

**SELİMOĞLU 9.33 MW HYDROELECTRIC POWER PLANT PROJECT**  
**Gold Standard Passport**

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**SECTION A. Project Title****SELİMOĞLU 9.33 MW HYDROELECTRIC POWER PLANT****SECTION B. Project description**

Selimoglu Weir and Hydroelectric power plant is a 9.33 MW installed capacity run of river project located on the Yanbolu river creek, in the East Black sea Region, in the province of Trabzon, 1200 meters east of Fındıklı town.

The purpose of the project is to generate electricity, from the elevation difference of about 100 meters between the location of the weir and the location of the powerhouse.

The weir is at 220 meters elevation, 3.75 meters above the riverbed. It shall be constructed as a concrete filled dam. The water intake is from the left shore of the weir. The powerhouse is located at 120 meters elevation. The water is transmitted to Selimoglu HEPP powerhouse, located at 120 metres, through a 42 metres long 3.2m width and 2.37 height rectangular conveyance channel, a 2,748 meters long 312 meters diameter channel and a second channel between tunnel and loading pool having a length of 32 m, width of 3.2m and height of 2.37m.






There shall be two horizontal axis Francis turbines at the power plant. The amount of electricity to be generated at the power plant is estimated to be 31.97 GWh annually. The average yearly flow rate of the project is 4.82 cubic meters per second. As a result of the project optimization studies, the maximum permitted flow rate is 10.25 cubic meters.

The energy generated at the hydroelectric power plant shall be transmitted to the national electrical grid by a single circuit, 34.5 kV, 3/0 AWG transmission line, connecting the HEPP to the Arsin substation, located at 10 kilometres away,

The estimated amount of carbon dioxide reductions is about 17,954 tonnes/year.

**SECTION C. Proof of project eligibility**

**C.1. Scale of the Project**

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

	
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**C.2. Host Country**

Host country Turkey has ratified Kyoto Protocol on 05/02/2009. However, Turkey is not expected to have any emission reduction commitment under Kyoto Protocol.

**C.3. Project Type**

**Renewable Energy Supply**

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

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Project activity involves construction of a 9.33 MW run-of river hydroelectric power plant for electricity generation. Project category is included in the sectoral scope 1 “Energy Industry – Renewable Sources” according to the UNFCCC definition.

<b>Pre Announcement</b>	<b>Yes</b>	<b>No</b>
Was your project previously announced?	<input type="checkbox"/>	<b>x</b>

### C.4. Greenhouse gas

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

**C.5. Project Registration Type**

<b>Project Registration Type</b>	
Regular	<b>x</b>

Pre-feasibility assessment	Retro-active projects (T.2.5.1)	Preliminary evaluation (T.2.5.2)	Rejected by UNFCCC (T2.5.3)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION D. Unique project identification**

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

	<b>Longitude</b>	<b>Latitude</b>
<b>Selimoglu Weir</b>	E 39°56'28.86"	N 40°51'24.84"
<b>Powerhouse</b>	E 39°58'14.76"	N 40°52'12.25"



Selimoglu Weir is located at the Northeast of Turkey, in the province of Trabzon, within the borders of district of Arsin, 500 meters northwest of the village of Oguzzane, on the Yanbolu Creek.

D.2. Map



Figure 1. Project Location of Selimoğlu HEPP

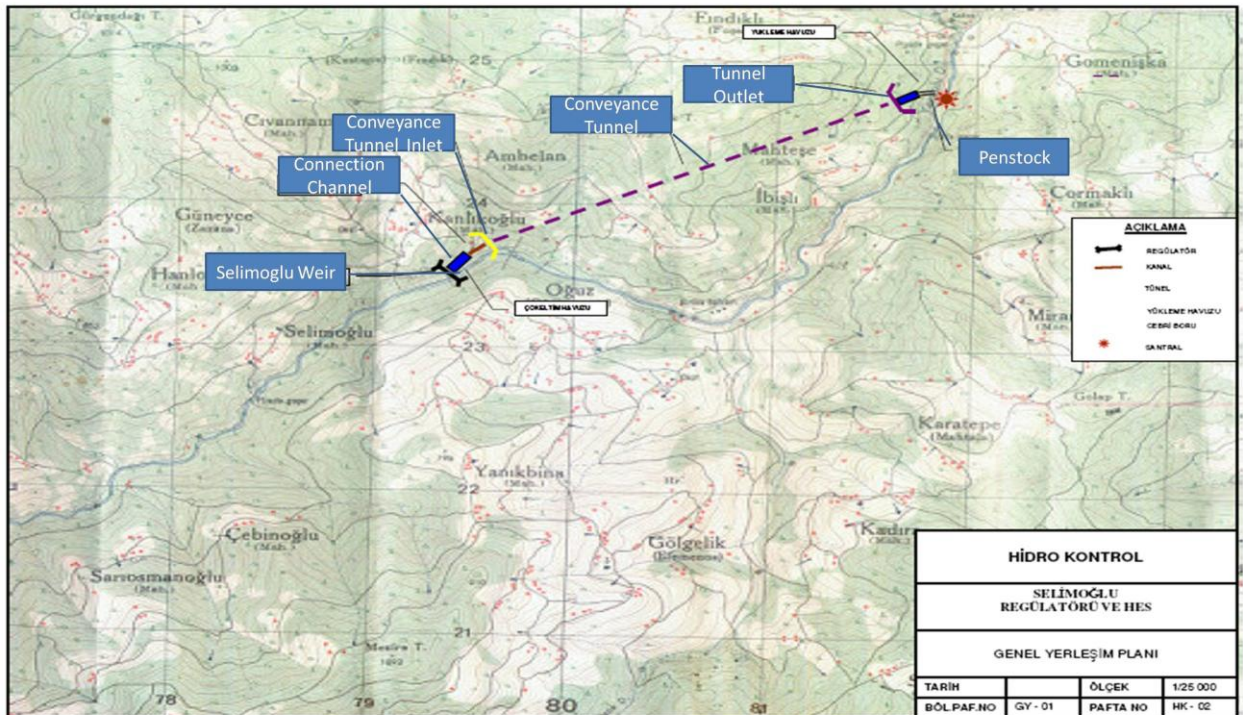


Figure 2. Location of Selimoğlu HEPP on the Yanbolu Creek

**SECTION E. Outcome stakeholder consultation process**

**E.1. Assessment of stakeholder comments**

The Local Stakeholder Meeting was held on 28/11/2008 in Fındıklı Town of Arsin District, in Trabzon.

Positive views were presented in the meeting, especially regarding employment opportunities for the local people. The main issues at the meeting were the effects on the corn mill, job opportunities and transportation of excavation. The concerns of the stakeholders from the Q&A round are grouped and assessed in the table below:

Stakeholder Comment	Assessment	Response to comment
Effect on the Corn Flour Mill by the project	Responded promptly	The project owner shall carry out the appropriate and probable works according to the views of the local people.
Job Opportunities	Responded promptly	Project Owner's representatives confirmed that there would be no negative effect to locals during the project construction and operation phase. All the excavation and concrete construction works (except tunnel drilling) have been given to 'local construction company', namely 'Mutlu Construction Company'. 40 local employees will be working for Selimoglu HEPP. Tunnel drilling works have been subcontracted by 'TST Company'. 15 local employees will be working for TST Company
Closing of the roads during transportation of excavation	Taken into Account	The problem of closing the roads shall be finished in 2 months. However the project owner is trying to shorten this phase and is helping people by assigning transportation.

Project owner responded positively and took into account the comments of the participants. The watermill has been visited by the project owner just after the meeting and photos have been taken. It has been confirmed that the mill has not been used for very long time and it is not in a position to be used by anyone. The issue has been discussed by the local representatives and they have been informed that it will be

ensured that there exist enough water for operating the mill or free electricity will be provided to the mill if the local people decide to use the mill.



**Figure 3. Corn mill in the diverted section of the river.**

## **E.2. Stakeholder Feedback Round**

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During the local stakeholder meeting, the participants have been informed about the feedback round.

Stakeholder Feedback Round (SFR) has been organized through letters sent by mail, email or hand delivery. All participants identified and those who have participated have been involved in invitation list. Local people have been involved through hand delivery of LSC meeting summary in Turkish and invitation letter requesting their feedback. Local and National institutions have been invited through mail and fax message whereas GS supporter NGOs have been informed by email message. All project documents have been published on GTE web site ([www.gte.uk.com](http://www.gte.uk.com)) for more than 60 days starting from 09/09/2009 which ends in 09/11/2009.

Copies of invitation receipts and hand delivery list have been provided to DOE. By 18/11/2009 November, no feedback has been provided about project.

**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
<b>Human Rights</b>			
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.	Project activities are not expected to cause any human rights abuse. Turkey has ratified European Convention on Human Right in 10/03/19541.	LOW	No mitigation measure is required for this indicator
2 The Project does not involve and is not complicit in involuntary resettlement.	Project does not involve any resettlement.	LOW	No mitigation measure is required for this indicator
3 The Project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage.	No cultural heritage, protected site, national park , critical landscape or reproduction area for wild life has been identified in the project site. (Feasibility Study Report Section 7.2 page 3)	LOW	No mitigation measure is required for this indicator
<b>Labour Standards</b>			
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	Turkey has ratified ILO 87 and 98 conventions .All staff recruited are employed according to the national legislations. <sup>2</sup>	LOW	No mitigation measure is required for this indicator

<sup>1</sup> <http://www.istanbul.gov.tr/?pid=9218> (Accessed on 31/08/2009)

<sup>2</sup> <http://www.ilo.org/public/turkish/region/eurpro/ankara/about/sozlesmeler.htm>

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Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
5 The Project does not involve and is not complicit in any form of forced or compulsory labour.	Turkey has ratified ILO convention 29 and 105 on forced and compulsory labour <sup>2</sup> .	LOW	No mitigation measure is required for this indicator
6 The Project does not employ and is not complicit in any form of child labour.	Turkey is a party of IPEC* since 1992 and ratified ILO convention 138 and 182.	LOW	No mitigation measure is required for this indicator
7 The Project does not involve and is not complicit in any form of discrimination based on gender,	Turkey has ratified ILO convention 100 and 111 and discrimination based on gender is illegal in Turkey <sup>2</sup> .	LOW	No mitigation measure is required for this indicator
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	Work Safety&Risk of accidents. The issues about health and safety has been defined in labour law referred. The project owner will provide all required trainings and issue relevant measures(including safety equipments) for health and safety of workers <sup>3</sup>	Low	Technical staff will be certified to work with high voltage equipment (Monitoring item 5)
<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	Wastes (oil , batteries etc) will be generated due to equipments used (turbines, generators etc).	LOW	Wastes will be collected and disposed as per the regulations. The waste oil will be disposed in

<sup>3</sup> <http://www.tbmm.gov.tr/kanunlar/k4857.html>

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Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
defined 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."	No other impact of project has been identified. The impacts on biodiversity and H&S of workers have been assessed under relevant indicators.		compliance with relevant regulation for disposal of oil and petroleum wated dated 12 <sup>th</sup> August 1996 and 21 <sup>st</sup> November 1997 <sup>4</sup> .
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) recognized as protected by traditional local communities <sup>5</sup>	There exist no protected (or proposed to be protected) or critical habitat within the project boundary . Company will comply with all national regulations and take all precautions stated in the feasibility report (Section 7) (Feasibility Report Study section 7.2)	LOW	No mitigation measure is required for this indicator
Anti-Corruption	Turkey has ratified several conventions on bribery and corruption including OECD	LOW	No mitigation measure is required for this indicator

<sup>4</sup> Feasibility Study Report Section 7.3.1.3

<sup>5</sup>

[http://www.kulturvarliklari.org/kve/index.php?cwid=3&flag=&vtadi=VGM%2CTUBA%2CTTK%2CKT BKVE&keyword=K%D6PR%DCBA%DEI&s\\_f=5](http://www.kulturvarliklari.org/kve/index.php?cwid=3&flag=&vtadi=VGM%2CTUBA%2CTTK%2CKT BKVE&keyword=K%D6PR%DCBA%DEI&s_f=5)

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Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
	and UN conventions <sup>6</sup> .		

### F.2. Sustainable Development matrix

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
Air quality	Mitigation measure is not required for this indicator	7.A -Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources)  7.B -7.2 CO2 emissions, total, per capita)	Parameter :SO <sub>2</sub> and NOx emission  Emissions of SO <sub>2</sub> and NOx will be reduced in parallel to CO <sub>2</sub> due to avoiding fossil fuel combustion.	+
Water quality and quantity*	Minimum 10% of natural will be released from the weir to protect aquatic life in the river bed as mandated by State Hydraulics Works(DSI).	-	Amount of water released.  Quality of water will not be affected by the project activity. Quantity of water released will be monitored continuously by DSI (State	0

<sup>6</sup> <http://www.masak.gov.tr/en/LaunderingProceedsofCrime/Chronology.htm>

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			Hydraulics Work Authority) to ensure that minimum flow is achieved.	
Soil condition	Excavation wastes will either be used in construction or disposed to appropriate places <sup>7</sup> .A sediment passage will be integrated in weir design.	-	Parameter: Excavation Wastes, sediment accumulation and soil erosion	0
Other pollutants	Mitigation measure is not required for this indicator	-	Parameter: Dust during construction.  Project will not create any other pollutant. Measures will be taken to minimize dust formation.	0
Biodiversity*	Fish passage will be included in project design and minimum water flow will always	-	Parameter: Functionality of fish passage	0

<sup>7</sup> Selimoglu HEPP Feasibility Report Section 7.3.1.1

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	<p>be released from the weir to enable fish migration and protect other aquatic species. Expert assessment will be provided to ensure proper functioning of fish passage and adequacy of flow</p>			
Quality of employment	<p>Staff will be trained for the positions created during construction &amp; Operation phases. Trainings will be renewed when necessary.</p>	-	<p>Parameter: Number of certificates issued/trainings provided.</p>	0
Livelihood of the poor	<p>No mitigation action is required since local people will naturally have priority in recruitment</p>	<p>MDG target 1.A (Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day )and 1.B (Achieve full and</p>	<p>Parameter: Number of locally recruited staff in the power plant.</p> <p>Project will increase income of local people</p>	0

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	process due to logistic purposes also.	productive employment and decent work for all, including women and young people)	compared to baseline scenario through locally recruited staff and supply of plant needs from region.	
Access to affordable and clean energy services	No mitigation action is required for this indicator.		Parameter: Fossil fuel replaced  Project will decrease dependency on import fossil fuels (Natural gas, Coal and petroleum) compared to baseline scenario.	+
Human and institutional capacity	No mitigation measure is required for this parameter.		Parameter: Number of people participating stakeholder meetings.  Project will contribute increasing awareness about environmental issues of the local people through stakeholder consultation process.	0
Quantitative employment and income	Mitigation measure is not required	MDG target 1.B (1.4, 1.5, 1.7 Achieve full and	Parameter: Payment made to staff.	+

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generation	for this indicator.	productive employment and decent work for all, including women and young people)	Project will create new job opportunities compared to baseline scenario.	
Balance of payments and investment	Mitigation measure is not required for this indicator.	MDG target 8.D (Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term)	Parameter: Currency saving due to avoided fuel import.  Project will replace fossil fuel import for electricity generation and result in net foreign currency saving.	+
Technology transfer and technological self-reliance	Mitigation measure is not required for this indicator.	MDG target 8.F (In cooperation with the private sector, make available the benefits of new technologies, especially information and communications)	Parameter: Expenditures for equipments  Project will limited impact on development of local suppliers and know-how in the country.	0

#### Justification choices, data source and provision of references

Air quality	<p><u>SO<sub>2</sub> and NO<sub>x</sub> emissions</u></p> <p>Project will decrease use of fossil fuels for electricity generation and prevent particulate matter, SO<sub>x</sub> and odour which form as a result of incomplete combustion.</p> <p>(Source: National GHG Inventory of Turkey <a href="http://unfccc.int/files/national_reports/annex_i_ghg_inventories/national_i">http://unfccc.int/files/national_reports/annex_i_ghg_inventories/national_i</a>)</p>
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	<a href="#">inventories_submissions/application/zip/tur_2009_crf_13apr.zip</a>
<p>Water quality and quantity</p>	<p><u>Quantity of water released</u></p> <p>Since the project activity is a run-off-river type HEPP, it does not cause any pollution or change in water quality in terms of chemical, biological oxygen demand or any other pollutants. As there is no water use for irrigation, domestic or industrial use, the only critical parameter is release of minimum amount of water from weir for aquatic life. Minimum amount water that should be released from the weir is determined and will be monitored by DSI (State Hydraulics work Authority) through flow measurement station at the upstream and downstream of the plant. The adequacy of flow will be assessed by an independent expert and additional measures will be issued if necessary.</p> <p>Waste water generated during construction and operation phases will be collected filtered and disposed according to relevant regulations as described in feasibility report.</p> <p>(Source:Selimoglu Hepp Feasibility Report section 4.2.1 and 7.3.1.6, 7.3.1.7, 7.3.2)</p>
<p>Soil condition</p>	<p><u>Excavation Wastes</u></p> <p>Part of excavation wastes will be used for construction of weir, access roads and for renovation of village roads. Remaining excavation wastes will be disposed at appropriate places upon permission from related authorities.</p> <p>Solid wastes will be collected and recycled if possible. Remaining wastes will be stored and dumped to the landfill station of the nearest settlement.</p> <p>Project site is classified in 4<sup>th</sup> group according to earthquake risk assessment. The requirement for structures in 4<sup>th</sup> group (out of 5) is specifies in the feasibility report. Plant design will be made considering this parameters. Since the project will cause minimum impact on landscape , it is not expected to cause any erosion risk due to the plantation in the region.</p> <p>For sediment transport, project will have a sediment passage to prevent accumulation in the weir which will decrease the capacity and plug the channel and damage the turbines. A continuous flow will be released from the sediment passage to enable transport of sediment. Also, since the project design flow rate is very low compared to peak flow rates, the sediment will be easily transported during flood season along the diverted section of river bed.</p>

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	(Source:Selimoglu Hepp Feasibility Report section 7.3.1.1 and 2.1.3.5)
Other pollutants	<p><u>Dust level</u></p> <p>Dust formation during construction has been chosen as other source of pollutant which has also been assessed during feasibility study. It has been indicated that dust level will be controlled as per the regulations and appropriate measures will be taken to minimize dust formation.</p> <p>The project includes a tunnel and located in a region with high precipitation therefore no significant dust formation is expected. Monitoring parameter has been added to ensure that necessary measures have been issued and no disturbance has been created for locals.</p> <p>(Source:Selimoglu Hepp Feasibility Report section 7.3.1.4)</p>
Biodiversity	<p><u>Minimum water flow and Fish Passage</u></p> <p>In order to minimize impact on aquatic life, minimum flow will continuously be released from the weir which includes a fish passage also. Minimum depth for fish migration will be calculated using flow released from the weir and passage dimensions. Functionality of fish passage will be assessed by an independent expert and report will be submitted to DOE during verification. Additional measures will be issued if necessary to ensure functionality.</p> <p>Project has minimum impact on plants as the conveyance line is composed of a tunnel and pipe installed under an existing road. There exist no forest however some private lands may be affected due to construction of powerhouse. If this is the case, all necessary permission will be taken and in order to compensate the affected plantation.</p> <p>(Source: Water right utilization agreement article 14, Weir and fish passage design shown to Auditor during site visit)</p>
Quality of employment	<p><u>Number of Certificates</u></p> <p>Due to Health and Safety regulations and technical skills required for operating equipments, training will be provided to relevant staff. Also, some of the board operators will have training to get certificate for working at high voltage level as requested by local regulations. Trainings will be renewed for newly recruited staff.</p> <p>(Source: Certificates &amp; evidence for trainings to be provided during verification)</p>
Livelihood of the poor	<p><u>Expropriation Compensation, Availability of springs after construction</u></p> <p>Income of local people employed in the plant will increase as a result of project activities which will also have impact on overall spending in the Arsin District. According to State Planning Organization statistics, Koprubasi District is ranking as 189<sup>th</sup> among 872 District in Turkey in terms of unemployment rate.</p>

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	<p>During the stakeholder meeting, it has been indicated that there exists a corn mill below the weir. It has also been indicated that corn mill is not used for long time by local representatives. The project owner has determined the location of corn mill immediately after the meeting (pictures given above) and it has been observed that it is not used for long time. Locals have been ensured that company can provide electricity or renovate the water channel to mill if they intend to use it in the future. Also, some springs which has changed direction will be monitored and water pipelines will be installed if the springs do not appear after tunnel construction and isolation is completed.</p> <p>The project is mainly tunnel. No significant private land expropriation is expected however, if necessary, the compensation for the private land expropriated will be made according to values dictated by relevant commissioned.</p> <p>(<a href="http://ekutup.dpt.gov.tr/bolgesel/gosterge/2004/ilce.pdf">http://ekutup.dpt.gov.tr/bolgesel/gosterge/2004/ilce.pdf</a> page 206)</p>
<p>Access to affordable and clean energy services</p>	<p><u>Fossil Fuel Replaced</u></p> <p>The project will reduce dependency on fuel and energy import through use of local and renewable resources and help meet national energy demand and enable diversification in the energy supply. According to projections, electricity demand of Turkish grid will increase significantly in coming year. Therefore, this indicator was scored as positive.</p> <p>(Source: Capacity projection 2008-2017, <a href="http://www.teias.gov.tr/projeksiyon/CAPACITY%20PROJECTION%202008-2017.pdf">http://www.teias.gov.tr/projeksiyon/CAPACITY%20PROJECTION%202008-2017.pdf</a> figure 1., page 5)</p>
<p>Human and institutional capacity</p>	<p><u>Number of People attending meetings</u></p> <p>Educational activities which are not part of the usual schooling system, such as environmental training, awareness raising and knowledge dissemination will increase through stakeholder meetings. Also, project will increase human and institutional capacity of the workers in terms of technical skills however since the impact of project will be limited, the indicator was scored as neutral to be conservative.</p> <p>(Source: LSC reports, trainings provided to workers)</p>
<p>Quantitative employment and income generation</p>	<p><u>Payments made to Staff</u></p> <p>About 100 people will be employed directly during construction and 10 people during operation. Since Arsin District is ranking as 193<sup>rd</sup> among 872 District, this will create a significant contribution to the local economy</p> <p>(Source: Social security and insurance payment documents, and</p>

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	( <a href="http://ekutup.dpt.gov.tr/bolgesel/gosterge/2004/ilce.pdf">http://ekutup.dpt.gov.tr/bolgesel/gosterge/2004/ilce.pdf</a> page 206))
Balance of payments and investment	<p><u>Currency Saving</u></p> <p>Turkey is heavily dependent on import fossil fuel, especially natural gas which is imported, for electricity generation. Project will reduce fuel import and result in net foreign currency saving proportional to electricity generation.</p> <p>(Source: TEIAS: <a href="http://www.teias.gov.tr/ist2007/43.xls">http://www.teias.gov.tr/ist2007/43.xls</a>)</p>
Technology transfer and technological self-reliance	<p><u>Equipment Expenditures</u></p> <p>Project will assist in transfer of new technology to Turkey. In addition to Technological skills of local suppliers and technicians are also expected to increase as a result of trainings provided by the equipment manufacturers. However, since the impact will be limited, the scoring was neutral.</p> <p>(Source: Equipment purchase agreements)</p>

### SECTION G. Sustainability Monitoring Plan

No	1
Indicator	Air Quality
Mitigation measure	N/A
Chosen parameter 1.1	SO <sub>2</sub> emissions by thermal power plants
Current situation of parameter 1.1	Total SO <sub>2</sub> emission related to electricity generation is about 936.1 Gg for 2007 according to National Inventory of Turkey <sup>8</sup> . Considering that electricity generation in 2007 is 183,339.7 GWh, SO <sub>2</sub> emission per MWh is calculated as 5.3 kg/MWh.
Future target for parameter 1.1	SO <sub>2</sub> emission reduction corresponding to 32.235 GWh generation is calculated as 175.6 ton per year.
Chosen parameter 1.2	NO <sub>x</sub> emissions by thermal power plants
Current situation of parameter 1.2	Total SO <sub>2</sub> emission related to electricity generation is about 202.9 Gg for 2007 according to National Inventory of Turkey. NO <sub>x</sub> emission per MWh is calculated as 1.1 kg.
Future target for parameter 1.2	NO <sub>x</sub> emission reduction corresponding to 32.235 GWh generation is calculated as 35.4 ton per year.
Way of monitoring	How
	Electricity generated by Selimoglu HEPP and NO <sub>x</sub> and SO <sub>2</sub> emission data from GHG inventory of Turkey will be used as

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[http://unfccc.int/files/national\\_reports/annex\\_i\\_ghg\\_inventories/national\\_inventories\\_submissions/application/zip/tur\\_2009\\_crf\\_13apr.zip](http://unfccc.int/files/national_reports/annex_i_ghg_inventories/national_inventories_submissions/application/zip/tur_2009_crf_13apr.zip) ,Worksheet:Table1s1 )

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		reference in calculation of the emission reduction.
	When	Yearly
	By who	Project owner

No	2(FAR-2)	
Indicator	Water Quality and Quantity	
Mitigation measure	Release of minimum flow to protect aquatic life and assessment of adequacy of environmental flow by an expert. Water Flow will be monitored and an independent expert with relevant background and experience will assess the adequacy of minimal flow. The expert report will include fieldwork and observation as required by GS and additional measures/recommendations if any.	
Chosen parameter 2.1	Flow rate of water released from the weir.	
Current situation of parameter 2.1	Natural flow of river course	
Future target for parameter 2.1	Minimum 10% of average natural flow (as mandated by DSI) or minimum flow as determined by expert, whichever is higher	
Way of monitoring	How	Flow measurements from the weir
	When	Flow will be monitored continuously by DSI gauging stations installed at the downstream. Data will be requested from DSI before verification and submitted to DOE.
	By who	Project owner
Chosen parameter 2.2	Waste water	
Current situation of parameter 2.2	None	
Future target for parameter 2.2	Disposal of wastewater as required by the relevant regulations.	
Way of monitoring	How	Assessing disposal methods during site visits
	When	Annually
	By who	Project owner

No	3	
Indicator	Biodiversity	
Mitigation measure	Release of minimum flow from fish passage to protect aquatic life	
Chosen parameter	Flow released from the fish passage	
Current situation of parameter	Natural flow of river course	
Future target for parameter	Release of sufficient flow from the weir for fish migration.	
Way of monitoring	How	Flow released will be monitored continuously by DSI gauging station installed at the downstream of the plant. Data will be requested from DSI before verification and submitted to DOE.
	When	Annually
	By who	Project owner

No	4	
Indicator	Biodiversity (FAR 1)	

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Mitigation measure	Building a functional fish passage	
Chosen parameter	Functionality of fis passage	
Current situation of parameter	None	
Future target for parameter	Effective and proper functioning of fish passage	
Way of monitoring	How	Observing free flow from the fish passage and calculating released flow from flow data records and passage design. The functionality of the passage will also be assessed by an expert. The assessment/opinion of independent expert on effectiveness of the fish passage will be included in monitoring report. Expert assessment will be supported by references and local data. Alternatives, additional measures and recommendations will also be discussed in the expert report.
	When	Once after project is completed.
	By who	Project owner

No	5 (DNH-8)	
Indicator	Quality of Employment	
Mitigation measure	Recruited people will be trained for increasing technical skills and awareness about health, safety and environmental issues. Trainings will be renewed for new staff and updated as required by regulations .	
Chosen parameter	Number of people trained (certificates )	
Current situation of parameter	None	
Future target for parameter	All technical staff working with high voltage equipments should be trained.	
Way of monitoring	How	Documents for trainings and certificates issued.
	When	Annually
	By who	Project owner

No	6 (DNH-3)	
Indicator	Livelihood of the poor	
Mitigation measure	,Compensation for expropriation	
Chosen parameter	Compensations made to locals	
Current situation of parameter	None	
Future target for parameter	The expropriation will be very small as the project includes a tunnel. All expropriated land will be compensated.	
Way of monitoring	How	Interview with owners of exproprriated land
	When	Once after construction is completed
	By who	Project Owner

No	7	
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## Gold Standard Passport

Indicator	Access to clean affordable energy services	
Mitigation measure	No mitigation action is required.	
Chosen parameter	Amount of natural gas imported for power production	
Current situation of parameter	In 2007, about 20.5 bn m <sup>3</sup> natural gas been used for about 95,000 GWh electricity generation.  Source: <a href="http://www.teias.gov.tr/ist2007/43.xls">http://www.teias.gov.tr/ist2007/43.xls</a> and <a href="http://www.teias.gov.tr/ist2007/36(06-07).xls">http://www.teias.gov.tr/ist2007/36(06-07).xls</a> for generation and fuel consumption	
Future target for parameter	Avoid about 7 million m <sup>3</sup> of natural gas consumption	
Way of monitoring	How	Through monitoring electricity generation
	When	Annually
	By who	Project owner

No	8	
Indicator	Quantitative employment and income generation	
Mitigation measure	Mitigation measure is not required.	
Chosen parameter	Payments made to staff	
Current situation of parameter	None	
Future target for parameter	100 people during construction and at least 10 people during operation stage is planned to be employed. Payment made is to be determined later.	
Way of monitoring	How	Through evaluation documents for wages paid and social security documents.
	When	Once for crediting period or yearly
	By who	Project owner

No	9	
Indicator	Balance of payments	
Mitigation measure	Decrease dependency on fossil fuel through increasing use of local resources.	
Chosen parameter	Currency saving.	
Current situation of parameter	In 2007, about 20.5 bn m <sup>3</sup> natural gas been used for about 95,000 GWh electricity generation and about € 5 bn has been spent.  Source: <a href="http://www.teias.gov.tr/ist2007/43.xls">http://www.teias.gov.tr/ist2007/43.xls</a> and <a href="http://www.teias.gov.tr/ist2007/36(06-07).xls">http://www.teias.gov.tr/ist2007/36(06-07).xls</a> for generation and fuel consumption. <a href="http://www.esgaz.com.tr/dogalgazfiyatleri.asp">http://www.esgaz.com.tr/dogalgazfiyatleri.asp</a> for natural gas price.	
Future target for parameter	Decrease natural gas consumed for electricity generation. Approximately consumption of 7.0 million m <sup>3</sup> of natural gas is expected to be avoided corresponding to € 2.0 million annually.	
Way of monitoring	How	Through comparing electricity generated by Selimoglu HEPP and natural gas that would be used to produce the same amount of electricity according to baseline scenario.
	When	Yearly

## Gold Standard Passport

	By who	Project owner
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No		11
Indicator		Soil Condition
Mitigation measure		Mitigation Measure is not required
Chosen parameter		Soil erosion and leakage within the project site
Current situation of parameter		Erosion without project activity
Future target for parameter		No erosion due to project activities.
Way of monitoring	How	Site investigation and interviews with locals.
	When	Annually
	By who	Project owner

No		12
Indicator		Soil condition
Mitigation measure		Sediment Passage
Chosen parameter		Sediment transport along the river
Current situation of parameter		Natural regime
Future target for parameter		No accumulation at the upstream and downstream of the weir.
Way of monitoring	How	Visual observations and pictures taken on site.
	When	Yearly
	By who	Project owner

No		13
Indicator		Soil condition
Mitigation measure		Excavation wastes used in construction and stored in appropriate locations.
Chosen parameter		Storage of excavation wastes in appropriate locations.
Current situation of parameter		None as there exist no excavation waste.
Future target for parameter		No accumulation at the upstream and downstream of the weir.
Way of monitoring	How	Through site visits and continuous monitoring during construction
	When	Once after completion of the construction
	By who	Project owner

No		14
Indicator		Livelihood of the poor
Mitigation measure		Providing electricity for old corn mill if requested by locals
Chosen parameter		Demand for use of corn mill by locals
Current situation of parameter		Currently corn mill is not functional
Future target for parameter		Ensure that water is sufficient for corn mill if it is needed to be used in the future.
Way of monitoring	How	Through site visits and interviews with locals
	When	Annually
	By who	Project owner

## Gold Standard Passport

No	15	
Indicator	Livelihood of the poor	
Mitigation measure	Ensuring springs appear or providing new pipeline	
Chosen parameter	Availability of water for locals around project site.	
Current situation of parameter	Natural springs exist	
Future target for parameter	Water should be available either via springs appearing back or new pipe for water should be installed.	
Way of monitoring	How	Through site visits and interviews with locals
	When	Once after construction is completed.
	By who	Project owner

No	16	
Indicator	Other Pollutants (DNH 9)	
Mitigation measure	Wastes generated during operation will be collected and disposed as per the regulations numbered 2240-5249 and 4473-7756 dated 12/08/1996 and 21/11/1997 respectively.	
Chosen parameter	Disposal of oil and other wastes (solid and liquid wastes)	
Current situation of parameter	None	
Future target for parameter	All wastes should be disposed properly.	
Way of monitoring	How	Checking waste disposal records for oil and other wastes
	When	Annually
	By who	Project owner

No	17	
Indicator	Other Pollutants -Dust	
Mitigation measure	Covering trucks and irrigating excavation site.	
Chosen parameter	Dust formation around the project site.	
Current situation of parameter	None	
Future target for parameter	Dust formation will be minimized to avoid disturbance to nearby settlement via measures such irrigating excavation site, covering trucks etc .	
Way of monitoring	How	Interviews with stakeholders for assessing pollution caused by dust formation
	When	Once after construction is completed.
	By who	Project owner

### 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

## Gold Standard Passport

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<b>H.1. Additionality</b>
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N/A
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<b>H.2. Conservativeness</b>
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N/A
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**ANNEX 1 ODA declarations**



HIDRO  
KONTROL

Bir AKÖZ Grubu Şirketidir

**20.01.2009**

**Selimoğlu Hyropower Plant Project**

**To: Gold Standard Foundation Declaration of Non-Use of Official Development Assistance by Project Proponent**

[Legal Owner / Project Proponent:]  
**Hidrokontrol Elektrik Üretim Sanayi A.Ş.**

As Legal Owner ("Project Proponent") of the above-referenced project, acting on behalf of all project participants, I now make the following representations:

[Authorised Representative:]  
**A. Bahaddin Özal**

I hereby declare that I am duly and fully authorised by the legal owner ("Project Proponent") of the above-referenced project, acting on behalf of all Project participants, to make the following representations on Project Proponent's behalf.

**I. Gold Standard Documentation**  
I am familiar with the provisions of Gold Standard Documentation relevant to Official Development Assistance (ODA). I understand that the above-referenced project is not eligible for Gold Standard registration if the project receives or benefits from Official Development Assistance under the condition that some or all credits coming out of the project are transferred to the ODA donor country.

I now expressly declare that no financing provided in connection with the above-referenced project has come from or will come from ODA that has been or will be provided under the condition, whether express or implied, that any or all of the credits [CERs, ERUs or VERs] issued as a result of the project's operation will be transferred directly or indirectly to the country of origin of the ODA.

**II. Financier Declarations**  
I hereby declare that I have submitted [ # ] declarations of Non-Use of ODA, representing declarations from all project financiers. If additional financiers are added to the project, I will promptly notify the Gold Standard Foundation and ensure that additional declarations are promptly submitted.

**III. Financing Plan**  
I agree to complete and submit a sufficiently clear and transparent financing plan for the project so that during validation the Validator can assess compliance with the Non-Use of ODA requirement.

**IV. Duty to Notify Upon Discovery.**  
If I learn or if I am given any reason to believe at any stage of project design or implementation that ODA has been used to support the development or implementation of the project, or that an entity providing ODA to the host country may at some point in the future benefit directly or indirectly from the credits generated from the project as a condition of investment, I will make this known to the Gold Standard immediately.

**Hidro Kontrol Elektrik Üretim Sanayi A.Ş.**  
Altunizade Kısıklı Cd. AKÖZ İş Merkezi No:18 Üsküdar 34662 İstanbul-TÜRKİYE  
Tel:+90 216 474 1 474 Fax:+90 216 474 0 474 info@hidrokontrol.cc•www.hidrokontrol.cc



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### V. Sanctions.

I am fully aware that under Section 10 of the Gold Standard Terms and Conditions sanctions and damages may be incurred for the provision of false information related to Projects and/or Gold Standard credits.

Signed: *B.Özal*

Name: A. Bahaddin Özal

Title: Second Chairman of the Board of the Directors

On behalf of: Hidrokontrol Elektrik Üretim Sanayi A.Ş.

**HİDRO KONTROL ELEKTRİK  
ÜRETİM SANAYİ A.Ş.**  
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**ANNEX 2 Special Guidance for Run-off-River HEPP project**

Management domain	
Minimum flow which guarantees habitat quality and prevents critical oxygen and chemical properties.	Minimum flow of water mandated by state hydraulics works (DSI) will be released for the section between the weir and the HEPP. This minimum has been determined as 10% of the natural flow in order to guarantee habitat quality and prevent critical oxygen and chemical properties however it can be increased anytime by DSI according to the water right utilization agreement.
No disconnection of lateral rivers.	Project is a small run-off-river type Hepp and does cause disconnection of lateral river. Flows of Selimoglu Weir will be discharged back to the same river bed after being used in energy production.

## Gold Standard Passport

<p>Minimum water depth for fish migration during critical periods.</p>	<p>Minimum flow of water mandated by state hydraulics works (DSI) will always be released from the weir as per the water right utilization agreement. The design of the fish passage has been made in order to guarantee the minimum free flow. The amount can be increased by DSI if necessary according to the agreement.</p>
<p>Lateral and vertical connectivity shall not be substantially disturbed</p>	<p>Since the project is a small run of river type project, implemented on a single creek<sup>9</sup>. It does not have a storage volume to disturb the underground waters. Permanent changes in water level will normalize after construction and isolation of plant facilities (tunnel etc) is completed.</p>
<p>Provides sufficient transport capacity for sediments</p>	<p>The plant has been designed to prevent accumulation and sediments flowing with the weir will be released to downstream. Additionally there will be pebble passages to ease transfer of sediments. Since the project does not have storage capacity, the sediment passage is also required to prevent filling of water intake structure of the reservoir and proper operation of the plant.</p>
<p>Landscape compartments shall not be destroyed. Flood plain ecosystems shall not be endangered.</p>	<p>Since the project does not have a dam but a small weir to regulate the river and a conveyance line, landscape compartments and flood plain ecosystems will not be endangered. Project involves a weir and powerhouse which are both near the existing road and conveyance tunnel which have no significant impact on landscape.</p>

<sup>9</sup> Selimoglu HEPP Feasibility Report, Section 3.3 page 4

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<b>Hydropeaking</b>	
Rate of change of water level should not impair fish and benthic population.	Project does not involve a storage capacity. A minimum flow of water mandated by state hydraulics works (DSI) shall be flowing and capacity of the plant is limited, so that there shall not be any significant change in water level. Regarding the consistency of rate of flow after the weir, the weir shall regulate and help the consistency of the flow of water.
Reduction in water level should not lead to drying of the water course.	Minimum amount of water will be released even in dry seasons and monitored by DSI. In addition, when the water flow rate is below a certain value, plant will not be operated to prevent cavitations of turbines therefore all flow will be released to river.
No isolation of fish and benthic organisms when water level decreases	The weir shall prevent the isolation of fish and organisms by providing a steady minimal flow, even when water level decreases. Also, fish passage is mandated and has been built to enable fish migration.
<b>Reservoir Management</b>	Since the project is a run of river power plant, it does not feature any large storage volume, but a weir to regulate the water. Unlike the dam reservoirs, a reservoir operation policy would not be applied to this project.
Are there feasible alternatives to reservoir flushing?	Project is a run-off-river type with no storage facility therefore flushing will not be caused by project activity.
Changes in reservoir levels should not impair lateral ecosystems (floodplains, river shores, ...)	Since project does not have a storage facility, it will have a significant change in water level.
Connectivity with lateral rivers should not be impaired	Project is a run-off-river type with no storage facility and implemented on a single creek, therefore no impact on lateral connectivity will not be impaired.
Sediment accumulation areas should be used as valuable habitats, where feasible.	No significant accumulation is expected as the weir design involves a sediment passage and collected sediments are released through these passages.
Special protection of flood plain ecosystems if they are impaired	Project has no storage volume and impact on flood plain ecosystem.

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<b>Sediment Management</b>	
Sediments have to pass through the power plant.	Sediment management will be performed and controlled by means of a sediment passage, which have been designed and constructed as the integral parts of the Project.
<b>Power Plant Design</b>	
Free fish migration upwards and downwards.	Since there shall be always water flowing in the river bed, free fish migration upwards and downwards will be available through the fish passage of the weir.
Protection of animals against injury and death stemming from power plant operations.	Necessary precautions shall be taken in the weir and power plant to prevent injury to animals or local people during operation. Since nearly all of the conveyance line is composed of tunnel, it does not constitute any risk.
<b>Social Impacts</b>	
Cultural Landscapes	There exists no critical habitat, protected area or cultural landscapes within the project boundary that will be negatively affected by the project.
Human heritage (including protection of special ethnic groups) and preservation of life styles.	There shall not be any negative social impact on human heritage and way of life since the power plant shall not be on any settlement territory. It shall help the locals by providing additional employment and easier access to their land in addition to voluntary contribution of project owner to local community.
Empowerment of local stakeholders in the decision making process about mitigation and compensation of social impacts	Local stakeholders shall be able to express their views about social impacts at stakeholders meetings whereby the project owners would take the proper mitigation measures. In addition, they can always contact with project manager to discuss about any impact of the project and mitigation if necessary.
Resettlement of local population	Project does not cause resettlement of local population.
Build additional social infrastructure due to migration induced by the project.	The project would not induce any migration. Project is owned by a charity foundation partially and project owner is willing to contribute to local people.
Water quality and fishing losses affecting downstream riverside population.	The downstream water quality shall not be affected, since the same water flows shall be kept downstream. Fishing is not an economical activity in the region therefore project will not cause any decrease in terms of fishing loss.

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## Developers Gold Standard version two

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