

# GOLD STANDARD PASSPORT

## GOLD STANDARD PASSPORT

### CONTENTS



- A. Project title
- B. Project description
- C. Proof of project eligibility
- D. Unique Project Identification
- E. Outcome stakeholder consultation process
- F. Outcome sustainability assessment
- G. Sustainability monitoring plan



- H. Additionality and conservativeness deviations



- Annex 1 ODA declarations

# GOLD STANDARD PASSPORT

## SECTION A. Project Title

Bergres Wind Power Project, Turkey

## SECTION B. Project description

**Bergres Elektrik Üretim A.Ş.** (hereafter referred to as “**Bergres Elektrik**”) is investing into a new Wind Power project called **Bergres Wind Power Project** (hereafter referred to as the “Project” or “**Bergres WPP**”), which involves installation and operation of 69,95 MWm/69,95 MWe wind power plant. The project consists of 21 turbines with 3.2 MWm/MWe and 1 turbine with 2.75 kWm/kWe capacities. The licence of the project was issued by Energy Market Regulatory Authority (EMRA) in February 09 of 2012. The generated energy will be fed to the grid at İzmir Havza and Yuntdag RES transmission line.<sup>1</sup>

An **estimated electricity net generation of 238,000 MWh<sup>2</sup> per year** by the efficient utilization of the available wind energy by project activity will replace the grid electricity, which is constituted of different fuel sources, mainly fossil fuels. The electricity produced by project activity will result in a **total emission reduction of 131,241 tonnes of CO<sub>2e</sub>/year**. Moreover, project activity will contribute further dissemination of wind energy and extension of national power generation. It is expected that the generation of electricity starts on 01/06/2017 and will have an operational lifetime of 49 years.<sup>3</sup>

The project will help Turkey to stimulate and commercialise the use of grid connected renewable energy technologies and markets. Furthermore, the project will demonstrate the viability of grid connected wind farms which can support improved energy security, improved air quality, alternative sustainable energy futures, improved local livelihoods and sustainable renewable energy industry development. The specific goals of the project are to:

- reduce greenhouse gas emissions in Turkey compared to the business-as-usual scenario;

<sup>1</sup> Please See; Generation Licence, Page 9

<sup>2</sup> Wind Guard Energy Yield Assessment, Page 8

<sup>3</sup> <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-10-v1.pdf>

## GOLD STANDARD PASSPORT

- help to stimulate the growth of the wind power industry in Turkey;
- create local employment during the construction and the operation phase of the wind farm;
- reduce other pollutants resulting from power generation industry in Turkey, compared to a business-as-usual scenario;
- help to reduce Turkey's increasing energy deficit;
- and differentiate the electricity generation mix and reduce import dependency.

As the project developer, **Bergres Elektrik** believes that efficient utilization of all kinds of natural resources with a harmony coupled with responsible environmental considerations is vital for sustainable development of Turkey and the World. This has been a guiding factor for the shareholders towards the concept of designation and installation of a wind power project. Other than the objective of climate change mitigation through significant reduction in greenhouse gas (GHG) emissions, the project has been carried out to provide social and economic contribution to the region in a sustainable way. The benefits that will be gained by the realization of the project compared to the business-as-usual scenario can be summarized under four main indicators:

### **Environmental**

The project activities will replace the grid electricity, which is constituted of different fuel sources causing greenhouse gas emissions. By replacing in the consumption of these fuels, it contributes to conservation of water, soil, flora and faunas and transfers these natural resources and also the additional supply of these primary energy sources to the future generations. In the absence of the project activity, an equivalent amount of electricity would have been generated from the power plants connected to the grid, majority of which are based on fossil fuels. Thus, the project is replacing the greenhouse gas emissions (CO<sub>2</sub>, CH<sub>4</sub>) and other pollutants (SO<sub>x</sub>, NO<sub>x</sub>, particulate matters) occurring from extraction, processing, transportation and burning of fossil-fuels for power generation connected to the national grid.

### **Economical**

Firstly, the project will help to accelerate the growth of the wind power industry and stimulate the designation and production of renewable energy technologies in Turkey. Then, other entrepreneurs irrespective of sector will be encouraged to invest in wind power generations. It will also assist to reduce Turkey's increasing energy deficit and diversify the electricity generation mix while reducing import dependency, especially natural gas. Importantly, rural development will be maintained in the areas around the project site by providing infrastructural investments to these remote villages.

## GOLD STANDARD PASSPORT

### **Social**

The employment of local people that have necessary technical qualifications for the required post will be the priority and enhanced by all project activities during construction and operation of wind farm. As a result, local poverty and unemployment will be partially eliminated by increased job opportunities and project business activities. Construction materials for the foundations, cables and other auxiliary equipment will preferentially be sourced locally. Moreover as contribution of the project to welfare of the region, the quality of the electricity consumed in the region will be increased by local electricity production, which also contributes decreasing of distribution losses.

### **Technological**






Implementation of the proposed project will contribute to wider deployment of wind power technology in local and national level. It will demonstrate the viability of larger grid connected wind farms, which will support improved energy security, alternative sustainable energy, and also renewable energy industry development. This will also strengthen pillars of Turkish electricity supply based on ecologically sound technology.

# GOLD STANDARD PASSPORT

## SECTION C. Proof of project eligibility

### C.1. Scale of the Project

Please tick where applicable:

Project Type	Large	Small
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

	<input type="checkbox"/>
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### C.2. Host Country

The host country is Republic of Turkey.

### C.3. Project Type

Please tick where applicable:

Project type	Yes	No
Does your project activity classify as a Renewable Energy project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does your project activity classify as an End-use Energy Efficiency	<input type="checkbox"/>	<input type="checkbox"/>

## GOLD STANDARD PASSPORT

Improvement project?		
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*Please justify the eligibility of your project activity:*

“Bergres Wind Power Project, Turkey” is classified in the Renewable Energy Source category as electricity from non-fossil and non-depletable energy sources, in this case from wind, is fed into the Turkish electricity grid.

Pre Announcement	Yes	No
Was your project previously announced?	<input type="checkbox"/>	<b>X</b>
Project start date for Bergres WPP is 12/11/2015 and there has not been any previous announcements of the project. Moreover, this project will go ahead with Gold Standard certification.		

### C.4. Greenhouse gas

Greenhouse Gas	
Carbon dioxide	<b>X</b>
Methane	<input type="checkbox"/>
Nitrous oxide	<input type="checkbox"/>

### C.5. Project Registration Type

Project Registration Type	
Retroactive	<b>X</b>

Pre-feasibility assessment	Retroactive projects (T.2.5.1)	Preliminary evaluation (eg: Large Hydro or palm oil-related project) (T.2.5.2)	Rejected by UNFCCC (T2.5.3)
	<b>X</b>	<input type="checkbox"/>	<input type="checkbox"/>

# GOLD STANDARD PASSPORT

If Retroactive, please indicate Start Date of project activity dd/mm/yyyy: 12/11/2015

# GOLD STANDARD PASSPORT

## SECTION D. Unique project identification

### D.1. GPS-coordinates of project location

**Table 1:** Geographical coordinates of the wind turbines of the project activity<sup>4</sup>

Wind Turbine No.	Latitude (N)	Longitude (E)
1	38° 59' 17,8620"	27°12' 59, 3912"
2	38° 59' 01,6368"	27°13' 02, 2513"
3	38° 58' 21,7776"	27°12' 38, 4412"
4	38° 57' 13,0140"	27°12' 32,7949"
5	38° 56' 59,2476"	27°12' 37,9060"
6	38° 57' 15,1488"	27°13' 10,1940"
7	38° 57' 40,7016"	27°13' 16,5056"
8	38° 57' 49,4064"	27°13' 10,2997"
9	38° 57' 39,4848"	27°13' 41,4743"
10	38° 57' 34,7544"	27°13' 56,0018"
11	38° 57' 29,8692"	27°14' 05,5424"
12	38° 57' 24,1704"	27°14' 15,4953"
13	38° 57' 18,7056"	27°14' 22,8726"
14	38° 57' 16,2144"	27°14' 35,0793"
15	38° 56' 52,4112"	27°14' 45,7579"
16	38° 56' 16,9188"	27°14' 16,0600"
17	38° 56' 09,4452"	27°14' 22,2656"
18	38° 56' 03,8472"	27°14' 30,9278"
19	38° 55' 56,6832"	27°14' 42,8240"
20	38° 55' 53,2560"	27°14' 53,9434"
21	38° 56' 07,0152"	27°15' 06,2861"
22	38° 55' 59,7000"	27°15' 14,6089"

<sup>4</sup> See, Bergres WPP Generation License (Convert UTM to Lat/Lon Coordinates), for unit conservation see;  
<http://www.rcn.montana.edu/resources/tools/coordinates.aspx?nav=11&c=UTM&md=83&mdt=NAD83/WGS84&z=35&e=591938&n=4469295&h=Nq>



# GOLD STANDARD PASSPORT

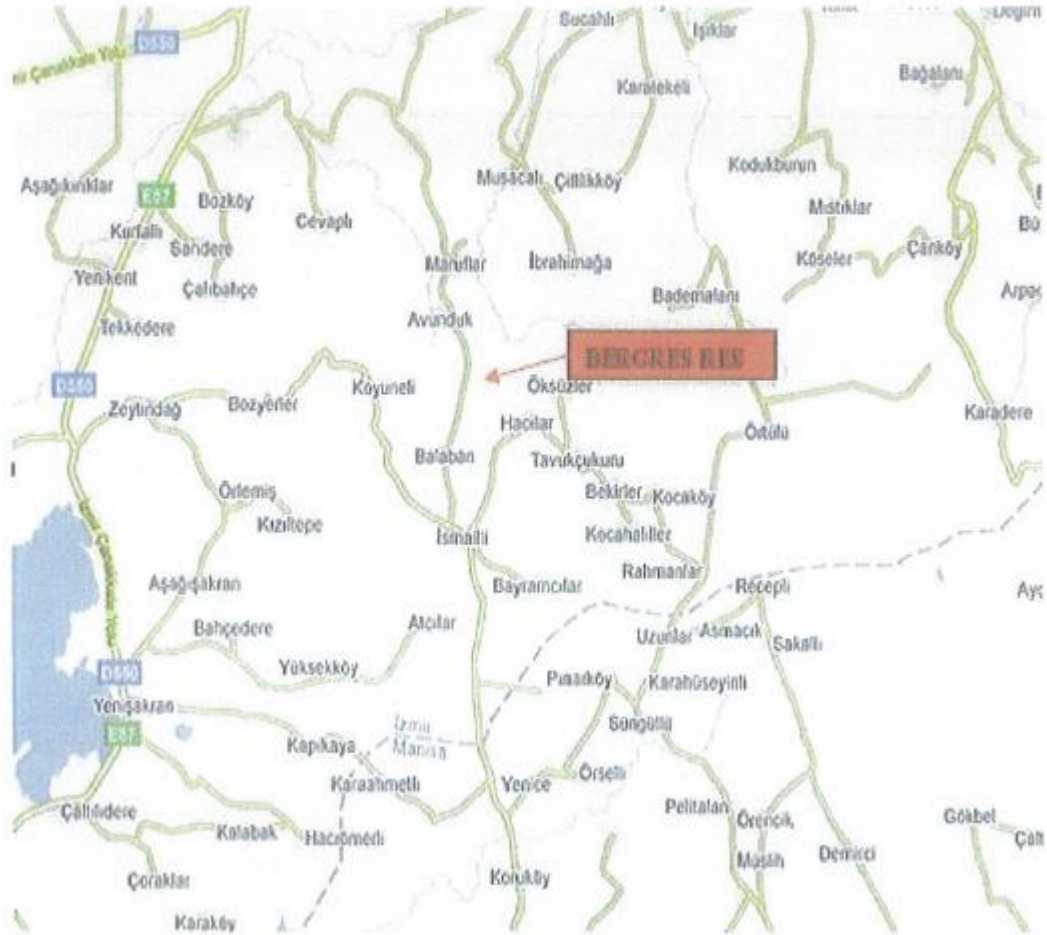


## ***Explain given coordinates***

The project site is located about 17 km south-east of the town of Bergama and approximately 60 km north of the city of Izmir in western Turkey. The wind farm area is located between the villages Avunduk and Balaban in the west, Yuntdag and Bayramcılar in the south-east and Hacılar in the east. The closest villages are Bayramcılar and Balaban villages and the distance between the villages and the project area is 500m.

# GOLD STANDARD PASSPORT

## D.2. Map



**Map 1: Location of Bergres Wind Power Plant Project<sup>5</sup>**

<sup>5</sup> See, PIF Page 28

# GOLD STANDARD PASSPORT

## SECTION E. Outcome stakeholder consultation process

### E.1. Assessment of stakeholder comments

There has been no stakeholder meeting for this retroactive project. Stakeholder comments will be received during stakeholder feedback round.

### E.2. Assessment of stakeholder comments

Outcomes of Stakeholder feedback round will be reported in this document.

### E.3. Discussion on continuous input / grievance mechanism

Discussion on continuous input will be given after stakeholder feedback round has been completed.

## SECTION F. Outcome Sustainability assessment

### F.1. 'Do no harm' Assessment

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low, medium, high)	Mitigation measure
Human Rights			

## GOLD STANDARD PASSPORT

<p>1. The project respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicit in Human Rights abuses.</p>	<p>The project respects internationally proclaimed human rights including dignity, cultural property.</p> <p>Turkey is a party to Universal Declaration of Human Rights: <a href="http://ua.mfa.gov.tr/detay.aspx?2634">http://ua.mfa.gov.tr/detay.aspx?2634</a></p>	<p>Low/none</p>	
<p>2. The project does not involve and is not complicit in involuntary resettlement.</p>	<p>As described in the Project Introduction File (PIF) page number 27 no settlements are too close to the project site, and therefore no resettlements are necessary.</p>	<p>Low/none</p>	
<p>3. The project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage.</p>	<p>As the area of the project is on hills of the Bergama and there is no cultural heritage sites close, there is no conflict with critical cultural heritage<sup>6</sup>.</p>	<p>Low/none</p>	
<b>Labour Standards</b>			
<p>4. The project respects the employees' freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights</p>	<p>The project respects the employees' freedom of association and their rights.</p> <p>Turkey is a party to ILO Convention 87 Freedom of Association and Protection of the Right to Organise Convention, 1948:<a href="http://ua.mfa.gov.tr/detay.aspx?5305">http://ua.mfa.gov.tr/detay.aspx?5305</a></p>	<p>Low/none</p>	
<p>5. The project does not involve and is not complicit in any form of forced or compulsory labour.</p>	<p>The project does not involve in any form forced labour.</p> <p>Turkey is a party to <u>C29 Forced Labour Convention</u>:</p>	<p>Low/none</p>	

<sup>6</sup> Project introduction file, page 27.

## GOLD STANDARD PASSPORT

	<a href="http://www.csqb.gov.tr/csqbPortal/ShowDoc/WLP+Repository/diyih/doc/ilosozlesmetr/29">http://www.csqb.gov.tr/csqbPortal/ShowDoc/WLP+Repository/diyih/doc/ilosozlesmetr/29</a>		
6. The project does not employ and is not complicit in any form of child labour.	<p>The project does not involve in any form child labour.</p> <p>Turkey is also a party to convention on Worst Forms of Child Labour since 1999.</p> <p><a href="http://www.ilo.org/ipecc/facts/WorstFormsofChildLabour/lang--en/index.htm">http://www.ilo.org/ipecc/facts/WorstFormsofChildLabour/lang--en/index.htm</a></p>	Low/none	
7. The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.	<p>The project does not involve in any form discrimination in any kind of form.</p> <p>Turkey is also party to Convention on Discrimination since 1972 to prevent any form of discrimination;</p> <p><a href="https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&amp;mtds_g_no=IV-2&amp;chapter=4&amp;lang=en">https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&amp;mtds_g_no=IV-2&amp;chapter=4&amp;lang=en</a></p>	Low/none	
8. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments	<p>Workers might have occupational accidents during construction and operation phase. According to project developer, during construction and operational phase of the project "Health and Occupational Safety Regulation" will be followed.</p> <p>Regulation could be found under this link too:</p>	Medium	Necessary health and safety measures will be taken during construction and operation phase, relevant staff will be trained

## GOLD STANDARD PASSPORT

	<a href="http://www.resmigazete.gov.tr/eskiler/2012/06/20120630-1.htm">http://www.resmigazete.gov.tr/eskiler/2012/06/20120630-1.htm</a>		to be able to work with high voltages.
<b>Environmental Protection</b>			
9. The project takes a precautionary approach in regard to environmental challenges and is not complicity in practices contrary to the precautionary principle. This principle can be defined <sup>7</sup> as: "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."	Bergres wind power project has minimum impact on environment and takes precautionary approach in regard to environmental challenges <sup>8</sup> .	Low	
10. The project does not involve and is not complicity in significant conversion or degradation of critical natural habitats, including those that are (a) legally protected, (b) officially proposed for protection, (c) identified by authoritative sources for their high conservation value or (d) recognised as protected by traditional local communities	The project does not involve and is not complicity in significant conversion or degradation of critical natural habitats. As explained in the 9th safeguarding principle, negative impact of the project activity to the environment would be minimum. <sup>9</sup>	Low	
<b>Anti-Corruption</b>			
11. The project does not	The project does not involve	Low/none	

<sup>7</sup> The Wingspread Conference on the Precautionary Principle (1998)

<sup>8</sup> Project introduction file, page 50-55

<sup>9</sup> Project introduction file, page 50-55

## GOLD STANDARD PASSPORT

involve and is not complicit in corruption	any kind of corruption. Turkey is a party to United Nation Convention against Corruption since 2006; <a href="http://ua.mfa.gov.tr/detay.aspx?15042">http://ua.mfa.gov.tr/detay.aspx?15042</a>		
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### F.2. Sustainable Development matrix

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Final score
Gold Standard indicators of sustainable development.	If relevant copy mitigation measure from "do no harm" – table, or include mitigation measure used to neutralise a score of ‘–’	Check <a href="http://www.undp.or/mdg">www.undp.or/mdg</a> and <a href="http://www.mdgmonitor.org">www.mdgmonitor.org</a>  Describe how your indicator is related to local MDG goals	Defined by project developer	Negative impact: score ‘–’ in case negative impact is not fully mitigated score 0 in case impact is planned to be fully mitigated No change in impact: score 0 Positive impact: score ‘+’
Environmental				
Air quality		<b>MDG- 7: Ensure Environment Sustainability</b>  7.A Integrate the principles of	Parameter: Amount of avoided CO, NMVOC  Explanation: Due to avoidance of fossil fuel combustion, these	+

## GOLD STANDARD PASSPORT

		<p>sustainable development into country policies and programmes and reverse the loss of environmental resources</p> <p>7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss</p>	<p>emissions will be reduced in parallel to reduced CO<sub>2</sub>.</p>	
Water quality and quantity		<p><b><u>MDG 7: Ensure Environmental Sustainability, target C</u></b></p> <p>“Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.</p>	<p>Parameter: Amount of avoided wastewater to be discharged to the environment by project activity.</p> <p>Explanations: Thermal power plants produce considerable amount wastewater especially due to cooling. By the project activity, significant amount of wastewater discharge will be avoided.</p>	+
Soil condition		<p><b><u>MDG- 7: Ensure Environment Sustainability</u></b></p> <p>7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss</p>	<p>Parameter: Amount of avoided NOx emissions,</p> <p>Explanation: Thermal power plants lead to considerable amount of NOx emission which has negative impact to soil condition. By project activity significant amount of NOx emission will be</p>	0



## GOLD STANDARD PASSPORT

			avoided by partially switching of thermal electricity production.	
Other pollutants		<p><b><u>MDG- 7: Ensure Environment Sustainability</u></b> 7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss</p>	<p>Parameters: Noise level during operation of the project activity. Explanation: During the operation of the wind farm there will be some noise due to turbines which is under allowed level.</p>	0
Biodiversity		<p><b><u>MDG- 7: Ensure Environment Sustainability</u></b> 7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss</p>	<p>Parameters: Number of bird strikes to the turbines.  Explanation: Bird strike is the main possible impact of wind projects on biodiversity</p>	0
<b>Social Development</b>				
Quality of employment	Necessary health and safety measures will be taken during construction and operation phase, relevant staff will be trained to be able to work with high voltages.	<p><b><i>MDG-1: Eradicate extreme poverty &amp; hunger</i></b>  1.B. Achieve full and productive employment and decent work for all, including women and young people</p>	<p>Parameter: Health and Safety and other trainings Explanation: Project developer ensures high standard health and safety conditions for the employees. Some of the staff may get training on different kind of issues like operation and maintenance of power plant. Baseline for parameter: Not applicable Future target for parameter: All employees will be trained on Occupational Health and Safety issue.</p>	+

## GOLD STANDARD PASSPORT

Livelihood of the poor		<p><b>MDG-1: Eradicate extreme poverty &amp; hunger</b></p> <p>1.A. Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day</p> <p>1.B. Achieve full and productive employment and decent work for all, including women and young people</p>	<p>Parameter: Number of people living under the poverty line</p> <p>Explanation: Income generation by local orders with project activity will have indirect impacts to livelihood of the poor.</p> <p>Future target for parameters: Continuation of the current situation.</p>	0
Access to affordable and clean energy services			<p>Parameter: Change in energy use of local people</p> <p>Explanation: The project will help to reduce high share of imported fossil fuel dependency of Turkey.</p>	0
Human and institutional capacity	The staff will be trained to be able to work with high voltages.	<p><b>MDG-1: Eradicate extreme poverty &amp; hunger</b></p> <p>1.A. Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day</p>	<p>Parameter: Change in number of jobs and positions for women</p> <p>Explanation: Theoretically, project activity would create new jobs to women. However, due to lack of interest of women to these kinds of jobs stemming from norms</p>	0

## GOLD STANDARD PASSPORT

			of society, impact of the project to this indicator is expected to be neutral.	
Economic and technological development				
Quantitative employment and income generation		<p><b><i>MDG-1: Eradicate extreme poverty &amp; hunger</i></b></p> <p>1.A. Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day</p> <p>1.B. Achieve full and productive employment and decent work for all, including women and young people</p>	<p>Parameter: Number of local employment</p> <p>Explanation: The project will create new employments on the project area.</p> <p>Baseline for parameter: N/A</p> <p>Future target for parameter: At least 2</p>	+
Balance of payments and investment		<p><b><u>MDG-8.D Develop a global partnership for development</u></b></p> <p>Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the</p>	<p>Parameter: Amount of avoided natural gas to be imported</p> <p>Explanation: Turkey imports nearly all of natural gas consumed. The project will have positive impacts on balance of payments with shifting some of electricity generation from natural gas.</p>	+

## GOLD STANDARD PASSPORT

		long term.		
Technology transfer and technological self-reliance		<p><b>MDG-8.F</b></p> <p>In cooperation with The private sector, make available the benefits of new technologies, especially information and communications.</p>	<p>Parameter: Total number of employee having wind power plant related trainings.</p> <p>Explanation: With this project, employees will be trained with wind power project related issues.</p> <p>Baseline for parameter: Only operation related trainings for the staff employed in the existing power plants.</p> <p>Future target for parameter: Continuation of baseline situation</p>	0
<p><b>Justification choices, data source and provision of references</b></p>				
Air quality	<p>Electricity generated from the wind farm partially substitutes electricity generation from fossil fuel fired power plants that represent a large share of the Turkish grid generation mix. Thus, besides greenhouse gases, all other air pollutants (e.g. SO<sub>x</sub>, NO<sub>x</sub>), particle and VOC emissions are avoided by the project activity. For CO and MNVOC emission amount see <a href="http://www.tuik.gov.tr/PreHaberBultenleri.do?id=16174">http://www.tuik.gov.tr/PreHaberBultenleri.do?id=16174</a></p> <p>Dust emergence connected to the project activity appears only for a short time during the construction phase and will be caused by digging foundations, land arrangement works and construction of the roads. While construction will start on March 2016 which is rainy period of the project region, there would be minimum dispersion of the dust. Hence, we can conclude that there will be minimum impact of the dust emissions on the project area.</p> <p>Therefore, in the SDM the positive effect of the project on the air quality is scored with (+).The positive impact of wind energy on air quality is described in Sustainability Monitoring Plan (section G) of GS Passport. Net project generation shall serve as evidence of positive impact of the project activity on this indicator and will be monitored annually as indicated in Section G.</p>			

## GOLD STANDARD PASSPORT

Water quality and quantity	<p>In the baseline, thermal power plants discharges significant amount of waste water to the environment after usage for cooling etc. Hence, with the project activity considerable amount of water discharge will be avoided with substituting partially thermal power plants. For Wastewater discharged by thermal PPs in 2012 see: <a href="http://www.tuik.gov.tr/PreHaberBultenleri.do?id=16175">http://www.tuik.gov.tr/PreHaberBultenleri.do?id=16175</a></p> <p>During operation of project activity only small amount of waste water to be discharged environment. Wastewater production is due to daily consumption of workers. In the project area, one septic tank has been digged. Since significant amount of wastewater will be avoided by the project activity, positive score is given to this indicator. Amount of avoided wastewater to be discharged to the environment will be monitored during operation of the project activity as described in the Sustainability Monitoring Plan (section G) of GS Passport.</p>
Soil condition	<p>In the baseline, thermal power plants emits significant amount of NOx which have negative impact to the quality of soil. The adverse affect of emissions of NOx on soil conditions is acid rains. Acid rains can damage soil conditions badly. With proposed project activity significant amount of NOx emission will be avoided due to substituting partially thermal power plant electricity generation.</p> <p>For NOx emission amount see TUIK: <a href="http://www.tuik.gov.tr/PreHaberBultenleri.do?id=16174">http://www.tuik.gov.tr/PreHaberBultenleri.do?id=16174</a></p> <p>For net electricity generation in 2012 see TEİAŞ: <a href="http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2012/uretim%20tuketim(23-47)/34(84-12).xls">http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2012/uretim%20tuketim(23-47)/34(84-12).xls</a></p> <p>Therefore, in the SDM the positive effect of the project on the soil condition is scored with (+). Amount of avoided NOx emission by the project activity will be monitored as described in the Sustainability Monitoring Plan (section G) of the GS Passport</p>
Other pollutants	<p>For this indicator, three parameters defined as relevant with the project activity. First parameter is noise impact. Since impact of noise can be significant only close area of the project, surrounding area of the project activity is selected as impact assessment boundary and for the baseline, continuation of current situation which is noise stemming from wind, movement of leaf and daily life in the close villages. Balaban village is the closest village to the project area and the distance is about 500 m.</p> <p>In the context of the wind farms noise of the turbines can be considered under other pollutants. According to the PIF of the project, the noise assessment study shows that the operational noise of the project will not exceed the Turkish noise regulation (<a href="http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.14012&amp;MevzuatIliski=0&amp;">http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.14012&amp;MevzuatIliski=0&amp;</a></p>

## GOLD STANDARD PASSPORT

	<p><a href="#">sourceXmlSearch=%C3%A7evresel%20g%C3%BCr%C3%BCl%3%BC</a>) and IFC/WB daytime and night time noise limits<sup>10</sup>.</p> <p>The noise caused by the wind turbines will not affect the villages in the area. Therefore, in the SDM the negligible effect of the project on the other pollutants is scored with (0).</p> <p>Since the indicator is scored (0) and noise level in the close settlement is negligible. The parameter is related with noise level during operation will be not be monitored as described in Sustainability Monitoring Plan (section G) of GS Passport.</p>
Biodiversity	<p>For this indicator, the impact of the project activity can be on birds and bats. The project area consists of treasury land and private land positioned on the hills and it is not natural protection zone. According to PIF, there is no endemic species around the project area. The dominant vegetation consists of small trees, bushes and grassland.</p> <p>In the project area, there is no risk for birds, because project area is neither on the way for migrating birds nor an area for birds, according to PIF<sup>7</sup>. Therefore, in the SDM the negligible effect of the project on biodiversity is scored with 0.</p>
Quality of employment	<p>In context of wind power projects, height of the towers and rotating parts (such as blades) has some accident risks. Only trained and certificated personnel shall have access to turbines. For Bergres WPP operation &amp; maintenance contractor has the sole responsibility for operation and maintenance. Hence, only trained and certificated staff of the contractor has right to access to towers, climb and perform necessary actions on turbines in case of emergency or fault. Therefore, there is no project related safety risk for this project. Project developer will also ensure healthy and safe working conditions for the employers with internal procedures and equipments.</p> <p>Since project employer will not face to project specific risks (ie. climbing to tower) in the consolidated SDM the Quality of Employment indicator is scored with (+).</p> <p>Request of local stakeholders about employment has been taken into account and workers have been employed from local people.</p> <p>Since this indicator is scored with positive, chosen parameter which is Health &amp; Safety conditions of employers and number of local employees will be monitored but parameter of defined mitigation measure which is 'accessing the turbines' will be monitored as described in the Sustainability Monitoring Plan (section G) of the GS Passport.</p>
Livelihood of the poor	<p>Generating electricity from resources that was not used before, generates an additional income to the local community, influencing the poverty alleviation, particularly in the rural areas, and accelerates the regional economic development.</p> <p>Also project developer is recruiting personnel for security or construction of the</p>

<sup>10</sup> PIF of the Bergres WPP, page: 47

## GOLD STANDARD PASSPORT

	<p>project from close villages, subcontractors are also from the same region. However, since monitoring of direct positive impacts of this parameter on livelihood of the poor is difficult, this parameter is scored (0) in the SDM to be conservative. Since this indicator is scored zero and no mitigation measure is required chosen parameter, i.e. total local order placement, will not be monitored.</p>
<p>Access to affordable and clean energy services</p>	<p>As a local energy source, wind power helps to mitigate Turkey's high import dependency and thus improves the access to energy services, especially in the scenarios of import stops or energy price hikes. The International Energy Agency criticises dependency on oil and gas imports and demands for expansion of renewable energy in Turkey (cf. IEA: Energy Policies, Turkey 2005 review, 2005, pages 85, 100 and 129). However, as the improved access to energy services does not affect the local public (as the electricity is delivered to the grid) and cannot be assigned to specific consumers and therefore not be monitored, a conservative score of zero is applied to this indicator.</p> <p>Since this indicator is scored with zero and there is no mitigation measure for this indicator, chosen parameter, i.e. change in energy use of local people, will not be monitored</p>
<p>Human and institutional capacity</p>	<p>Even though project will create significant amount job opportunities, please refer to 'Quantitative employment and income generation' indicator, due to lack of interest of women to these kind of jobs stemming from norms of society, impact of the project to this indicator is expected to be neutral.</p> <p>Project activity will not have any impact to lands and villagers will continue their pre-project activities after project implementation. Since impact of the project activity to this indicator is scored zero, selected parameter will not be monitored.</p>
<p>Quantitative employment and income generation</p>	<p>Within the installation of the project, there will be created employment opportunities for workers (civil services and turbine installations). Around 80 new working places during the plant installation will be created<sup>11</sup>. During the operation of the wind farm likely 12 persons will be employed. However, since it couldn't be clearly substantiated that wind power plants lead to higher employment comparing with conventional power plants such, this indicator is scored with (+) in the SDM.</p> <p>The positions at the wind farm require skilled workers, which will be achieved by adequate trainings. In addition to the skilled employees, there will be employed some security staff in both stages. Because of the introduced new technology, the regional tourist interest in the region will increase, which is expected to influence the regional development and with it the employment situation.</p> <p>Trainings of employees will be monitored with documentation as described in</p>

<sup>11</sup> Please See PIF Page 24

## GOLD STANDARD PASSPORT

	Sustainability Monitoring Plan (section G) of GS Passport.
Balance of payments and investment	<p>The project and its role in strengthening the sustainable sector of electricity generation in Turkey tend to contribute to mitigation of import dependency. Electricity generation from wind sources is completely independent from any imports and thus does not have any negative effects on the balance of payments.</p> <p>The project generation will shift correspondent amount of natural gas fired electricity generation. With this, payments for natural gas imported will decrease. Hence the project will have positive impact on this indicator and it is scored with (+) in the SDM.</p> <p>The positive effect of the project to this indicator is described in Sustainability Monitoring Plan (section G) of the GS Passport. Share of natural gas fired electricity in Turkish electricity mix will be reported to show continuous positive impact of the project as described in section G.</p>
Technology transfer and technological self-reliance	<p>As the project developer is a Turkish company using the returns from the GS VER project to enable the realization of the wind farm, the Turkish capabilities, competencies and self-reliance regarding the introduction of innovative technologies are strengthened. The fact that the project activity is not common practice in Turkey is comprehensively derived in section B.4 part of the PDD). The project developer considers the investment into and the operation of a new technology in Turkey as a contribution to technological self reliance due to the gathered experience with the proposed project. And some of the employees will be trained for wind power plant related issues. However, since it is difficult to substantiate and monitor that these trainings will lead an important know-how and technology transfer, this indicator is scored with (0) in the SDM, to be conservative.</p> <p>Since this indicator is scored zero and no mitigation measure is required chosen parameter, i.e. total number of employee having operation and maintenance certificates will not be monitored</p>

### SECTION G. Sustainability Monitoring Plan

No	1
Indicator	Air Quality
Mitigation measure	No mitigation measure.
Chosen parameter	Amount of CO and NMVOC emissions



## GOLD STANDARD PASSPORT

Current situation of parameter		According to latest official data CO and NMVOC emissions due to electricity generation in 2014 are: 0.152 tons/GWh and 0.033 tons/ GWh respectively <sup>12</sup> .
Estimation of baseline situation of parameter		No quantitative information is available for projection of described emission rates. Continuation of current emission rates is estimated in case of baseline situation.
Future target for parameter		Reductions of proportionate amount in described emissions during operational life of the project activity. When electricity generation amount (238,000 MWh/y) is considered for the project activity then expected annual emission avoidances with project implementation becomes 36.3 and 7.7 tons respectively for each parameter.
Way of monitoring	How	Amount of annual net electricity generation, which is calculated by monthly settlement notifications of PMUM based on monthly meter readings, will be used to calculate estimated CO and NMVOC emission reductions by project activity.
	When	Annually
	By who	Assigned technician by Plant Manager or assigned carbon consultant

No	2
Indicator	Water Quality and Quantity
Mitigation measure	
Chosen parameter	Amount of wastewater to be discharged to the environment
Current situation of parameter	In 2014; 20.6 m <sup>3</sup> wastewater is discharged the environment due to each GWh electricity produced <sup>13</sup> .
Estimation of baseline situation	Continuation of current situation

<sup>12</sup> The unit emissions are calculated as dividing emission amount for each parameter with net electricity amount. (For CO and NMVOC emission amounts see :

<http://www.tuik.gov.tr/PreHaberBultenleri.do?id=16174>

<http://www.tuik.gov.tr/PreHaberBultenleri.do?id=16174>

Calculation is further substantiated in Monitoring Plan of CM Calculation Worksheet, which is available to DOE.

<sup>13</sup> For Wastewater discharged in 2014 by thermal PPs see cell A5 of Table-2 from:

<http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2014/istatistik2014.htm> (Below the page to be one

Calculation is further substantiated in Monitoring Plan sheet of CM Calculation Worksheet, which is available to DOE.

## GOLD STANDARD PASSPORT

of parameter		
Future target for parameter		Avoidance of around 4,912.3 m <sup>3</sup> wastewater discharge to the environment per year.
Way of monitoring	How	Amount of annual net electricity generation, which is calculated by monthly settlement notifications of PMUM based on monthly meter readings, will be used to calculate estimated amount of avoided wastewater discharge by project activity.  Records of transfer of waste water from power plant by sewage truck, if it was performed, will be used to demonstrate proper waste water management
	When	Annually
	By who	Assigned technician by Plant Manager or assigned carbon consultant

No		3
Indicator		Quality of employment
Mitigation measure		Necessary health and safety measures will be taken during construction and operation phase, relevant staff will be trained to be able to work with high voltages.
Chosen parameter		Health & Safety trainings
Current situation of parameter		Not applicable.
Estimation of baseline situation of parameter		Not applicable.
Future target for parameter		Project developer ensures high standard health and safety conditions for the employees.
Way of monitoring	How	Training attendance list and/or certificates. Safety measures and equipments will be shown to DOE.
	When	Annually (Once at the end of the each monitoring period). After first verification period, only new cases will be reported. Safety measures and equipments will be shown to DOE during each site visit for verification.
	By who	Assigned technician by Plant Manager or assigned carbon consultant.

## GOLD STANDARD PASSPORT

No	4	
Indicator	Quantitative employment and income generation	
Mitigation measure	None	
Chosen parameter	Number of employment	
Current situation of parameter	Number of employment from agriculture	
Estimation of baseline situation of parameter	Continuation of the current situation	
Future target for parameter	Additional employment from project region with project.	
Way of monitoring	How	For number of local employment: social insurance registries and receipts of employees. After first verification, only changes in employees will be reported.
	When	Number of local employment: annually
	By who	Assigned technician by Plant Manager or assigned carbon consultant.

No	5	
Indicator	Balance of payment and investments	
Mitigation measure	No mitigation measures are required.	
Chosen parameter	Amount of payment for natural gas to be imported for electricity generation.	
Current situation of parameter	According to TEİAŞ 25,426,014 thousand m <sup>3</sup> natural gas is consumed for electricity generation in 2014. In 2014 Electricity generation amount from natural gas is 120,576 GWh and share of natural gas in the electricity mix is 47.85% <sup>14</sup> . Since Turkey imports 98.6% of consumed natural gas, it is calculated that for 1 GWh electricity generation 23,294 m <sup>3</sup> natural gas is imported in 2014.	
Estimation of baseline situation of parameter	According to the projections of TEİAŞ (See Table-6 in B.4 part of the PDD), dependency to natural gas for electricity generation will remain high till the end of 2019 with 44.7% share of the electricity mix in this year.	
Future target for parameter	Avoidance of around 23,294 m <sup>3</sup> natural gas import each	

<sup>14</sup>See, <http://www.teias.gov.tr/YayinRapor/apk/projeksiyon/index.htm> (2015 report, page 53, Table 32)

## GOLD STANDARD PASSPORT

		year by generation of project activity, which is worth about 6,311,043 EUR per year.
Way of monitoring	How	TEİAŞ statistics for natural gas share in the electricity mix shall help to demonstrate the high import dependency. Amount of annual net electricity generation, which is calculated by monthly settlement notifications of PMUM based on monthly meter readings, will be used to calculate correspondent amount of currency saved by project activity with help of above calculated factor.
	When	Annually
	By who	Assigned technician by Plant Manager or assigned carbon consultant.

### Additional remarks monitoring

N/A
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# GOLD STANDARD PASSPORT

## SECTION H. Additionality and conservativeness



This section is only applicable if the section on additionality and/or your choice of baseline does not follow Gold Standard guidance

### H.1. Additionality

**Not Applicable.**

### H.2. Conservativeness

**Not Applicable.**

# GOLD STANDARD PASSPORT

**ANNEX 1**      **ODA declaration**