind farms.

III.4..4. Indirect economic impacts:

Infrastructure investments in public or private roads during 2012:

The Wind Farm construction comprises the construction of new roads used for the access to each wind turbine and rehabilitation of existing roads in order to allow the transportation of heavy equipment to the site during construction works.

In all 4 wind farms currently under operation, EDPR allows access to local inhabitants to use all new constructed and rehabilitated roads, facilitating in this way the agricultural activities. The platforms that were used for wind turbines installation are used by inhabitants as temporary parking places for equipment used in agricultural activities. In Pestera WF the new constructed roads are currently used as a <u>bypass road</u> to access directly lyrinezu village.

As showed in the tables below in total EDPR Romania constructed 118.32 km of new roads with an investment of 10623 €k.

	2010				2011			
New roads constructed	Peste	ra WF	Cernav V	voda I-II VF	da I-II Sarichioi WF		Vutcani WF	
in 2010 and	Oper	ration	Ope	ration	Ope	ration	Oper	ration
2011	km	€K	km	€K	km	€K	km	€K
	26.82	3,078	40	3,702	17	1,073	11	1,000

New roads constructed In 2012	Col	oadin WF	Vutcani	Extension WF
	Cor	Construction		truction
	km	€K	km	€K
	15.2	1,300	8.3	1,100

Access to Solar PV Plants requires investment in access roads. Details regarding lengths of new access roads and necessary investment are presented in the table below:

New roads constructed	Cujr	nir PV	Dabul	eni PV	Grojdobodu PV		Vanju Mare PV	
ln 2012	Const	ruction	Const	ruction	Const	ruction	Constr	uction
	km	€K	km	€K	km	€K	km	€K
	3,3	0,200	1,2	0,079	2,6	0,240	0,85	0.015

During **2012**, EDPR invested in rehabilitation of existing local roads for public use, inside the localities where wind farms were constructed:

- 1 km existing road in Vutcani Commune (Vutcani WF)
- 2 km existing road in Lastuni village, Mihail Kogalniceanu commune (Sarichioi WF)
- 0,3 km rehabilitation of existing road in Mircea Voda locality (Cernavoda WF)

The total investment was 115 €k.

Infrastructure investments in electric energy utility upgrades:

For the connection of **Cobadin and Vutcani Extension WFs** to the distribution networks, EDP Romania has made investments during 2012 in:

- Construction of 1.7 km HVL for connecting Cobadin WF to Enel DSO facilities

- upgrading 16 km existing 110 kV HVL Basarabi-Cobadin (Enel DSO)

- upgrading 2 existing 110 kV electrical substations Basarabi and Cobadin (Enel DSO)

- Construction of a new In/Out substation for Cioabdin WF.

The total investment for electric energy upgrades was 4,037 €K.

		2012		
Electric energy utility	Cobadin WF		Vutcani Extension WF	
updates	U.M.	€K	U.M.	€K
Construction of new 110 kV HVL	1.7km	0,219	0	0
Improvement of existing 110 kV HVL	16 km (HVL Basarabi – Cobadin)	0,213	0 (infrastructure Vutcani Wf)	0
Rehabilitation of existing 110 kV substations (2)	2 Cobadin and Basarabi	0,512	0 (infrastructure Vutcani Wf)	0
New built IN/OUT Substation	In/Out Cobadin Nord	1,719	0	0
Total:		2,663		0

Taxes contribution:

By taking into consideration the Beneficiary of paid taxes we can see main 3 categories:

- a) Taxes paid to local councils (communes where wind farms/photovoltaic plants are being developed)
 - Land tax
 - Wind Farm tax (for every operational investment a tax is being paid annually)

These 2 taxes are paid to the Local Council of the communes where the plants are located. These taxes are representing a contribution that EDPR is having to increasing local budget of local communities where WFs were developed.

An increased local budget represent increased facilities for local population like: infrastructure updates, new social and educational programmes etc.

b) Other land Taxes paid to OCPI, ANIF, ANCPI – for changing the land category use (from agricultural to construction use), for cadastral maps, etc.

ANIF – National Authority for Land Reclamation, OCPI – National Office for Cadastrial and Land Booking and Department for Agricultural Development), ANCPI – National Authority of Cadastral Plans

TAXES PAID	TO LOCAL A	UTHORITIES IN 2012				
PROJECT	Land	Wind fam taxes	OCPL ANIE ANCPL			
	taxes EK	€K	$taxes \in K$			
	Tuxes ch	CA	laxes ck			
Pestera Wind Farm	5,60	223,70	-			
Cernavoda Wind Farm	15,04	415,61	-			
Sarichioi Wind Farm	1,57	76,50	0,55			
Vutcani Wind Farm	3,06	100,12	-			
Cobadin Wind Farm	1,67	-	0,22			
Vutcani Extension Wind Farm	-	-	-			
SUBTOTAL WIND	26,94	815,93	0,77			

In 2012 EDPR made following payments. Please see table below:

Cujmir Photovoltaic Plant	-	-	2,00
Dabuleni Photovoltaic Plant	-	-	1,35
Grojdibodu Photovoltaic Plant	-	-	0,18
Vanju Mare Photovoltaic Plant	-	-	1,68
SUBTOTAL SOLAR	-	-	5,21
TOTAL €K	26,94	815,93	5,98

c) Taxes paid to County Councils (the county where the plant is situated)

• 1% of the total construction value is paid to the authority who issued the building permit.

d) Taxes paid to other public institutions represented by one County Office

• Taxes paid to ISC- State Inspectorate in Construction (representing 0,8% of total construction value)

Until now EDPR paid to County Councils 324 €K and 187 €K to ISC.

The following table is showing the taxes paid for all projects developed and constructed in Romania:

PROJECT	TAXES PAID TO LOCAL AUTHORITIES		ESTIMATEI	D TO BE PAID
	Local Councils €K	Inspectorate in construction €K	Local Councils €K	Inspectorate in construction €K
Sarichioi Wind Farm	24	41	-	-
Vutcani Wind Farm	52	41	-	-
Cobadin Wind Farm	54	43	12	10
Vutcani Extension Wind Farm	20	16	50	40
SUBTOTAL WIND	150	141	62	50
Cujmir Photovoltaic Plant	55	5	4	42
Dabuleni Photovoltaic Plant	35	4	38	55
Grojdibodu Photovoltaic Plant	41	33	7	5
Vanju Mare Photovoltaic Plant	43	4	5	34
SUBTOTAL SOLAR	174	46	54	136
TOTAL €K	324	187	116	186

Education and public awareness activities with regard to green energy for local communities:

The main objective of these activities was to improve the local community knowledge on green energy on EDPR operational wind farms.

During 2012 several visits to Pestera and Cernavoda I-II WFs were organised for children of public schools of Pestera, Mircea Voda, Saligny and Constanta localities.

EDPR O&M personnel presented information regarding wind energy to groups of children and teachers who visited the wind farms and electrical substations.

In order to sustain educational activities outside the school and public awareness, brochures and presentation materials were distributed to every visitor and to Local Councils of Pestera, Cernavoda, Mircea Voda, Saligny, Sarichioi and Vutcani. The amount spent in 2012 for presentation materials was **8 €k**.

Support to Local Councils for social, sports, sanitary or public utility activities:

During 2012, EDPR Romania contributed to local budget of the localities where is present in order to help local community in improving cultural, educational, sportive, sanitary and social services, or other services for community interest like Public illumination, etc. Each Local Council has established which of the mentioned activities had priority for local community. The total contribution was $18 \in K$,

Participation in local/ national fairs, conventions, social events

In September 2012 EDPR Romania representatives have joined the annual conference about Romanian Wind Energy, an event organized by the Romanian Association for Wind Energy (RWEA) at Constanta between the 4-6 of September 2012, that put face to face the highest level officials with the investors, European energy companies, law firms, consultants or experts from banking industry. This forum has brought many quality debates and a very pleasant networking during the side events.

A quick review of the subjects of the conference is presented below:

- the renewable energy strategy updated according to reality
- the new provisions of the ERES law, market configuration-energy trading rules
- financing possibilities in the present conditions, performance in technology
- case-studies from the Romanian wind operators.

Donation to "Save the Children" Association

Every year, including 2012, EDPR Romania is contribution to Save the Children Association with $10 \in K$.

Save the Children is the world's leading independent organization for children, very active in Romania in supporting medical care and education programmes for children in need.

III.5. Major challenges and issues for the Company

In 2012 Sarichioi and Vutcanil WFs were certified with Environmental Management System (EMS) ISO 14001:2004 by Lloyds Register.

Main challenges encountered in 2012 by EDP Renewables Romania are related to EMS implementation:

- One of the challenges was understanding the real meaning of EMS system: a tool for environmental management
- Understanding the importance of communication between all departments directly involved in the EMS (Operation& Maintenance, Engineering & Construction and Environment & Sustainability, Asset and project Managers) and all external stakeholders

- To apply all EMS requirements from the construction stage of new wind farms to be ready to be certified starting operation
- Setting a system dedicated to communication with external stakeholders, including complains
- Performing environmental analysis of projects in development or construction phase with regard to:
 - Assessment of environmental aspects
 - Compliance with legislative and other requirements
 - Setting objectives and targets for 2013
 - Resources (third party support, internal changes at the organization, trainings...)
 - Identification of NC (non-conformities), CA (corrective actions) and PA (prevention actions)
- Internal and external audits

IV. <u>Compliance with ESAP and EMMP</u>

IV.1. Information on ESAP implementation

The actions set in ESAP are based on the findings of the environmental and social assessment for the project. This has been communicated to third parties and is the basis of the Lenders agreeing to finance the project. Ttable below presents implementation status of:

- ESAP Pestera and Cernavoda WFs issued in April 2010
- ESAP Sarichioi and Vutcani WFs issued in July 2012
- ESAP PV plants issued in November 2012
- Corporate ESAP wind farms projects issed in November 2012

As part of this ESDD Assessment, EDPR's recently agreed existing corporate Environmental and Social Action Plan (ESAP) has been evaluated and modifications have been added as necessary to include Project-specific requirements that are recommended to be implemented based on the findings of the audit and include the key mitigation measures that are listed above.

No.	Actions set in ESAP	Implementation during 2012	Further actions
	Pestera and Cernavod Sarichioi and Vutcani	a I-II Wind Farms: Wind Farms:	
1.	Implementation of the Environmental Management and Monitoring Plan (" EMMP ")	An EMMP was implemented during construction/operation of 4 wind farms Please see Section IV.2 regarding the EMMP implementation and the measures developed in 2012.	The actions foreseen in the EMMP for operational period will be further implemented in 2013.

No.	Actions set in ESAP	Implementation during 2012	Further actions
2.	The Company will appoint an independent ornithological expert to provide independent expert advice on ornithological aspects of the Project and develop criteria/thresholds for ordering shutdown. The IOE will be appointed by the Company on a 3 year basis.	A specialised company Blue Terra Consulting has been hired by EDPR starting 2010 to conduct biodiversity monitoring of Pestera and Cernavoda WFs and to elaborate reports in accordance with EMMP and Constanta EPA requirements. Eco Green Consulting has been contracted to monitor Sarichioi and Vutcani WFs. The experts' team in charge comprises an ornithological expert, member of Romanian Ornithological Society. The monitoring period was established to be continuous in order to cover all key periods, such as birds migration.	Blue Terra Consulting and Eco Green Consulting will continue activity during 2013, having a contract with EDPR Romania.
3.	The Company will shut down wind turbines on the basis of written Notice to Close issued by the IOE.	During 2012 no written notices were received from IOR appointed for the 4 operational wind farms was received. The monitoring results didn't showed any negative impact.	The IOR will continue its activity in 2013.
4.	Within 2 years of the operation of both farms, undertake a bird collision assessment, in line with recognized international best practice and based on a model as advised by the IOE, and discuss with key stakeholders, inclusive of SOR and regulators.	Collision Risk Analysis for Pestera and Cernavoda WFs based on Scottish National Heritage Model were developed showing data for years 2011 and 2012, The reports are published on company website.	In 2013 a Collision Risk Assessment will be done for Sarichioi and Vutcani WFs.
	Corporate Project Man	agement, Environmental, Health and Safety ma	nagement:
1.1	Development and implementation of a corporate Stakeholder Engagement Plan (SEP) in line with EBRD and IFC PR 10 and PS 8 at corporate level	Please see Section IV.4 regarding the SEP implementation and the measures developed during 2012.	The actions foreseen in SEP related to operational period of the wind farms will be further implemented in 2013.
1.2	Maintain a corporate Environmental Manager for EDP Romania	The Environmental Manager for EDPR Romania supervised the monitoring programmes, the key environmental indicators reporting every 3 months though an internal tool SIS (Sustainability Information System), the reporting to EPA according with conditions set in the environmental	The Environmental Manager for EDPR Romania will continue to develop these activities in 2013.

No.	Actions set in ESAP	Implementation during 2012	Further actions
		authorisations and legislation in force.	
		In 2012 EMS ISO 14001 was implemented and certified to all 4 operational wind farms.	
1.3	Develop and implement an Environmental, Health and Safety Management System (e.g.,Implement EDP Corporate EHS Management System standards) prior to commencement of operations. EHS Management system certification by 2012 (voluntary).	 Part of the implemented Environmental Management System EMS ISO 14001 EDPR are the following procedures: EMS-EU_GP 00001 Identification and assessment of environmental aspects_v00 EMS-EU_GP 00004 Competence, training and awareness_v00 EMS-EU_GP 00007 Operational control, monitoring and measurement_v00 EMS-EU_GP 00008 Emergency preparedness and response_v00 EMS-EU_GP 00009 Non-conformities, corrective actions and preventive actions_v00 Part of these procedures is to communicate 	In 2013 EDPR Romania intends to certify the operational wind farms with SR OHSAS 18001:2008.
		and obtain agreement from all companies hired in operational activities to comply with EDPR norms and regulations, besides the legislative ones.	
1.4	Require contractors to comply with all national environmental and health and safety laws, EBRD and IFC PRs and PSs as well as	All contract signed with contractors hired in the construction and operation have stipulated the obligation of complying with all national environmental, healthy and safety laws in force. In addition to this, the requirements stated in all permits are part of the signed contracts.	-
	with any provisions of the EIAs, EMMP, construction consents and other relevant permits.	In order for EDP Renewables Romania to assure the implementation of Health and Safety laws, it was foreseen to hire a Health and Safety Coordinator during the construction works. His task was to cheek and require to all contractors and subcontractors involved in the construction works to comply with the legislative constrains in force.	
		All contractors involved in construction and operation have implemented H&S Plans that were previously approved by EDPR Romania.	
		Also every contractor hired in construction period has sent monthly reports containing following data for them and their subcontractors:	
		 activity; executed works; Number of workers involved; Number of worked hours; 	

No.	Actions set in ESAP	Implementation during 2012	Further actions
		- Number and type of accidents	
		The operation and maintenance of Pestera and Cernavoda WFs is contracted to Elcomex Company who appointed a H&S Responsible.	
1.5	Adopt pre-acquisition EHS due diligence procedures and for new (including Greenfield) projects.	A due diligence was conducted for new projects constructed in 2011, Sarichioi and Vutcani WFs, by an external company (KPMG). The EIA procedure for SARICHIOI Wind Farm 33MW was followed in 2009. The project was classified by Tulcea EPA as category A (Annex 1 of GD 445/2009) and a complete procedure was followed according with EU Directives and romanian legislation in force. The EIA procedure for Vutcani Wind Farm was followed in 2007. EIA procedures had foreseen public consultations. As established for Pestera and Cernavoda I-II WFs, the EHS procedures were implemented during construction works of Sarichioi and Vutcani: -Construction Environmental Management Plan was elaborated and sent to all constructors involved. -Monitoring of avifauna and reporting to competent EPA during construction works of new projects was performed. -Every contract signed with external companies have provisions regarding EDPR procedures, compliance with legislative EHS	All measures implemented in first operational year of Pestera and Cernavoda I-II will be further implemented when Sarichioi and Vutcani will become operational in 2012.
1.6	Make general environmental information on project and the company publicly available.	As part of the procedure developed for obtaining the Environmental Authorisations, it was mandatory by the legislation in force to make public announcements regarding all prepared documentation. The documentation was showing the environmental information during the construction period and planed measures for the operational period. Biodiversity monitoring reports and noise measurements were made publicly by submission to Constanta / Tulcea EPA. Interersted public can consult these reports at EPA headquarters and EDPR website.	This annual monitoring report will be published on our company website. www.edpr.com/suatai nability
	New projects:		
II.1	Commission external Environmental and	In 2012 external company (WSP) was contracted to conduct ESIA DD for Sarichioi	In 2013 all operational PV plants will be

No.	Actions set in ESAP	Implementation during 2012	Further actions
	Social Due Diligence Assessments according to implemented EHS due diligence procedures	and Vutcani WFs and solar PV projects. In October 2012 ISO 14001 EMS was implemented in Sarichioi and Vutcani WFs, being certieid by Lloyds Co.	subject of EMS 14001 certification.
11.2	Undertake initial ornithological and baseline environmental screening of projects during initial wind survey assessments. Avoid environmentally sensitive areas, such as designated Natura 2000 areas under the EU Birds Directive.	For projects constructed in 2012, Cobadin and Vutcani Extension, EIA procedures were followed in 2009. Part of this study was to undertake a biodiversity survey. Selection of sites for the new projects was done considering avoidance of Natura 2000 sites.	When new projects are developed in Romania avoidance of Natura 2000 sites is considered.
11.3	Complete detailed stakeholder mapping for each project.	Meetings with SOR and Eco_Pontica NGO were held regarding Sarichioi WF. Having in view all their recommendations and Tulcea EPA point of view an Avifauna Monitoring Plan was established and agreed for the first 5 operational years of Sarichioi WF. During DD of PV Plants local authorities were consulted and a SEP was issued.	-
11.4	Develop ElAs for new wind farms according with relevant national, EU and international guidelines.	 EIA Romanian legislation in force is 100% aligned with EIA EU Directives. EIA procedures for obtaining environmental agreements for new projects were mandatory and . EIA procedure was followed in 2012 for Facaeni WF and PV Plants: Cujmir, Grojdibodu, Vanju Mare and Dabuleni. A due diligence for the solar PV Projects was conducted in 2012, according with EBRD requirements. 	-
11.5	Assess cumulative impacts with other wind farms or developments in the projects area of influence as defined in IFC and EBRD PS and PR.	In the avifauna monitoring campaign that will be conducted during operational years, cumulative impact with other wind farms will be assessed.	_
11.6	Prepare and disclose Non Technical Summaries (NTS) of the EIAs	A NTS was elaborated for each project during EIA procedure followed for obtaining the environmental agreement.	-

No.	Actions set in ESAP	Implementation during 2012	Further actions
11.7	Include EHS management requirements in contracts, including for EPC contractors	As established for Pestera and Cernavoda I-II WFs, the EHS procedures were implemented during construction works of Sarichioi , Vutcani, Cobadin and PV plants:	These measures will be implemented to further developed projects.
		-Construction Environmental Management Plan was elaborated and sent to all constructors involved.	
		-Monitoring of avifauna and reporting to competent EPA during construction works of new projects was performed for Cobadin WF.	
		-Every contract signed with external companies have provisions regarding EDPR procedures, compliance with legislative EHS framework in force.	
11.8	Prepare and implement internal and external Emergency Plans, and Occupational Health and Safety Plans for construction.	Was implemented for Sarichioi and Vutcani WFs as a requirement of EMS ISO 14001 system, as soon as the WFs become operational.	In 2013 PV plant in oeration will be certified with ISO 14001 EMS.
III.1	Provide annual reports on the Environmental, Social, Health and Safety (ESHS) to the EBRD and IFC and other shareholders. A general summary of environmental and social issues to be provided on the web site.	An Annual Report was prepared in January 2012 and published on company website. www.edpr.com/suatainability	This Annual Environmental Report for 2012 will be published on our company website. www.edpr.com/suatai nability
111.2	Set up and operate grievance forums: information offices, hot lines, etc. to enable meaningful public consultation and information process	The access of public during the construction works of Cobadin and Vutcani Extension and during operation of 4 operational WFs was allowed on site by designated EDPR personnel. EDPR Romania had conducted several visits of local inhabitants and students to wind farms with the aim of sustaining local social and educational activities.	-
IV.2. Information on EMMP implementation

EMMP contains a set of mitigation and enhancement measures that EDP Renewables Romania will implement during various stages within the lifetime of the 4 operational wind farms, considered as Chategry A by Lenders. The EMMP focuses on avoiding environmental and social impacts and where this is not possible appropriate mitigation measures are identified to minimize or reduce potential impacts to acceptable levels.

This chapter presents information for EMMP issued in April 2010 that contains measures for all projects regardless the stage: development/construction or operation. The measures set for Pestera and Cernavoda WFs were implemented in Sarcihioi, Vutcani, Cobadin and Vutcani extension projects.

For the solar PV plants during the due diligence conducted in 2012, the ESAP issued does not contain the obligation of EMMP issuance. The actions to be complied are set in ESAP.

2012 implementation status of EMMP is presented below:

N 0.	Actions set in EMMP	Performance Standard /Legislation or permits requirements	Implementation during 2012	Further actions
1. 1	Undertake site specific bird and bat surveys during and after construction	IFC Performance Standard EBRD PR 6 Requirement of Environmental Agreement (including environmenta I monitoring programme)	Services of an independent Consultancy Companies were contracted for site specific bird and bat surveys: Blue Terra Consulting (Pestera, Cernavoda and Cobadin WFs) and Eco Green (Sarichioi and Vutcani WFs). The monitoring team consisted in experienced ornithologists and bat experts. The companies are certified to conduct environmental studies according with Romanian legislation. The scope of monitoring was to assess the impact of construction works and operation activities on birds and bats and to identify the measures for improvements. For birds monitoring a video surveillance system was installed in each wind farm. The data are recorded on external hard- disk.	The program for monitoring of birds and bats will continue during 2013.
1. 2	Establish a protocol / approach for monitoring of	IFC Performance Standard	Monitoring of construction works with propose of minimizing the environmental impact and compliance with the conditions set in the Environmental	Monitoring of construction Works will be conducted in

a) Actions required to achieve compliance with National Romanian Environmental, Health and Safety legal requirements and EU environmental standards:

N o.	Actions set in EMMP	Performance Standard /Legislation or permits requirements	Implementation during 2012	Further actions
	ecological impacts during construction and operation	EBRD PR 6 Requirement of Environmental Agreement (including environmenta I monitoring programme)	Agreements was undertaken during construction period of Cobadin and Vutcani Extension WFs, by an independent company. Be-weekly reports were sent to EDPR and all main contractors.	2013 during construction Works of Facaeni WF, Bailesti and Burila Mica PV Plants.
1. 3	Undertake monitoring of effectiveness of ecological off- setting measures (these may include financial contributions towards long-term ecological management of a protected area, funding initiatives to enhance ecological awareness, funding research into the ecological impacts of wind farms)- if applicable, depended on the results of ecological monitoring (see 1.1 above)	IFC Performance Standard EBRD PR 6 Requirem ent of Environm ental Agreeme nt (including environm ental monitorin g program me)	Not applicable. The results of undertaken avifauna monitoring during construction works didn't show any adverse impacts that needed further studies.	
1. 4	Undertake noise monitoring at the site perimeter during operation	Best practice Government Decision no. 321/2005 (requirement of Environmental Permit)	It was mandatory to conduct noise measurements near residential areas in order to comply with Environmental Authorisations and to verify compliance with Romanian Standard 10009/1988. Following activities were conducted in order to elaborate a Noise Measurements Report that was submitted to Constanta EPA in October 2012 for Pestera WF and in December 2012 for Cernavoda WF. a) Elaboration of Noise Maps for Pestera and Cernavoda I-II WFs b) Determination of optimal	Same actions are foreseen in the environmenta l authorisations for all operational years.

N o.	Actions set in EMMP	Performance Standard /Legislation or permits requirements	Implementation during 2012	Further actions
			 measurement points for noise assessment on site c) Site visits d) Noise measurements on the points identified by laboratory analysis e) Data assessment of measured noise levels in an Certified Laboratory RENAR f) Elaboration of noise bulletins g) Elaboration of final noise assessment report and submission to Constanta EPA. According with measurements done, the provisions of STAS 1009/1988 are fulfilled. Near the residential areas of Pestera and Cernavoda the maximum allowable limit of 45 dB was not exceeded. 	
1. 5	Develop a Construction Waste Management Plan	Romanian Legislation EU directives	A Construction Environmental Management Plan (CEMP) was developed and distributed for implementation to all constructors hired for the Cobadin and Vutcani Extension WFs construction in 2012. CEMP is containing specific measures for the management and reporting of produced waste management (construction waste, domestic type waste, recyclables, hazardous waste).	-
1. 6	Implement the construction waste management plan and maintain records for annual environmental audits	Romanian Legislation and EU Directives Environmental Permit	In October 2012 an external environmental audit was conducted by Lloyds Register Company. According with GD 856/2002 non- hazardous and hazardous waste quantities produced in 2012 were reported in January 2013 at: - Constanta EPA for both Pestera and Cernavoda I-II WFs. - Tulcea EPA for both Sarichioi WF. - Vaslui EPA for Vutcani WF.	An annual environmenta I audit will be conducted by an external company for all operational wind farms. Waste reporting to EPA is mandatory every year.
1. 7	Continue the Ecological monitoring during the entire construction works	Environmental agreement	See point I.1.	The monitoring will continue in 2013.

N o.	Actions set in EMMP	Performance Standard /Legislation or permits requirements	Implementation during 2012	Further actions
	and for at least one year following commissioning to provide a more complete baseline of the sites conditions and to verify the conclusions of the EIA Reports			
1. 8	Review and monitor implementation of Contractors' health and safety plans, health and safety risk assessments and associated procedures during construction and operation (e.g. maintenance activities). Ensure effective control and management of all health and safety risks by contractors, such as through the adoption of safe working practices and use of personal protective equipment where required.	Romanian Legislation (e.g. Law 319/2006 on Health and Safety at Work) and EU Directives EBRD PR2	All contracts signed with contractors have stipulated the obligation of complying with all national environmental, healthy and safety laws in force. The conditions set by the permits are part of the signed contracts. In order for EDPR Renewables Romania to assure the implementation of Health and Safety laws, it was foreseen to hire a Health and Safety Coordinator during the construction works. His task was to cheek and require to all contractors and subcontractors involved in the construction works to comply with the legislative constrains in force. All contractors have implemented H&S Plans that were previously approved by EDPR Romania. Also every contractor has sent monthly reports containing following data for them and their subcontractors: - activity; - executed works; - Number of workers involved; - Number of workers involved; - Number of workers involved; A Grievance Mechanism Register and a Work Accident Record was distributed to all contractors and subcontractor for	In 2013 EDP Romania intends to certify the operational wind farms and PV Plants with SR OHSAS 18001:2008.
I. 9	Monitor provision of temporary accommodation for construction workers to ensure it complies with the requirements of EBRD PR2 and legal requirements.	Romanian Legislation (e.g. Law 319/2006 on Health and Safety at Work) and EU Directives EBRD PR2 Environmental Permit	implementation.	

No.	Actions set in EMMP	Performance Standard /Legislation or permits requirements	- Implementation during 2012 Further actions	
2.1	Provide information on public access	Best practice	The access of public during the construction works was allowed with the acceptance of main constructor or EDPR representative on site. Personnel was available at site organisation office. During operation EDP Romania allow visits of children from local community in order to support educational activities regarding renewable energies. No complains were registered related to access.	In 2013 EDP Romania will continue supporting social and educational activities for local inhabitants and interested public.
2.2	Undertake vocational education / training where practicable during construction	Best practice	30% of hired personnel by contracted companies is from local communities. For all 4 operational wind farms Local Companies (Elcomex, General Electric and Pet Communications) were contracted for substations operations. Other local companies were contracted for services: waste and wastewater management, security, snow removal services, maintenance, etc.	Same services will be subcontracted in 2013.
2.3	Undertake preparation and implementation of a Construction Environmental Management Plan	Best practice Would provide a mechanism to assist in implementation of conditions of the Environmental Permit	A Construction Environmental Management Plan (CEMP) was developed and distributed for implementation to all constructors hired for Cobadin and Vutcani Extension WFs construction in 2012.	In 2013 a CEMP will be implemented for Facaeni WF and solar PV plants.

b) Procedures for environmental and social assessment of the wind farms in line with best international practice

c) Actions required to contain/remediate past environmental damage and assessment of costs and/or further investigations;

Not applicable.

d) Actions to improve environmental, social and health and safety management, monitoring and performance of the wind farms in accordance with good international industry practice.

No.	Actions set in EMMP	Performance Standard /Legislation or permits requirements	Implementation during 2010 and 2011	Further actions
4.1	Implement a management system to address the environmental and health and safety issues related to the Project. Integrate the management systems with the rest of the EDP Group.	Best practice	In October 2012 Sarichioi and Vutcani WFs were certified by Lloyds with environmental management system ISO 14001, contributing in this way to compliance with this action.	Annual EMS audits performed by Lloyds. EMS 14001 will be implemented and certified in 2013 for Cobadin and solar PV projects under operation.
4.2	Develop a corporate annual EHS report and disclose on the internet. Disclose information to the Lenders to show compliance with the EMMP and current status of EHS issues	EBRD PR10	A Corporate Annual report for 2012 is issued every year by EDPR Group, available at: <u>http://www.edpr.com/sustainability/do</u> <u>cuments-library-and-publications/</u>	-
4.3	Establish formalised procedures to monitor and review the Project in accordance with PR1.	Best practice EBRD PR 1	An EMS Responsible in EDPR Romania was assigned since 2011. All requirements of EBRD PR 1 are part of the implemented EMS System.	-
 4.4 Undertake further consultation with local community during construction and operation Principle 6 of the Equator Principles and IFC Standard / EBRD PR1 European Best Practice Guidelines for Wind Energy Development 		Principle 6 of the Equator Principles and IFC Standard / EBRD PR1 European Best Practice Guidelines for Wind Energy Development	During 2012 several visits to Pestera and Cernavoda I-II WFs were organised for children of public schools of Pestera, Mircea Voda, Saligny and Constanta localities. EDPR O&M personnel presented information regarding wind energy to groups of children and teachers who visited the wind farms and electrical substations. In order to sustain educational activities outside the school and public awareness, brochures and presentation materials were distributed to every visitor and to Local Councils of Pestera, Cernavoda, Cobadin, Mircea Voda, Saligny, Sarichioi and Vutcani. During 2012, EDPR Romania contributed to local budget of the localities where is	-

			present (Pestera, Saligny, Mircea Voda, Sarichioi, Mihail Kogalniceanu) in order to help local community in improving cultural, educational, sportive, sanitary and social services, or other services for community interest like Public illumination, etc.	
4.5	Implement SEP that includes annual social and environmental reporting during construction and operation of the Project.	Best practice EBRD PR10	See Section III.4. Information on SEP implementation.	-
4.6	Creation of a stakeholder register and register of external communications (including with the public and regulatory authorities)	Best practice EBRD PR10	 Part of the Environmental Management System EMS ISO 14001 EDPR implemented following procedures: EMS-EU_GP 00005 Communication_v00 with the scope to establish the ways for internal and external communication relating to environmental aspects and the EMS EMS-EU_GP 00006 Control of documents and records_v00 defines the process followed by EDPR EU to develop, approve, review, distribute, archive and manage documents and records arising from the EMS 	Mentioned procedures will be followed in 2013.
4.7	Implement and publicise EDPR's grievance management system in accordance with EBRD PR10	Best practice EBRD PR10	A grievance mechanism was implemented during of Cobadin and vutcani Extension WFs and 4 solar PV Plants: Cujmir, Vanju Mare, Dabuleni and Grojdoiibodu. The forms were available at site construction and on: http://www.edpr.com/sustainability/do cuments-library-and-publications/	-
4.8	Undertake a regular environmental audit (every year) of the wind farm	Best practice	An EMS audit performed by Lloyds Register was conducted in October 2012. As a result the wind farms were certified with EMS ISO 14001.	An EMS audit will be conducted in 2013.
4.9	Monitor subcontractors' compliance with EDPR and EBRD health and safety policies and procedures Creation of a register	Best practice EBRD PR2	Task undertaken by H&S Coordinator hired by EDPR Romania during construction works All contractors hired in operation and maintenance activities have implemented H&S Plans that were previously approved by EDPR Romania and have designated a H&S	-

	of near-misses and accidents (including by subcontractors)		responsible. A Grievance Mechanism Register and a Work Accident Record was distributed to all contractors and subcontractor for implementation.	
4.10	Monitor the removal temporary construction access roads, construction compounds and other areas following completion of construction and their restoration to encourage re- vegetation over time	Best practice EBRD PR6	The restoration of sites and re- vegetation of the land affected during 2012 construction activities (Cobadin, Vutcani Extension Wfs and 4 solar PV Plants) was monitored within the Construction Monitoring program. Please see description of Environmental Construction Monitoring campaigns.	-

Environmental Construction Monitoring (ECM) and CEMP:

The purpose of the **Environmental Construction Monitoring** performed in 2012 with the means of external companies was to assure compliance with environmental laws and regulations in force and EDPR procedures.

These monitoring campaigns for each of EDPR wind farms focused on the provisions of **EAs** (Environmental Agreement) and **EMMPs** (Environmental Management and Monitoring Management Plan). Moreover, the monitoring aimed to assess onsite environmental situation.

Compliance with the conditions set in the EAs was essential in the process of obtaining the Environmental Authorisations, needed for operation.

The **EMMPs**-Environmental Management and Monitoring Plan foresee the following actions:

- establish a protocol for monitoring of ecological impacts during construction and operation
- develop a construction waste management plan identifying methods to reduce waste generation and reuse and recycle wastes in preference to disposal
- implementing the construction waste management plan and maintain records for annual environmental audits
- Monitor the removal temporary construction access roads, construction compounds and other areas following completion of construction and their restoration to encourage re -vegetation over time

Applied methodology for ECM:

The methodology applied for Environmental Construction consisted in the activities listed in the table below. In addition, the table is containing the actions undertaken in order to fulfil with each proposed activity.

No.	Activities	Actions
1.	Defining the framework	- Meetings with all involved Constructors and Sub-
	- Identification of all relevant	constructors

No.	Activities	Actions
	aspects in order to reach the proposed objectives	 Defining the necessary information for EMC and identification of data suppliers Elaboration of initial report for each wind farm showing the methodology propose for EMC
2.	Data collection	 Assessment of construction works Study of all relevant documents: technical projects, EMMP, EIA , etc.
3.	Monitoring activities	 In order to monitor how the construction works are respecting with all requirements of permits and plans, site visits were undertaken weekly. During site visits following aspects were assessed: Place for storing the construction materials and hazardous materials; Waste collection and storage generated during construction; Site organisation; Ghecking the compliance of traffic program; Methodology of removal, storage and transport of vegetal soil layer; Methodology of storage and transport of soil resulted from excavation
4.	Compliance with the provisions of EMMP	 Elaboration of Waste Management Plan Elaboration of Construction Environmental Management Plan

The **CEMP** will be applicable to all EDP's staff and contractors during the Projects:

Objective	Cobadin WF	Vutcani Extension WF
Civil works for Wind farm	GES	CJR LUSO ENERGIE
Wind turbine	Vestas	Vestas
Substation & Connection works	Ampel Dacia	SEDMIRUMA
High voltage line	Electromontaj	n/a
Power transformers	Konkar	Konkar
Meteorological towers	Telsat	Telsat

A copy of CEMP for all EDPR Romania Wind Farms (Pestera, Cernavoda I-II, Sarichioi and Vutcani) can be found at:

http://www.edpr.com/sustainability/documents-library-and-publications/

During 2012 4 PV plants were constructed: **Cujmir**, **Dabuleni**, **Grojdibodu and Vanju Mare sites** and the completion date was January 2013. The photovoltaic panels for each park were delivered by Suntech Power Holdings Co. The connection works in the CEZ Distribution company were executed by Elteco SRL. The contractors selected for engineering, procurement and construction of each of the "Ready to Build" sites are listed below

PV Plant	Contractor(s)
Cujmir	EFACEC CENTRAL EUROPE LIMITED SRL EFACEC ENGENHARIA E SISTEMAS SA.
Dabuleni	SC GLOBAL SERVICES PROVIDER RO SRL
Grojdibodu	EFACEC CENTRAL EUROPE LIMITED SRL EFACEC ENGENHARIA E SISTEMAS SA
Vanju Mare	AMPEL DACIA SRL

Engineering, procurement and construction for the PV Plants which are still in development will be contracted to experienced companies using existing procedures.

All contractors are informed about **EDPR EHSS requirements** during the tender process and their past environmental, health and safety performance is considered during evaluation of bids. A Construction Environmental Management Plan (EMP) and Waste Management Procedure specific to construction of the PV Plants are delivered to all contractors. All contractors are required to inform their subcontractors and personnel of EDPR's EHSS requirements as part of the terms and conditions of their turn-key contracts.

In line with ISO 14001 and ESAP requirements EDPR carry out environmental monitoring of contractor performance to ensure compliance with applicable legislation.

In addition, compliance with national legislation is also carried out by a local institution, **Environmental Guard.** If non-compliances are identified, penalties can be enforced. It was reported that no penalties have been enforced.

IV.3. Information on SEP implementation

The key objective of **SEP** is to inform identified stakeholders regarding the potential impacts of the projects.

A formalized Grievance Mechanism has been developed and implemented by the company to cover:

- construction period of Cobadin and Vutcani Extension WFs and 4 solar PV Plants
- operational period of: Pestera, Cernavoda, Sarichioi and Vutcani WFs

Beside the grievance mechanism, as part of H&S requirements of Governmental decision 1425/2006, a Record of Work Accidents was distributed to all our contractors and subcontractors in 2012. The engagement of implementing these two mechanisms was decided by minutes signed by each contractor and EDPR Romania. The H&S Coordinator of EDPR Romania checked the implementation of this mechanism.

The Types of Information to be disclosed:

Part of the Environmental Management System EMS ISO 14001, EDPR Romania implemented in 2012 following procedures for Sarichioi and Vutcani WFs and maintained for Pestera and Cernavoda WFs:

- EMS-EU_GP 00005 Communication_v00 with the scope to establish the ways for internal and external communication relating to environmental aspects and the EMS
- EMS-EU_GP 00006 Control of documents and records_v00 defines the process followed by EDPR EU to develop, approve, review, distribute, archive and manage documents and records arising from the EMS

The objectives of external communications are to provide continuous engagement with targeted audiences to inform about the company activities, including company performance, company development and investment plans and their implementation.

The **methods of communication** used by EDPR are summarised in the following:

- Publication for public review of the Stakeholder Engagement Plan, Nontechnical Summary and Environmental and Social Action Plan;
- Meetings with regulatory bodies;
- Public meetings;
- Announcements in local media;
- Provision of general information on notice-boards at key public locations; and
- Publication of project information on the company website http://www.edpr.com/sustainability/documents-library-and-publications/

No.	Actions set in SEP	Type of information disclosed	Forms of communications	Stakeholder Groups informed
1.	Publication of ESIA Disclosure Package for Sarichioi and Vutcani WFs.	 Stakeholder Engagement Plan, Non- Technical Summary, full ESIA documentatio n and Environmental and Social Action Plan 	Disclosure: March 2012 Internet: - Company website and Emails Local newspapers: http://www.curierulnational.ro/Ec onomie/2012-12- 13/BERD+finanteaza+cu+50+mil.+ euro+doua+parcuri+eoliene+	-Tulcea and Vaslui APM -Vutcani, Sarichioi and M, Kogalniceanu LCs -SOR Romanian Ornithology Society - biodiversity Department of Ministry of Environment
2	Funding approval for the development of the Sarichioi and Vutcani Wind	When funding has been arranged, an announcement of full decision to develop the plant and	http://www.ebrd.com/pages/proj ect/eia/43647.shtml http://www.constructiibursa.ro/be rd-finanteaza-parcurile-eoliene- de-la-vutcani-si-sarichioi- 18291&s=investitii&articol=18291& editie_precedenta=2012-12-	All interested Stakeholders

Actions set in SEP and implemented during 2012:

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No.	Actions set in SEP	Type of information disclosed	Forms of communications	Stakeholder Groups informed
	farms.	the coverage of the implications (social / employment / EIA etc) will be confirmed to stakeholders.	<u>14.html</u>	
3.	Announceme nt of construction programme to local residents	Details of propose construction programme including proposed work on local roads and transportation programme for major components (road closures).	 Announcements at Headquarters of Sarichioi, M. Kogalniceanu and Vutcani Local Councils Information Panel containing construction, duration, contractors was /is available at access road in WF construction works site 	Local residents
4.	Announceme nt of the Sarichioi and Vutcani I-II Wind Farm commissionin g and start-up	Formal notification of operation of the wind farm.	http://www.business24.ro/energie /energie-alternativa/doua-noi- parcuri-eoliene-s-ar-putea- construi-in-romania-cu-finantare- berd-1516392	All interested Stakeholders
5.	Announceme nts on maintenance activities which may impact on local residents	Information regarding the project (construction and operation), assessed environmental impact	-Public announcement of the request for environmental authorisations in local newspapers: Observatorul .ro for Cobadin WF For Vutcani Ectension the procedure for obtaining EA was not started yet.	All interested Stakeholders
6.	Employees	Internal meetings, employees and managers.	Monthly coordination Meetings with all departments involved: Engineering, Environment & Sustainability, Operation& Maintenance, Assets and Projects Managers.	Internal meetings, employees and managers.

V. <u>Compliance with IFC Performance Standards on</u> <u>Social and Environmental Sustainability and</u> <u>applicable EU and Romanian Laws</u>

V.1 PS1. Social and Environment Assessment and Management System

PS1 (i) Please provide an updated summary description of the EHS Management System of the Company:

EDPR has implemented an **Environmental Management System (EMS) based on ISO 14001:2004** for the operation and maintenance of their operational wind farms (Pestera (certified in 2011), Cernavoda (certified in 2011), Sarichioi and Vutcani (certified in 2012).

For 2013 the intention is to update this to include issues specific to the PV farms and this is on-going. Completion of this is added to the ESAP as specific measure to be implemented during 2013. A list of all procedures is contained in the EMS Manual; these will be followed at all stages of the projects.



The structure of EMS implementation is shown in following figure:

Environmental Policy:

Environmental Policy was approved in January 2011 by EDPR Executive Committee for all countries were EDPR wind farms are present, including in Romania. Environmental Policy was sent to all identified stakeholders for Pestera and Cernavoda WFs.

- EDPR EU's top management has defined the Environmental Policy and ensures that, within the defined scope of the EMS:
- It's appropriate to the nature, scale and environmental impacts of its activities, products and services;

- It includes a commitment to continual improvement and prevention of pollution;
- It includes a commitment to comply with applicable legal requirements and with other requirements to which the organization subscribes which relate to its environmental aspects;
- It provides the framework for setting and reviewing environmental objectives and targets;
- It's documented, implemented and maintained;
- It's communicated to all persons working for or on behalf of the organization; and
- It's available to the public.



EDPR have a **Health and Safety Policy** which is made available to all employees and contractors. Implementation of an OHSAS 18001:2007 compliant health and safety management system is already in progress in several of the countries in which EDPR operates.

Implementation is planned for 2013 operations in Romania. This measure was added to the Environmental and Social Action Plan (ESAP). It is not a requirement under Romanian legislation to have health and safety plan during the development phase of the projects, however, it was reported that a project Health and Safety Plan exists for the construction phase which includes risk assessments and procedures to be followed.

Organisational Chart and Reporting Lines:

The EDPR EMS organisational chart is presented below. For Romania it was appointed an EMS Manager, responsible for the implementation of the system to the operational wind farms.

Responsibilities regarding EMS requirements and reporting to EMS Manager were added to job descriptions of all employees from Romania.

The EMS Manager from Romania has the obligation to report to Europe EMS Manager and to Country Management representative.

An EMS Manager has been appointed for Romania (Laura Lazar). The EMS Manager reports to the Europe EMS Manager (Angela Toledo) and to the Country Management Representative.

Responsibilities regarding EMS requirements and reporting to the EMS Manager have been added to the job descriptions of all employees in Romania.





Phases and results of EMS Implementation in 2012:

EDPR contracted ABS Consultancy Company to help in the implementation of ISO 14001:2004. ABS activities are presented in following figure:



List of procedures, forms of EMS ISO 14001 implemented in 2011 and 2012:

The list of documents part of the EMS system implemented for operational wind farms: Pestera and Cernavoda WFs is enclosed in the table below:

CODE	DOCUMENT	SCOPE	SECTION OF ISO 14001:2004 STANDARD

CODE	DOCUMENT	SCOPE	SECTION OF ISO 14001:2004 STANDARD
EMS- EU_M- 00001	EMS Manual_v00	The Manual describes all the basic features of the Environmental Management System, and more particularly its organization, structure, responsibilities, procedures, processes and resources	4.1. General requirements
	EDPR Environmental Policy		4.2. Environmental Policy
General	Procedures:		
EMS- EU_GP 00001	Identification and assessment of environmental aspects_v00	The aim of this procedure is to establish the process of identification and assessment of environmental aspects of EDPR EU, and determine those aspects that have or can have significant impacts on the environment	4.3.1. Environmental aspects
EMS- EU_GP 00002	Identification of requirements. Evaluation of compliance_v00	Identify, evaluate, record and report the environmental legal requirements applicable to the activities and locations within the scope of the Environmental Management System	4.3.2. Legal and other requirements; 4.5.2. Evaluation of compliance
EMS- EU_GP 00003	Objectives and targets_v00	To define the process to establish the environmental objectives and targets, and its monitoring	4.3.3. Objectives, targets and programmes
EMS- EU_GP 00004	Competence, training and awareness_v00	To define the process to ensure the availability of resources for the fulfilment of EMS requirements; to ensure that any person(s) working for the organization or on its behalf is (are) competent on the basis of appropriate education, training or experience, as well as to identify training needs and take actions to meet them	4.4.1. Resources, roles, responsibility and authority 4.4.2. Competence, training and awareness
EMS- EU_GP 00005	Communication_v00	To establish the ways for internal and external communication relating to environmental aspects and the EMS	4.4.3. Communication
EMS- EU_GP 00006	Control of documents and records_v00	Defines the process followed by EDPR EU to develop, approve, review, distribute, archive and manage documents and records arising from the EMS	4.4.5. Control of documents 4.5.4. Control of records
EMS- EU_GP 00007	Operational control, monitoring and measurement_v00	To define the process used by EDPR EU to establish operational control, monitoring and measurement of the environmental aspects considered significant	4.4.6. Operational control
EMS- EU_GP 00008	Emergency preparedness and response_v00	To define the process to identify, record and respond to environmental near-miss situations	4.4.7. Emergency preparedness and response

CODE	DOCUMENT	SCOPE	SECTION OF ISO 14001:2004 STANDARD
		and accidents or emergency situations	
EMS- EU_GP 00009	Non-conformities, corrective actions and preventive actions_v00	To define how to detect, process and record real and potential non- conformities (NC), corrective actions (CA) and preventive actions (PA)	4.5.3. Nonconformity, corrective action and preventive action
EMS- EU_GP 00010	Internal Audits_v00	To establish the process of planning, implementation and record of the internal audits of the EMS	4.4.5. Internal audit
EMS- EU_GP 00011	Management review_v00	To define the process of the Management Review	4.6. Management review
Forms:			
EMS- EU_F 00001	Identification and assessment of environmental aspects_v00	Comply with EMS-EU_GP 00001	4.3.1. Environmental aspects
EMS- EU_F 00002	Program of Objectives and Targets_v00	Comply with EMS-EU_GP 00003	4.3.3. Objectives, targets and programmes
EMS- EU_F 00003	Environmental Training Program_v00	Comply with EMS-EU_GP 00004	4.4.1. Resources, roles, responsibility and authority 4.4.2. Competence, training and awarness
EMS- EU_F 00004	Comunications index_v00	Comply with EMS-EU_GP 00005	4.4.3. Communication
EMS- EU_F- 00005	EMS Documentation List_v00	Comply with EMS-EU_GP 00006	4.4.5. Control of documents 4.5.4. Control of records
EMS- EU_F- 00006	Distribution Control EMS documentation v00	Comply with EMS-EU_GP 00006	4.4.5. Control of documents 4.5.4. Control of records
EMS- EU_F- 00007	Env Monitoring & Measurement Program_v00	Comply with EMS-EU_GP 00007	4.4.6. Operational control
EMS- EU_F- 00008	Env Monitoring & Measurement Generators_v00	Comply with EMS-EU_GP 00007	4.4.6. Operational control
EMS- EU_F 00009	Environmental Monitoring Subcontractors_v00	Comply with EMS-EU_GP 00007	4.4.6. Operational control
EMS- EU_F- 00010	Environmental requirements for subcontractors_v00	Comply with EMS-EU_GP 00007	4.4.6. Operational control
EMS- EU_F- 00011	Environmental Near- miss_Emergency report_v00	Comply with EMS-EU_GP 00008	4.4.7. Emergency preparedness and response
EMS- EU_F- 00012	Environmental Near- miss_Emergency verification plan_v00	Comply with EMS-EU_GP 00008	4.4.7. Emergency preparedness and response

CODE	DOCUMENT	SCOPE	SECTION OF ISO 14001:2004 STANDARD
EMS-	NC, CA & PA_v00	Comply with EMS-EU_GP 00009	4.5.3. Nonconformity,
EU_F-			corrective action and
00013			preventive action
EMS-	NC List_v00	Comply with EMS-EU_GP 00009	4.5.3. Nonconformity,
EU_F-			corrective action and
00014			preventive action
EMS-EU-	Audit Program_v00	Comply with EMS-EU_GP 00010	4.4.5. Internal audit
F-00015	_		

Certification EMS ISO 14001 of Sarichioi and Vutcani WFs:

In 2011 for Pestera and Cernavoda WFs was implemented EMS ISO 14001. The certification was obtained in December 2011.

In Octiber 2012 Sarichioi and Vutcani WFs were certified with EMS 14001 by Lloyds. The **certificates obtained from Lloyds Register Company** are presented in the followings:

PS1 (ii) Please provide a summary of S&E training that employees and contractors received during the reporting year.

For implementing EMS ISO 14001:2004 the services of a Consultancy Company were contracted: ABS Consulting. A training regarding EMS requirements for Sarichioi and Vutcani WFs was provided to EDPR employees: EMS Manager, Asset Manager and Wind Farm Operation Manager.

Following procedures from EMS system required training of operational personnel:

- According with EMS-EU_GP 00004 Competence, training and awareness procedure, part of EMS system implemented in 2012 EMS Manager Romania identified, proposed and analyzed the training needs (associated with the EMS and the environmental aspects) of the employees involved in the EMS. These training needs are recorded in form EMS-EU/F-00003 Environmental Training Program as a proposed training plan for the country. The Training Program was communicated to all employees and evidences of these communications were kept.
- Procedure EMS-EU_GP 00007 Operational control, monitoring and measurement_v00 foresees a chapter regarding subcontractors and service providers control. In this regard the person responsible for each subcontractor/service provider must inform all subcontractors/service providers working at the wind farms about the environmental requirements of the EDPR EU EMS through the form EMS-EU/F-00010 "Environmental requirements for subcontractors". The evidence of this communication through the return of this form signed and stamped was kept. Moreover, all contracts signed include requirements regarding the compliance with EHS applicable legislation.
- Procedure EMS-EU_GP 00008 Emergency preparedness and response_v00 includes the task of EMS Manager to provide a training to operational personnel regarding:
 - the patters of performance against near-miss and emergency situations
 - how to identify and report a near-miss.



CERTIFICATE SCHEDULE

EDP Renewables EUROPE, S.L. Calle Serrano Galvache 56 Centro Empresarial Parque Norte 28033 Madrid Spain

Other Locations

Romania SC EDP Renewables Romania, S.R.L. Wind farm Pestera Constanta County, Romania

5C Cernavoda Power, S.A. Wind fanns Cernavoda I & II Cotstanta County, Romania

SC EDP Renewables Romania, S.R.L. Wind farm Sarichioi, Romania Tutora

SC EDP Renewables Romania, 5 R.L. Wind farm Vutcani Vaslui, Romania

Bolgium Groenwind, S.A. Wind farm Cerfontaine Senzelles, Belgium

Greenwind, S.A. Wind farm Chimay Chimay, Belgium

Greenwind, S.A. Wind farm Froidchapelle. Froidchapelle, Belgium

Approval Certificate No: LIS6010748

Activities

Operation and maintenance management of wind farm.

Operation and maintenance management of wind farm.

Operation and maintainance management of wind farm.

Operation and maintenance management of wind farm,

Operation and maintenance management of wind farm.

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Operation and maintenance management of wind farm.

Original Approval 17 December 2010

Current Certificate 26 November 2012

Certificate Expiry: 16 December 2013 Page 21 of 21



Approval Centrificate No: US6010748 This document & subject to the provision on the revense Av O. Carlot I, 44 – 61, 5309-649 Libbon, Yostagal, Reputration wurden 110/310920 For and on behalf of 11 Fenchench Storet London FC3M 485, United Gungdom This approver a carlot activity with the USB extension or behalf of the Acceleration of the USB Acceleration of the As regarding **Occupational Health and Safety**, EDPR is preparing the implementation within the organization of a management system to comply with the requirements of **OHSAS 18001**. The system is to be certified in 2013.

In 2012, the training delivered to EDPR personnel comprised three categories:

- induction induction was given to all new EDPR employees in both OH&S field and emergency response
- on-the-job training delivered to all new employees, in both emergency response and OH&S matters
- periodical training training delivered as according to risk assessment and annual training programme to all employees; the training covered health, safety and emergency response at a frequency of two per year for each employee.

Induction and on-the-job training in OH&S and emergency response was delivered by external consultant EUROFIN CONSULT until August and later on by newly hired OHS Manager Romania. Periodical training was delivered by EUROFIN CONSULT, TITI AUR (defensive driving and AWD car driving) and Honeywell – Miller (throughout Vestas – rescue from height).

EHS Trainings Provided during the Reporting Year 2012 (Employees and Contractors):

Training course	Туре	Employees/ Contractors	Number of Employees/ Contractors trained	Cost (US\$)
Training EMS system to be implemented in Romania SIS tool Waste management & near-miss emergency preparedness and response	Provided by ABS Consultancy Comany	Employees EDPR Romania	3	2000
Salem tool	Flavius Chelu	Employees EDPR Romania	1	Included in EDP Group costs (more details in the 2012 Annual report)
EMS system requirements. Legal and other requirements	Provided to all EDPR Romania employees by EMS Manager every three months	Employees EDPR Romania	27	-
Environmental requirements for subcontractors according with EDPR Romania EMS system	Provided to all hired contractors by EMS Manager	Contractors	11	-

Training course	Туре		Employees/ Contractors	Number of Employees/ Contractors trained	Cost (US\$)
Induction	OHS emergency response	and	Employees EDPR Romania	13	-
On-the-job training (OHS and emergency response)	OHS emergency response	and	Employees EDPR Romania	13	-
Periodical training (OHS and emergency response)	OHS emergency response	and	Employees EDPR Romania	27	-
Defensive driving and AWD driving training	OHS		Employees EDPR Romania	11	4400
Rescue from height	OHS		Employees EDPR Romania	4	*)

The scope of the contract with EUROFIN CONSULT includes, besides trainings, external prevention and protection services (as according to Romanian legislation) with a total cost of 3500 US\$, hence a separation of costs to be attributed to training activities performed by EUROFIN CONSULT cannot be provided.

*)Part of the service contract

PS1 (iii) If the Company publicly reported on overall S&E performance (eg sustainability report), please provide how it was done (Global Reporting Initiative)

EDPR Group is publishing every year an integrated report describing the company's performance with respect to the three pillars of sustainability: economic, environmental and social.

Sustainability reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development.



The reports are published on company website: www.edpr.com

GLOBAL REPORTING INITIATIVE (GRI):

EDPR is committed to follow the **G3 guidelines** of the Global Reporting Initiative (**GRI**) for Sustainability Reporting.

The GRI directives define a set of indicators and recommendations to create a global standard for disclosing information concerning the three sustainability pillars: economic, environmental and social performance. A company's adherence to these directives means that it concurs with the concept and practices of sustainability.

The GRI framework defines a list of principles to help organizations ensure that the content of the report is balanced and accurate. EDPR applied these principles as the basis for 2012 Annual Reports.

GRI APPLICATION LEVEL:

Following the GRI Guidelines, the reports for 2010, 2011 and 2012 have been externally assured by KPMG, certifying the **A+ application level** self-declared by EDPR.

More details can be found in EDPR Annual Report for 2012 published on company website.

V.2. PS2. Labor and working conditions

PS2 (i) If the company received complains through internal grievance mechanism for workers or through national regulatory agency/courts, please provide a summary of those.

There have been no complaints during 2012 associated with the construction of the 4 Solar Parks or Cobadin & Vutcani Extension WFs to date. It was also reported that there are no on-going litigation or disputes in the areas of health, safety, employee relations, community relations or the environment.

A grievance mechanism was implemented as part of EDPR's operational wind farm Environmental and Social Action Plan (ESAP).

PS2 (ii) Please provide a summary whether the Company complied with national law in allowing workers to form and join workers organisations without retaliation or discrimination. Please provide a summary table of workers organisations with numbers of member workers relative to total employees.

All the workers hired by EDPR Contractors and direct employees of EDPR are having individual working contracts in line with Romanian legislation and Work Code republished in 2011. EDPR's "General Contracting Conditions" are mandatory and are attached to every contract to be signed by Contractors. These include provisions relating to the occupational health and safety and employment and social obligations.

The legal minimum working age is 18 years old and it is understood that there are policies in place to cover the employment of young persons.

The workers right to form and join workers' organisations is subject to Law no 54/2003. At the time of writing no workers' organisations had been registered by employees of EDPR or their contractors. It was reported that there have been no strikes or other collective disputes related to labour and working conditions.

EDPR have a Code of Ethics in place which applies to permanent or temporary employees, proxies, external auditors or to any other person that may supply services to EDPR, either permanently or occasionally. It covers legislation and ethics; conduct in the workplace; human rights and equal opportunities; integrity; relationship with clients and suppliers; environmental and sustainability and disciplinary action.

The act regulating safety on construction sites is Governmental Decision 300/2006 that transposes 92/57/CEE Directive and states the following:

- Thirty days before starting the works, the site manager must submit to local OH&S Administration a notification that contains information on the site; this notification is posted on the site and maintained up-to-date;
- The site manager or beneficiary of the project must assign a site safety coordinator the minimum qualifications needed for such a coordinator are established in the decision;
- The safety site coordinator delivers a site safety management plan that must to be delivered to all subcontractors or individual workers, which in turn deliver their own safety management plan in accordance with actions established in the site safety management plan. Each safety management plan is to be delivered to safety site coordinator for approval within 30 days from contracting the works;
- The site safety management plan is to be continuously updated during the development of the site;
- A coordination register is to be prepared by the site safety coordinator who must keep this register for five years after the termination of works. It must be readily accessible and made available to site manager or representatives of authorities whenever requested;
- The site safety coordinator must maintain an amendments file to include any changes from initial stage of the works and submit this file to beneficiary at the termination of the works;
- Each subcontractor must assign a safety representative who will attend the coordination meetings with the site safety coordinator;
- All general legal requirements on safety apply, such as consultation and participation of workers, training, risk assessment etc.

PS2 (iii) If the company undertook any voluntary retrenchment during the reporting year, please provide retrenchment data including a copy of the retrenchment action plan.

No retrenchment action plan was elaborated for 2012 and implemented.

PS2 (iv) Please state whether the Company remained complaint with the Child Labor and Forced Labor requirements of the performance standard.

Romanian legislation specifically forbids forced labor and labor of children under 18 (from 16 to 18 with written agreement of parents); EDPR Romania fully complies with these requirements.

The contracts established between EDPR Romania and different service providers provide clauses regarding full compliance of contractors with applicable regulation.

Safety Plans delivered for construction sites (both Solar PVs and Wind Farms) provide requirements regarding child labor. In addition to that, inspections were carried out on two Solar PV construction sites by local OH&S Inspectorate in relation with compliance with legal requirements regarding employment. Neither of the inspections found breaches in the legal requirements regarding employment.

PS2 (v) Please provide occupational health and safety performance data of the company using the table below and analyse the effectiveness of the actions being taken for improvement.

Indicators:		Category	2010	2011	2012
Total number of workforce	А	Employees	13	18	32
		Contractors	860*	980*	1300*
Total number of Man Hour	В	Employees	18,984	26,608	37,471
worked		Contractors	322,616	392,000	465,626
Total number of facilities	С	Employees	0	0	0
		Contractors	0	0	0
Total number of lost time	D	Employees	0	0]**
accidents		Contractors	0	0	0
Total Lost Time accidents	Е	Employees	0	0]]**
(Man-Day)		Contractors	0	0	0
Lost Day Rate	E/B	Employees	0	0	2.93***
		Contractors	0	0	0
Fatality Rate	C/	Employees	0	0	0
	D	Contractors	0	0	0

Occupational Health and Safety performance of the Company:

*) the total number of workers comprises the contractor's subcontractors workers

**) one traffic accident recorded on the way to work from home, which according to Romanian legislation is recorded as "work related accident"

***) reported to 10,000 workers

A high percentage of the employees working for providing services to EDPR Romania come from localities where wind farms are located, contributing to the local economic development.

For operational activities developed in **2012** for the four operational wind farms personnel was hired from local communities, as presented in the table below:

2012 - New jobs created in local communities							
Operational activities:	Pestera WF	Cernavoda I-II WF	Sarichioi WF	Vutcani WF	Observations:		
Wind farm surveillance	7	15	6	6	Diamant Security Company provides surveillance and security services to Pestera and Cernavoda WFs. Elica Active Company is hired for Sarichioi WF		
Substation operation – services	4	4	4	4	Elcomex company has the headquarters in Cernavoda locality, having personnel from Pestera, Mircea Voda, Saygny, Medgidia andSarichioi localities. General Electric Company is hired for Vutcani WF.		
Wind Turbines operation	4	4	4	4	Services contracted to Vestas Company who has hired personnel from local communities.		
Waste collection services	1	1	1	1	Services provided by GBI Serveis SAU for Pestera and Cernadoa I-II WFs. CUP Barlad SA Company for Vutcani WF. JT Grup Tulcea Company for Sarichioi WF		
Snow removal services during winter	1	1	1	1	Sunrise Comp SRL is providing this type of services for Pestera WF. Paneal and Pegas Comanies for Cernavoda I-II WFs. Enecto Stop Vutcani WF Vialis Pontica Company for Sarichioi WF.		
EDPR Romania O&M Personnel	1	1	1	1	EDPR Romania has hired 4 persons in O&M department from local communities.		
Total	18	26	17	17			

During 2012 for construction activities of **Cobadin and Vutcani Extension WFs**, EDPR Romania subcontracted works to different companies that hired personnel from local communities, as presented in following table:

2012 - New jobs created in local communities					
Construction activities:	Cobadin WF	Vutcani Extension WF			
Roads, platforms and foundations construction	28	26			
Substation construction	5	4			
High Voltage line construction	6	0			
IN/OUT substations	4	-			
Wind turbines installation	6	6			
Total	49	36			

V.3. PS3. Pollution Prevention and Abatement

IFC Standard 3 / EBRD PR3: Pollution Prevention and Abatement

PS 3 (i) Please provide summaries of:

(i) Compliance with relevant Romanian environmental standards including how they are being improved from previous years:

No major pollution risks have been identified. A Construction Environmental Management Plan (EMP) and a Waste Management in Construction Plan have been developed and all contractors are contractually obliged to adhere to all procedures set out within these documents.

It has been estimated that there will be potential greenhouse gas savings of up to 45 kt CO2-e/yr from the PV plants compared with power generation using fossil fuels.

The environmental authorization is defined as the technical and legal document establishing the operational terms and parameters for existing activities as well as for new ones.

The environmental authorisations for Sarichioi and Vutcani WFs are published on EDP Renewables website.

The validity of the environmental authorisations is 10 (ten) years starting with the issuance date. The environmental authorizations will be suspended in case of failure to comply with the provisions stipulated therein.

Mandatory reporting was performed in 2012 to Environmental Protection Agencies as foreseen in the environmental authorizations of the 4 operational wind farms

(ii) Any complaints or violation notice related to pollution, if received, and (iii) any incident of non-violation or accidental release of pollutants if any.

No complains or violation notices related to pollution were received by EDPR Romania in 2012.

The EMS ISO 14001 has established to procedures in order to respond in case of incidents and accidental pollutions:

- EMS-EU_GP 00008 Emergency preparedness and response_v00

- EMS-EU_GP 00009 Non-conformities, corrective actions and preventive actions_v00

PS 3 (ii) Please provide quantities of both hazardous and non-hazardous waste generation, recovery and reuse, treatment/destruction/disposal and summarise how the Company is working towards improvement. Please also define in detail how waste from any temporary construction/employee housing is being managed and disposed.

All 4 operational wind farms are endowed with a Clean Point for the temporary storage of produced hazardous and non-hazardous waste.

The clean point is located outside the Control Building, on a concrete platform foreseen with a roof and proper fencing. Bins for selective collection of hazardous and nonhazardous waste are placed and labelled according with the collected type of waste.

EDPR has closed contracts with authorized agents for the collection of generated hazardous and nonhazardous waste and domestic wastewater.

Type of waste		Generatio n (kg/year)	Recovery &Reuse (kg/year)	Treatment/ Destruction /Disposal (kg/year)	Recyclin g Rate (%)
	ltem	Α	В	C=A-B	D=B/A(%)
Non- hazardou	Mixed municipal waste (LER 20 03 01)	3,293	0	3,293	0%
s waste	Paper and cardboard (LER 20 01 01)	377	377	0	100%
	Metals (LER 20 01 40)	57	57	0	100%
	Plastics (LER 20 01 39)	277	277	0	100%
Hazardou s waste	Spent waxes and fats (LER 12 01 12*)	0	0	0	-
	Mineral based non- chlorinated hydraulic oils (LER 13 01 10*)	0	0	0	-
	Synthetic hydraulic oils	0	0	0	-
	Mineral-based non- chlorinated engine, gear and lubricating oils (LER 13 02 05*)	0	0	0	-
	Mineral-based non- chlorinated insulating and heat transmission oils (LER 13 03 07*)	0	0	0	-

Summary of waste management by the Company:

Type of waste		Generatio n (kg/year)	Recovery &Reuse (kg/year)	Treatment/ Destruction /Disposal (kg/year)	Recyclin g Rate (%)
	Packaging containing residues of or contaminated by dangerous substances (LER 15 01 10*)	0	0	0	-
	Oil filters (LER 16 01 07*)	0	0	0	-
	Hazardous components removed from discarded equipment (LER 16 02 15*)	0	0	0	-
	Gases in pressure containers (including halons) containing dangerous substances (LER 16 05 04*)	0	0	0	-
	Lead batteries (LER 1606 01*)	0	0	0	-
	Ni-Cd batteries (LER 16 06 02*)	0	0	0	-
	Mercury-containing batteries (LER 16 06 03*)	0	0	0	-
	Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03 (LER 17 09 04)	0	0	0	-
	Fluorescent tubes and other mercury-containing waste (LER 20 01 21*)	0	0	0	-

PS 3 (iii) Whilst this is a carbon friendly project that may generate carbon credits, please provide an approximate measurement of total GHG emissions from the project

Wind energy does not emit any greenhouse gases. The calculations on just how much CO_2 could be saved by wind energy is based on an assumption for the carbon intensity of the global electricity sector, i.e. the typical amount of CO_2 emitted by producing one kWh of power.

According with **EIB publication "Electricity Emission Factors Review, 2009" Romania's emissions were estimated at 0.553 t/MWh**, as an average value for the carbon dioxide reduction to be obtained from wind generation.

	Energy produced	CO2 emissions
	MWh	t
Pestera WF	140,411	77,647

Cernavoda I-II F	126,594	70,006
Sarichioi WF	48,865	27,022
Vutcani WF	35,689	19,736
Total:	351,559	194,411

V.4. PS 4 AMBIENT NOISE:

Noise limits in Romania are established in several standards and laws:

• Ministry of Health Order

The Romanian legislation, **OM 536/1997**, establishes that maximum noise levels for residential areas is 50 dB(A) for day period and 40 dB(A) (noise rating level NR=35) for night, measured at three meters in front of the facade and at a height of 1,50 meters.

In practice this law is used by Health Protection Authority for measuring the noise levels inside the residences.

• Ministry of Environment Order

OM 152/558/1119/532 from 2008 establishes the noise limits for the different noise sources (roads, railway, airport and industry) that are mentioned in 2002/49/END.

In practice, for emitting the environmental permit, EPA uses **STAS 10009-88**, a technical standard that establishes that maximum noise levels for industrial areas is 65 dB(A), measured at three meters meters away from the boundary (property limit) of the industrial site. The recommended locations of measurement points for verifying the compliance with the limits are defined in STAS 6161/3-82.

For residences, STAS 10009-88 states that the measurement point should be chosen at 2 meters in front of facade and at a height starting from 1.30 meters and at every three floors above, where applicable. The noise limit permitted is 50 dB(A) for daytime and 40 dB(A) for night time.

In 2012 noise measurements were done for Pestera and Cernavoda WFs near closest residential areas. For the other two operational wind farms Sarichioi and Vutcani according with requirements stated in the environmental Authorizations, noise measurements will be performed until May 2013. For Cobadin and Vutcani Extension Wind farms that will become operational in the first semester of 2013, noise measurements will be performed until December 2013.

Ambient noise – maximum values measured in Pestera and Cernavoda WFs:

	Unit	IFC environmental guidelines	EU/Host Country standards	Result of monitoring	Compliance
Residential, institutional,	dBA				
			50	4.5	
Day time		55	50	45	Yes
Night time		45	40	44-47	Yes
Industrial, Commercial:	dBA				
Day time		70	70	51	Yes

Night time		70	70	51	Yes
Distance from the site boundary to the closest noise receptors	m	Receptors areas: >700 m Receptors 0 m	in Residentia in industrial, cc	l, institutional, mmercial arec	educational ıs:

All the measurements were conducted with a sound level meter type 2270 produced by Brüel & Kjær. For the mandatory calibrations, we used a acoustic calibrator type 4231.

PS 4 (ii) If the Company has Emergency Preparedness and Response Plans that require community participation and readiness, please provide un update of implementation and a summary of issues encountered.

EDPR implemented in all operational wind farms an Emergency Preparedness and Response Plan according with requirements of EMS Procedure EMS-EU_GP 00008 Emergency preparedness and response_v00.

The participation of community is not required.

In 2012 no emergency situations were registered. There have been made simulation for different situations: fire, trafo leakages.

IV.5. PS5. Land Acquisition and Involuntary Settlement

PS 5 (i) Did the Company acquired any new land or new right-of-way that required compensation to land owners or land users during the reporting Year?

Land acquisition for WFs was consistent with PS5 and based on a willing buyer basis. The land for the solar PV plants is rented.

IV.6. PS6. Bird Monitoring and turbine shutdown system

(i) Independent Ornithological Experts (IOE) Report

IOE Annual Reports for 2012 reporting year regarding operational WFs are published on company website:

http://www.edpr.com/sustainability/documents-library-and-publications/

(ii) Please provide detailed summaries of all bird monitoring data, brdstrikes, shutdown orders as per requirements of ESAP and EMMP.

An **ecological assessment** was undertaken as part of the EIA Reports prepared for the sites and this information has been supplemented with further ecological assessment.

A **video monitoring system** was installed in Pestera and Cernavoda. Data is recorded on external hard disk.



Information regarding

The conclusions of the monitoring programs of avifauna, flora and habitats for Cernavoda I-II and Pestera WFs are:

- The site of Cernavodă I-II and Pestera Wind Farms includes, mainly, agricultural crops, with small insertions of surfaces with ruderal vegetation, the area being crossed by access roads to the wind turbines;
- The vegetal associations which are typical to agro-ecosystems and include ruderal species, with a limited number of flora species are predominant. Identified associations does not contain conservation reliant plant species, included in the Romanian or European Red Lists, Annexes to Bern Convention or the Habitats Directive, the vegetation being composed of common species;
- Weed vegetation mixed with other ruderal species grows at the edge of the access roads, irrigation ditches etc.
- Installation in the area of the wind turbines does not create major imbalances in the agroecosystems within the area, already affected by the anthropic impact;
- The terrestrial vertebrate and invertebrate fauna within the site area of Cernavodă I-II and Pestera Wind Farms is represented, mainly, by common species which are frequently found in highly anthropized ecosystems. Their presence in the area is an outcome of the way in which the lands are used;
- As regards the entomofauna, we specify the followings: if the current system of land use is kept, it will maintain a favourable conservation status;

- Herpetofauna is represented by common species for anthropized ecosystems, within the area, there is no risk of disappearance of the identified species, which are resistant to the anthropic impact, being adapted to the new environmental conditions;
- Mammal fauna of the study area is characterized, mainly, by the presence of common species specific to steppe areas and agroecosystems;
- As regards the monitoring of the avifauna of the wind farms area and its proximity, 43 species of birds have been identified out of which 16 migratory species and 17 nesting species;
- The bird species which nest in the area of the wind farms (agricultural crops, ruderal vegetation) are in general common species, typical to such habitats, and their presence in the area proves the fact that they are not negatively affected by the activity specific to the operation of the wind farms;
- As regards the avifauna migration, one of the important corridors in Dobrogea area is located on the seashore of the Black Sea and along the Danube coastline lakes (Ciochia, V. 1984), at considerable distances to the Cernavodă I-II and Pestera Wind Farms, where, in general, the seabirds migrate (ducks, geese, shorebirds etc.). For the rest of the migratory species, the wind farms location does not represent an area which is favourable to shelter, rest or feed for a long period (for example, the landscape is less attractive, including monoculture crops, high aridity, reduced humidity, low percent of natural steppe vegetation, forests/tree plantations);
- An intense migration of the large species was not registered in the area of the wind farms and its proximity (birds of prey, storks etc.). The noticed presences (Circus cyaneus, Buteo rufinus, Ciconia ciconia) were represented by singular specimens, in transit;
- As regards the impact on the avifauna, during the period of performing the monitoring (January-December 2011), in the area of the wind farms, no dead specimens of birds have been identified and reported which could have resulted from the possible collisions of birds with the moving blades of the wind turbines or with the tower (pillar) of the wind power plants.

The conclusions of the monitoring programs of avifauna, flora and habitats for Vutcani WFs are:

- In March 2013, it was ascertained that the area of the wind farm was traversed, during the spring migration, by 600-1200 specimens of stork (Ciconia ciconia). This fact can lead to the conclusion that the area is part of a flyway. It remains to be established whether this route is primary or secondary.
- During the monitoring of the avifauna, between August 2012 March 2013, there were NO species of dead birds and/or injured by the blades of the operating turbines were recorded.

The conclusions of the monitoring programs of avifauna, flora and habitats for Sarichioi WFs are:

The impact of the 870 m overhead powerline that crosses ROSPA0032 Deniz – Tepe on the species indicated in the Natura 2000 Standard Form for which the important birds area was desigated in 2012 was assessed as insignificant, due to the following reasons:

 No electrocuted birds were identified. The study of the behaviour of the species identified in the survey indicated that they were not disturbed by the presence of the overhead powerline and they flew either above the power lines, or beneath them, even during foggy days.



Flock of starlings in the Deniz-Tepe overhead powerline area

- The maximum height of the high voltage poles is of 32 m, which does not make them an obstacle in the flying path of the birds using the area looking for food.
- Electrical conductors (4 in number) are placed at a distance of 5.5 m from each other, which eliminates the risk of collision and/or electrocution.
- No big birds were seen within the wind farm using the area to find food.
- After the completion of the works for the construction of the wind farm the area is no longer affected by the presence of people and equipments, and the nesting birds have resumed their activity - e.g. Specimen of Burhinus oedicnemus – the Eurasian Stone-curlew

Regarding the Additional Measures for the Protection and Conservation of Birds on the route of the 110 kV overhead powerline Sarichioi Station and Zebil Nord Station included in the Approval no. 152/20.12.2011 issued by the Eco Pontica Foundation, custodian of the Natura 2000 Deniz Stepe site, we hereby declare:

Measure no. 1 Marking the lines with visual signaling devices every 50 m

 According to the technical norms in force, the beacons are mounted only at overcrossings of national roads

- The Bird Life Romania recommendation is to mount beacons on the overhead powerline between the S39 pole and the Zebil North power station
- One beacon was mounted half the distance between the 2 poles of the overhead powerline
- The term for the installation of the beacons was the end of the months April May 2012 (beginning of the migration period for birds): MET



Mounted warning beacon

Measure no. 2 Placing metallic boxes as artificial nests for The Saker Falcon (Falco cherrug) on each high voltage poles within and in the vicinity of the protected area

- Bird Life Romania provided the technical specifications for the artificial nests by e-mail
- Bird Life Romania recommends placing these nests on the main line pole in the upper third
- It has been established that the nests be mounted on the \$39-\$46 overhead powerline route: MET



Artificial nest mounted on the pile

We specify that NO Falco cherrug specimen was seen using the mounted nests.

Measure no. 3 Mounting antistork devices

• The measure was stipulated in the project of the overhead powerline and was carried into effect during the construction: MET.

Measure no. 4 Eliminating the electrocution hazard at the poles within the protected area

• Each overhead powerline pole is provided with an earthing system, which eliminates the electrocution risk: MET.

Measure no. 5 Starting the monitoring of the overhead powerline from its putting into operation over a period of 36 months

- EDPR and SC Eco Green Consulting SRL shall submit Eco Pontica and Bird Life Romania a Monitoring Plan for 36 month that shall include a description of the work methodology and a suggestion regarding the frequency of the field travels: MET.
- POSTCONSTRUCTION MONITORING IS IN PROCESS.

Regarding the supervised flora and fauna we hereby state that there were no phenomena leading to its degradation.

(iii) What changes, if any are being proposed to the EMMP?

No changes are proposed to the measures foreseen in EMMP.

(iv) Please provide a <u>Collision Risk Analysis</u> confirming the project is not resulting in incremental mortality in excess of thresholds based on the Scottish National Heritage Model or other model as applicable.

The **Collision Risk Analysis for Pestera and Cernavoda WFs** are published on the EDPR website:

http://www.edpr.com/sustainability/documents-library-and-publications/

(v) Please provide a summary of agricultural crop management in the area of the wind farms.

The land required for developed WFs has been purchased from individual land owners by EDPR. No compulsory purchase was required for the developments and there will be no loss of livelihood or attendant economic losses associated with the developments.

Initially the category of land was "agricultural use". The surfaces affected by construction (foundations and platforms of wind turbines, access roads, substations) had to be declared to competent authorities in order to change the land category in "construction use".

In this regard, several steps were followed: obtaining urbanism certificates, declarations to ANIF – National Authority for Land Reclamation, OCPI – National Office for Cadastrial and Land Booking and Department for Agricultural Development). The taxes paid to these institutions are detailed in Chapter B of this document.

The agricultural land outside the operational footprints will be given by EDPR to local residents for continued agricultural use.

Size of land affected by construction works:

In the table below are listed the surfaces affected by constructions in 6 WF developed in Romania:

Affected surfaces by constructions:	UM	Pestera WF (30 WTG)	Cernavoda WF (46 WTG)	Sarichioi WF (11 WTG)	Vułcani WF (12 WTG)
Technological platforms	ha	2.4	3.68	0.44	0.72
Foundation of wind turbines	ha	1.2	1.84	0.24	0.39
Access roads	ha	2,00	1.61	0.74	0.55
Substations	ha	0.42	0.6	0.17	0.2
Subtotal :	ha	4,02	7.73	1.59	1.86

Affected surfaces by constructions:	UM	Cobadin WF (13WTG)	Vutcani Extension WF (14 WTG)
Technological platforms	ha	1.04	1.12
Foundation of wind turbines	ha	0.42	0.45
Access roads	ha	0.60	0.35
Substations	ha	0.2	0
Subtotal :	ha	3.3	1.92

EDPR Romania allowed local inhabitants to use the land plots for agricultural activities, except the parcels used for wind farms constructions, contributing in this way to the increase of benefits to local communities.

In 2012, EDPR Romania has not implemented any agricultural crop programme.

(vi) Please summarise general environmental performance related to operational and/or construction performance (as appropriate) of the Wind Farms, including a summary of environmental key performance indicators.

In order to have an increased social and environmental performance EDPR utilizes a reporting tool internally titled: Sustainable Development Reporting Platform (SIS tool).
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Environmental Key Performance Indicators related to 2012 operational year are reported every 3 months to SIS tool. The key indicators with SIS codification system are presented in following table.

Indicators regarding generated waste quantities are presented in Section PS 3 (ii) Summary of waste management by the Company.

Environmental Key Performance Indicators	Value	Unit	Comments:
IA - 03 - Environmental managemer	nt system		
IA-03.01.S : Number of production facilities certified (ISO 14001)	4	no	Certification of Pestera and Cernavoda WFs in december 2011. Sarichuoi ad Vutcani Certification in October 2012.
IA-03.03.S : Installed Capacity with environmental certification (ISO 14001)	285	MW	4 wind farms
IA-35.3.S : List of facilities to maintain/achieve certification in the following period (2013)	399	MW	To maintain EMS ISO 14001: 1. Pestera WF (90 MW) 2. Cernavoda WF (138 MW) 3. Sarichioi WF (33 MW) 4. Vutcani WF (24 MW) To implement EMS ISO 14001 in 2013 : Cobadin WF 6 solar PV projects
IA - 14 - Water consumption and use	9		
IA-14.05.1.S : Water withdrawal from well	0	m ³	

IA-14.08.S : Amount of water	32	m ³				
coming from other private		m ³				
IA-14.12 S · Consumption of water	32	m ³				
for human use	52	m ³				
IA - 18 - Biodiversity						
IA-18.03.S : Land management	0	ha				
area inside protected areas						
IA - 26 - Energy Efficiency						
IA-26.3.S : Backfeed Power			-			
	205,50	MWh				
IA - 16 - Efluentes Líquidos						
IA-16.24.S : Domestic wastewater	29	m ³	-			
sent to municipal treatment						
	0	m^3				
	0	111-				
IA - 17 - Spills and near miss						
IA-17.02.S : Recorded significant	0	m ³				
spills volume						
IA-17.03.S-3 : N° of Recorded	0	no				
Significant splits	0	n 0				
near miss	0	no				
IA-13.02.5 : SF6 emissions	0	кg				
IA - 22 - Noise						
IA-22.01.S : No. of facilities where	2	no				
noise measurements were made						
IA-22.02.S : Measures to minimize	-	-	N/A			
noise						
IA - 19 - Compliance/Incidents or Fines						
IA-19.1.S: Number of	0	no	-			
environmental infraction						
IA-19.2.S: Number of	0	no				
environmental crime						
IA-19.4.S : Environmental fines	0	EUR	-			
IA-19.5.S : Environmental crime	0	EUR				
IA-19.7.S : Environmental	0	EUR				
compensation						
IA-19.8.S : Number of started	0	no				
processes sanctioning						

IA-19.9.S : Number of pending processes sanctioning	0	no
IA-19.10.S : Number of resolved processes sanctioning	0	no

Another indicator is the list of environmental studies conducted in 2012 for the projects developed in Romania

	NUMBER OF ENVIRONMENTAL STUDIES - 2012							
	PERMITTING							
Romania	Feasibility studies	Environmental Noise Impact studies Studies		Specific fauna & flora studies	Other environmental studies (landscape, etc)	Cultural Impact Studies		
Pestera WF								
Cernavoda WF								
Sarichioi WF								
Vutcani WF								
Cobadin WF				1				
Vutcani Extension WF	1	1						
Facaeni WF	1	1						
TOTAL	2	2	0	1	0	0		

Corrective measures during construction of Cobadin and Vutcani Extension WFs:

Represent environmental related activities during construction aimed to reduce the environmental impact and to assure compliance with legislation in force and best environmental practices.

Before starting the construction works in April 2012 a **CEMP** - Construction Environmental Management Plan was distributed to all main contractors and subcontractors. The key objective was to ensure that EDPR and all its Contractors and Subcontractors are committed to the philosophies of good site practice and safe working conditions.

The EMMP-Environmental Management and Monitoring Plan foresee the following actions that are in line with conditions foreseen in the Environmental Agreements:

- establish a protocol for monitoring of ecological impacts during construction and operation
- develop a construction waste management plan identifying methods to reduce waste generation and reuse and recycle wastes in preference to disposal

- implementing the construction waste management plan and maintain records for annual environmental audits
- Monitor the removal temporary construction access roads, construction compounds and other areas following completion of construction and their restoration to encourage re -vegetation over time

Examples of how the corrective works were done are presented below.





Costs for corrective actions during the construction (Examples: handling of natural soil, morphological restitution, hydroseeding, management of waste during construction, watering of mud roads, etc)

In order to assist and verify the implementation of all corrective measures mentioned above, environmental construction monitoring was conducted by site visits.

The methodology applied for Environmental Construction Monitoring for both wind farms, Cobadin and Vutcani Extension, consisted in the activities listed in the table below. In addition, the table is containing the actions undertaken in order to comply with each proposed activity.

EHS Annual Monitoring Report

No.	Activities	Actions
1.	Identification of all relevant aspects in order to reach the proposed objectives	 Meetings with all involved Constructors and Sub-constructors Elaboration of initial report for each wind farm
2.	Data collection	 Assessment of construction works Study of all relevant documents: technical projects, EMMP, EIA , etc.
3.	Monitoring activities	In order to monitor how the construction works are respecting with all requirements of permits and plans, site visits were undertaken <u>weekly</u> . During site visits following aspects were assessed:
		 Place for storing the construction materials and hazardous materials; Waste collection and storage generated during construction; Site organisation; Signalling of construction activities; Checking the compliance of traffic program; Methodology of removal, storage and transport of vegetal soil layer; Methodology of storage and transport of soil resulted from excavation
4.	Compliance with the provisions of Envronmental Agreement	 Elaboration of Waste Management Plan Elaboration of Construction Environmental Management Plan

NUMBER OF ENVIRONMENTAL STUDIES - 2012

			CONSTRUCTION		
Romania	Environmental Monitoring Plans	Noise Studies	Specific fauna & flora studies	Other environmental studies (landscape, etc	Cultural Monitoring Plans :)
Pestera WF					-
Cernavoda WF					
Sarichioi WF					
Vutcani WF					
Cobadin WF					1
Vutcani ExtWF					1
Facaeni WF					
TOTAL	0	0	0	2	0
			OPERATION		
Romania	Environmental Monitoring Plans EMS ISO 14001	Noise Stu -	udies Specific flora st	fauna & Othe Judies stud	r environmental ies (landscape, etc)
Pestera WF		1	1	1	
Cernavoda WF		1	1	1	
Sarichioi WF		1	1	1	
Vutcani WF		1	1	1	
Cobadin WF					
Vutcani Ext WF					
Facaeni WF					
TOTAL	4	4	4		0