

VALIDATION OF POINT 0 KOYULHISAR HEPP 21218413



Document Prepared By TÜV Rheinland Energie und Umwelt GmbH

Project Title	Koyulhisar Hydropower Plant, Turkey
Version	v.1.0

Report Title	Validation of Point 0 Koyulhisar HEPP 21218413
Client	Turkuaz Karbon Varlık Yönetimi Enerji Proje ve Dan. San. İth. İhr. Ltd. Şti.
Pages	20
Date of Issue	December 28th 2011
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Summary:

The project was validated according to the Social Carbon Standard Indicators adapted for Koyulhisar Hydropower Plant Project, Turkey. This report reflects Point 0 Validation, complementary to the first periodic Verification to VCS v.3. The project does not make use of indicators adapted to specific projects, based on SOCIALCARBON approved indicators. Two indicators were excluded, whereas no additional indicators were submitted.

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1 INTRODUCTION

1.1 Scope and criteria

For Verification of the Point 1 assessment, improvement compared to the initial validation of the Social Carbon Report, representing the Point 0 situation, has to be monitored and confirmed. This Verification reflects the first periodic assessment of Social Carbon indicators once per Monitoring period. Focus of the verification is the direct comparison of both SC Reports (Point 0/1) with identification of the implicit changes during the project runtime from time of implementation. The actual changes that were identified in the report were included in the verification plan annexed to this report. Based on this verification plan evidence was collected in the form of documentation but mainly as physical evidence and statements made by involved persons during the on-site assessment. The approach therefore was not to verify the absolute score of the indicator but the actual variation or improvement that was identified by comparison of both SC Reports. The absolute score awarded was then compared to the provided description given in the document “Social Carbon Standard Indicators adapted for Cakit Hydropower Plant Project, Turkey”.

Verification criteria are extracted or included in the methodological approach that is derived from using the Social Carbon Methodology. The indicator scoring published in the document “Indicators for the Hydroelectric Power Plants Version 4.1” with underlying Standard Indicators adapted for Cakit Hydropower Plant Project, Turkey will be used to verify the awarded score based on the findings that were made during the on-site assessment and the review of related documents. It shall be mentioned that all “carbon” related validation and verification findings may be extracted from the VCS validation/verification report and are not subject to further investigation in this report, especially as the initially awarded score was 6 throughout the group of indicators at Point 0.

The following indicators were not applied for the assessment:

Name of the indicator	Justification for excluding the indicator
APP and Legal Reserve Evaluates state of conservation of the areas around the reservoir including Permanent Preservation Areas - APP and legal reserve areas whether owned by the project or not.	There are no APP and Legal Reserve within the project area or around it. This is also documented on page 49 of the Project Information File presented to and approved by the Ministry of Environment and Forestry (Ministry of City Planning and Environment with its new name)
Transfer of New Technology Evaluates the level of technological innovation and the technologies employed in the project or regarding operational procedures and maintenance, actions for mitigation of impacts, or other aspects that show a break from the common practice of the sector. The existence of research and development projects (R&D) related to the project are also considered in this indicator.	The Project is using three vertical axis Francis type turbines (as also indicated on the page 6 of the Validated VCS, Project Description). This kind of technology is not new and the contribution of the project will be limited to training of the staff and some added experience to the project operators. Therefore this indicator is not applicable.

1.2 Description

The project owner Bereket Enerji operates several hydropower projects in Turkey, some of which do have very small generation capacity. However the carbon finance mechanism was only recently discovered which is why this is the first project to be validated against SC. The Project owner assigned the responsibility related to SC development to the Chief Environmental Officer Ms. Gül.

The project is located on the geographic coordinates: Latitude: 40°16'13,48' North and Longitude: 37°50'55,58' East, on the downstream of two state owned dams: Kılıçkaya Dam (124 MW) and Çamlığöze Dam (33MW), operating as peak power plants with a maximum flow rate of 160 m³/s in Turkey. The project collects the water that leaves the spillway of Çamlığöze Dam and it is kept up to 5 hours behind the spill weir regulator. The water is transferred to a set of open canals and tunnels that bring the water to a head pond from which it is loaded to the penstock that brings pass the water to the power house where it reaches a multiple diversion weirs and a power station with 3 Francis-type turbines. Figure 1. One of these three turbines is installed as a standby unit, intended to operate only whenever one of the other two turbines will not be operating for the purpose of maintenance and repair. The head difference between the spill regulator and the tail water of 101 m and a project flow of 28 m³/sec.

The weirs have a reservoir with roughly 1,204,040 m² surface area. Figure 2. The turbines have a capacity of 21 MW each, totalling to 63 MW, according to the turbine purchase contract. The estimated net power supply to the grid is 220 GWh per year, this has been recalculated by considering, a well documented, 16% production loss due to the seasonal and topographic conditions (37, 40). The generated power will be supplied to the national power grid via a 154 kV transmission line.

The project aims at the reduction of greenhouse gases in Turkey by substituting emissions from fossil fuel fired power plants. The Validation Team was able to confirm the accuracy of the project description by reviewing maps and technical drawing during the site visit, as well as interviews and inspections conducted during the on-site audit.

No EIA regulatory procedures had to be observed because the project was exempt from the regulations which was verified by means of the EIA exempt certificate submitted to TUV Rheinland. However an EIA project identifier file had been submitted to the environmental directorate as part of the standard procedure. The fact that the project owner holds all necessary approvals combined with general knowledge related to the registration procedures in Turkey suggest that the project is fully in line with the public requirements.

The validation process included collecting of all relevant information to confirm statements made by the responsible party in the SCR to calculate the Point 0 scoring using HEPP indicators including information on 29 project parameters. The majority of information was verified during the on-site assessment by physical evidence, interviewing of involved individuals and reviewing of related documentation after the SCR had been received. The SC methodology requires verifying the information related to socioeconomic aspects based on the matrix evaluation grid of the indicator documentation. Therefore the situation on-site was compared to the scenario in the evaluation matrix and the SCR score rating. The best possible match of the actual on-site situation with the least deviation from the reference scenario shall represent the awarded score. Where a direct match could not be identified, information was not available or insufficient or the indicator was not applicable this is mentioned explicitly.

Upon receipt of the Draft SCR a list of CAR/CL was forwarded to the responsible party derived from the desk review of the Draft SCR and available supplementary information. Additionally the (interview)-records drafted during the on-site assessment were considered during the validation process.

1.3 Site Inspections and Interviews

The following persons were interviewed following the schedule of the on-site assessment on December, 12th. Additional persons were encountered, however notwithstanding the fact their input be considered for Validation they will not be mentioned here.

Plant Staff		
Ihsan Seker	Plant Manager	Operation, maintenance, regulation, coordination of electricity accounting, rules and regulation compliance, responsible for data management
Eser Bozkurt	Chief Mechanical Engineer	Assigned from headquarter, regular visits, maintenance
Musa Kantik	Chief Electrical Engineer	Currently assigned to a different plant, does regular visits to site, previous plant manager, el. Engineer responsible for maintenance
Management PO		
Özgün Gül	Chief Environmental Officer	Responsible for compliance with legal requirements and environmental issues, employed by the PO.
Tevfik Kasaplar	Environmental Engineer	Assigned by the PO, support to Ms. Gül
Carbon Consulting		
Asli Sezer Özcelik	Carbon Consultant, PP	Primary contact for Validation of SCS, Point0
Murat Özcelik	Carbon Consultant, PP	
Zahid Karakaya	Turkuaz Karbon Varlik Yonetimi Enerji Sti..	Managing Partner, PD developer
Stakeholder		
Mehmet Yilmaz	Müdür, Kaymakamlik Office	As governor of the region was able to confirm compliance of project implementation with laws and regulations, issues related to environmental and social concerns
Adnan Alemdar	Member of the board of Muhtas	Was interviewed related to social, environmental and expropriation aspects.
Enver Kilic	Kalebasi Muhtar	Delivered statements related to the commitment of the PO to develop a sustainable and social policy.

1.4 Document review

The documents as indicated below have all been reviewed during the Validation process. Part of the previous underlying documentation relevant for the Verification of the project against VCS were also reviewed but are not mentioned here. The main underlying document for the Validation was the Social Carbon Report Version 2 made of December 22nd.

No	Document	Submitted	Comment
1	Water use agreement	03.12.2011	Water use agreement of January 2005 between the PO and DSI/EPDK to utilize the river flow for the purpose of power production in the Koyulhisar Plant. Environmental discharge

			requirements are set to be a minimum of ten percent of the natural river flow.
2	Pre EIA	03.12.2011	The EIA study made of April 2005 by Aktan. It is based on the initial generation capacity of 42 MW.
3	EIA Exempt Certificate	03.12.2011	The EIA Exempt Certificate issued by the Forestry Directorate that proves no full EIA study is required for the project activity. It is issued June 2005.
4	Fish ladder construction drawing	03.12.2011	Technical construction drawing with reference date July 2009, to implement a fish ladder in the weir structure.
5	License extension request	03.12.2011	A request issued by the PO to extend the generation capacity indicated on the license from 42 MW to 63 MW.
6	Production License	03.12.2011	The initial production license by EPDK for Koyulhisar HEPP with a generation capacity of 43 MW made of February 2005.
7	Reservoir map	03.12.2011	Drawing of the reservoir area at dam elevation
8	Employees list	03.12.2011	List of enrolled employees identifying 32 persons that have been taken on June and October 2009 and 50 employees that have started 2006 and subsequent years until 2008. The distinction between the two groups is made with the place of employment and types of works carried out. The list indicates the first period to be the construction and second related to the actual plant operation.
9	First Aid training certificates	13.12.2011	Training certificates of the employees (six participants) attending First Aid training
10	OHS Training participation list	13.12.2011	The participation list of attendees to the Occupational Health and Safety training indicating a number of eighteen employees that attended the course on October 7, 2010.
11	Compensation proof	26.12.2011	An excerpt as a list indicating payments to affected land owner for expropriation compensation
12	Environmental report conveyance channel	26.12.2011	The environmental risk report issued by an established commission related to damages in the structure of the conveyance channel. This was produced as a response to the raised concerns by stakeholders.

2 VALIDATION OF INDICATORS

2.1 Social Resource

Expropriation Process

Brief SCR description

No direct population displacement, land-ownership was affected. Second expropriation process is ongoing subsequent to the initial process.

Validation

Evidently no displacement of persons or activities was necessary. The interview with the village head and another local stakeholder revealed a good relationship with the project owner and it was mentioned that all the funds had been transferred to entitled persons affected by land use for the project. The deposition of the funds receivable was verified by documented proof. According to the stakeholders a second expropriation process is currently ongoing, however without involvement of them directly. The process follows the construction of the conveying channel and should be followed up during **Periodic Verification**.

Point 0 Score: 6

Communication With Stakeholders

Brief SCR description

Irregular communication with Stakeholders. PO is open to communication. Contacts are available to authorities and village heads.

Validation

There exists no structured communication policy which is common with regards to the socio-cultural environment. The village head pointed out that he tends to contact the project owner by telephone should there be any issues. The first point of contact for stakeholder according to the village head of Kalebasi is the plant manager of Koyulhisar HEPP. If he is unavailable all personnel of the plant can be contacted and asked for help. The Governor of town confirmed that one on one communication was established and that the general relationship with the project owner is good. During the visit of the Governor's office it became evident that a lively and friendly atmosphere exists between the project owner and the officials as all participants of the interview seemed acquainted with each other and discussion on pending issues was started instantly.

Point 0 Score: 3

Acceptance

Brief SCR description

In general good acceptance. However, some doubts from local stakeholders the project would effect the quantity of irrigation water, inhabitants concerns about a failure that may result to flooding of their houses. These concerns have legally and scientifically addressed by the project management.

Validation

The interviewed village head and local inhabitant of the village Kalebasi expressed their direct support of the project. It was mentioned that everybody was satisfied with the implementation of the project and that it would be appreciated "if all projects were run like this". The village head mentioned that the project would rather have a positive effect on the population in close proximity as it provides labour opportunities and also other benefits related to borrowed construction equipment and the supply of free construction material. The project owner to their understanding was replacing the so called "village service" (supporting villagers with supplies and other concerns) as being more responsive and useful. The interviewed persons did all not directly share the concerns related to the flooding issue, however the governor confirmed that this was actually one of the greatest issues, also investigated by a commission that was formed to engage on investigations related to the conveyance channel safety and that submitted a preliminary report including suggestions what best should be done to mitigate the risk. The head of this commission according to the Governor is an officer of DSI (State Hydraulic Works). The report was just being issued and therefore unknown to the project owner who declared to review the report and develop appropriate actions thereof. This topic should be followed up during the **Periodic Verification**. However the report was also made available as supporting evidence. In addition to that note shall be taken that also the transmission line was apparently considered a potential risk by some stakeholders.

Point 0 Score: 4

Social Demands

Brief SCR description

Demands (mainly materialize as requests for construction materials and caterpillars) are brought forward to the project owner via the village or district heads or the members of the city council. Village heads request construction materials. PO supplies these needs to a certain extend. PO recovered places to a better condition than the original.

Validation

At the office visit to the Governor it was expressed that 50% of the personnel working at the plant should be employed from Koyulhisar town. The current share was at 25% whereas upon the question of the reason for it being like this it was admitted that working skills amongst the population were obviously insufficient. It was verified on-site that a considerable amount of persons was employed at the plant and that compared to other projects in this region also the share of local people employed was high. It was expressed by the village head of Kalebasi that no particular interest of employment

opportunities exists amongst the village population. Social demands as far as they were concerned were very much limited to the provision of supplies and construction material as mentioned before. However during the construction phase of the HEPP also people from the village were employed on a time limited contract. Planned activities include planting of trees for beautification in the village whereas the forest department shall take the lead on this. Another request was made that referred to the safety of the conveyance channel. The project owner therefore extended the height of the security fencing and also installed rescue rings along the path next to the canal. The Governor expressed that no other demands or concerns are present. He would like the project owner to extend the activities for the next years especially to construction of a new school.

Point 0 Score: 4

Social Programs

Brief SCR description

The project owner planted caper bushes to control slope stability and leaves the fruits to locals to collect and sell them, however the shrubs are too young and yet of no significance.

Validation

Planting of the caper bushes was observed on-site whereas the size of the plants is very small. This should be followed up at **Periodic Verification**. A suitable spot to monitor this is the emergency spill gate at kilometer 13 (13/33) of the conveyance channel.

Point 0 Score: 4

Social Benefits

Brief SCR description

The project owner supplied construction materials to the neighbouring villages and neighbouring districts and helped paving of the road in Kalebasi village. Furthermore earth movers are provided when the town or village needs them.

Validation

The village head confirms that recovery of degraded areas is taking place, and a section of the road was destroyed during construction, this has been repaired and some additional work was performed by the project owner, namely filling of a ditch which was requested by the villagers. It was also confirmed that construction materials are supplied upon request.

The decision to engage on the road construction was agreed upon with the Governor and the project owner provided cash in advance (supposedly 100000 TYL for the road construction). The paved section was observed on-site to be approximately 6000m².

Point 0 Score: 4

2.2 Human Resource

Capacity Building Initiatives

Brief SCR description

The employees are qualified for the job and they are receiving regular trainings to maintain and build capacity. OHS trainings were conducted as well as First Aid courses for several employees.

Validation

The persons on site were interviewed to confirm this. According to the statements made the plant manager is a graduated electrical engineer from Turkey, furthermore three electricity technicians from a technical school offering two years of education are employed. Four more on-site technicians are high school graduates two of which are operators in the command room, who in addition are responsible to monitor electricity related matters in the facility. In addition the plant is complemented by three apprentices performing assisting tasks. In total there was a count of thirty-two employees whereas a group of six people is responsible for technical maintenance and fourteen persons are patrolling the canal as there is debris to be removed from it. Three security wards are guarding the powerhouse site.

According to Turkish regulation training is due every two years, but the project owner decided to train people every year. Mr. Fatih Peker works as a trainer who is accredited as trainer and he visits regularly (safety training). Also high voltage training is being conducted.

Point 0 Score: 5

Health And Safety

Brief SCR description

The project has its Occupational Health and Safety system in place. An Occupational H&S booklet exists, and an MD is employed in the project site. Yet, there were two people that lost consciousness during a clean up duty at the tunnel.

Validation

According to the plant manager an OHS procedures is available at the headquarter. However by end of November 2011 the OHS procedure was also available at the plant. However this could not be verified and it appears that no actual OHS procedures exist on-site. An actual OHS system is being prepared right now, so the documentation will be available soon which has to be followed up during the **Periodic Verification**. The received training regarding first aid and OHS was verified by documented proof No. 9 and 10.

Point 0 Score: 2

Benefits

Brief SCR description

The employees are provided with free lunch and dinner depending on their shift, with free transfer to their house and a monetary bonus.

Validation

One bonus per year is granted to each of the permanent staff, as well as lunch allowances and safety equipment. The payable bonus was verified by documented proof No. 11. The plant manager confirmed the availability of transport for each employee as well as the provision of free meals.

Point 0 Score: 4

Involvement Of Employees

Brief SCR description

Only management and employees directly involved in the carbon project are aware.

Validation

Evidently only key personnel was involved. The plant manager was partly aware of a complementary procedure but did not have understanding related to the carbon finance mechanism or related topics. Ultimately only personnel working at the headquarter was aware whereas plant staff was not informed.

Point 0 Score: 2

2.3 Financial Resource

Operational Performance

Brief SCR description

The project owner claims that they are satisfied as they have lowered their expectations.

Validation

The initial feasibility study claimed a higher annual generation capacity and the annual power generation had to be adapted due to water availability and other restrictions. However according to the statement of the project owner the expectation now have been adapted taking into account the new situation and verification of the project confirms generation capacity to be consistent with the adapted assumptions. Therefore the indicator can be validated as being reasonable.

Point 0 Score: 4

Market

Brief SCR description

Project activities are eligible for the voluntary market

Validation

The project was validated and verified under the VCS v.3 standard. The Validation Report and Verification report of TÜV Rheinland have been reviewed.

Point 0 Score: 3

Sales of Credits

Brief SCR description

The project owner started to probe potential buyers by the help of their carbon finance consultant.

Validation

Project owner and consultant have been interviewed regarding this indicator. It is unclear of how the commercialization will be handled but apparently negotiations are ongoing as pointed out by the project owner. No VERPA or other agreement could be reviewed so the statement rests on these assumptions. It remains unclear to this point whether the carbon consultant will have a mandate for marketing or whether the project owner will act on his own behalf.

Point 0 Score: 2

2.4 Natural Resource

Sustainability Principles

Brief SCR description

Incorporation of sustainability in the values, strategy and principles of the project owner

Validation

The sustainability principle is applied in the form of common sense. no actual policies or processes are developed or have been communicated to the staff. The interviewed persons however confirmed that top management delivers the message of sustainability and environmental concerns being a key issue for the company. Therefore it is reasonable to assume that a corresponding policy is incorporated in the values of the project owner. The strategy to also invest in micro size HEPP does also support this policy rule.

Point 0 Score: 3

Environmental Management

Brief SCR description

Environmental management system does not exist, however a systemic approach is being implemented and the reporting is non existent.

Validation

According to the chief environmental officer an environmental management system is currently under development. So far no procedures have been installed and reporting of the performance is ineffective. However a systemic approach can be observed as the project owner seriously cooperates with authorities to comply with demand and requests.

Point 0 Score: 2

Environmental Legislation

Brief SCR description

The water required has risen since generation capacity was increased to 63 MW. Generation license is OK but the Pre-EIA has not been updated. Environmental licenses routinely issued; The project complies with the Turkish environmental regulations and rules

Validation

The competent authority to issue a generation license extension in Turkey is DSI (state hydraulic works). The project owner has evidently requested a new updated license [5] but according to the statement of the project owner is slow to respond. Still the determined obligations are fulfilled and all required licenses exist. The fact that the indicated generation capacity on the license has not been updated does not suggest non-compliance. The process regarding license extension should be observed during the **Periodic Verification**.

Point 0 Score: 5

Legal Procedures

Brief SCR description

The project did not suffer from public civil or judicial action or receive any warnings due to potential risk or effective damage to human health or the environment

Validation

The governor of Koyulhisar confirmed no legal actions had been taken and that no other legal procedures have been filed. He also expressed that potential legal arguments may result from the aforementioned second phase of expropriation process. It was also observed that the project owner did receive a formal warning/claim related to the flooding issue also mentioned before which resulted in deployment of a commission to investigate the potential threats but no sentences were issued.

Point 0 Score: 5

Environmental Impacts

Brief SCR description

The project has submitted a project description file to the Sivas Province General Directorate of Environment. The file was studied and the project received an EIA exemption certificate.

Validation

The environmental study [2] was cross checked and it confirmed that only insignificant environmental impact was indicated. The exempt certificate was also reviewed [3] as supporting evidence.

Point 0 Score: 5

Environmental Risk Management

Brief SCR description

The project has an environmental risk management plan in place. There were no environmental emergency situations during the specified period.

Validation

No environmental risk situations occurred as has been confirmed by the Governor. However it was not possible to review the Environmental Risk Management Plan. According to the project owner this will be followed up as a potential future improvement target.

Point 0 Score: 4

Reservoir And Area Management

Brief SCR description

There is no intrusion to the project area.

Validation

It was verified on site that especially the reservoir area is guarded and fenced. This is also necessary to observe the fishing activities. The Governor confirmed that no inappropriate use was observed on the site but that the area may be used and perceived as recreational area. No actual plan for the site management exists and is taken as a future target. The project owner explained that they are exercising good control over the marginal area.

Point 0 Score: 3

Erosion, Landslides, Silting and Floods

Brief SCR description

Operations cause major ongoing sedimentation or erosion problems in reservoir or downstream areas. corrective actions demonstrate efficiency during its execution.

Validation

It was observed on site that sedimentation and even more landslides do cause major operational issues. The headrace and conveyance channel has to be cleaned frequently as debris from the slopes above the canal blocks the water passage. This is done in a well organized way with personnel specifically assigned to this task. The project owner confirmed that other measure will be taken to avoid future contamination.

Point 0 Score: 3

Water Resources

Brief SCR description

Operations either enhance or cause minimal deterioration to reservoir or downstream water quality

Validation

The project has to comply with the DSI regulation regarding environmental discharge which means that 10% of the natural flow have to be release into the natural section between weir and tail water conjunction. The project owner confirmed that a water flow watch-station is being installed to observe the volumetric flow rate. This station will be used to control the discharge throughput. With a fish-ladder currently under construction implementation of this device however is not yet possible. It should be observed during the **Periodic Verification** whether this watch-station is effectively used to regulate the water flow. The plat manager confirmed that no water quality measurement is foreseen to observe tail-water quality.

Point 0 Score: 4

2.5 Biodiversity / Technology Resource

Recovery Of Degraded Areas

Brief SCR description

Areas are being reclaimed and the project management is working to improve the project landscape. In addition to this the project owner is trying to improve the surrounding areas to improve the slope stability and avoid landslides

Validation

The village heads confirmed that surrounding project areas that were degraded during the construction have been recovered and that actually some of the areas are in better condition than found when the

project owner first started mobilisation of the construction activities. An environmental landscaping plan was however non existent. The slope stability and avoidance of landslides lies in the project owner own interest as the landslides directly jeopardize the project power generation performance due to necessary revisions of the conveyance channel. The planting of caper bushes may also be understood as a voluntary measure to improve the slope stability.

Point 0 Score: 4

Biodiversity Conservation

Brief SCR description

The project owner is safeguarding the project boundaries and watching for illegal hunters and fishers.

Validation

The contribution is clearly limited to legal obligations as it was observed on site that the project owner is safeguarding the reservoir area but does not undertake any voluntary research or conservation activities. The project owner stated that not the entire reservoir is under permanent surveillance but that fishing activities can be monitored very well as there are also patrols on duty.

Point 0 Score: 3

Ichtyofauna

Brief SCR description

The project owner has installed an active fish ladder at the spill way and they have observed fish activity in that fish passage. Also they planned to construct a fish passage in the body of the weir to help support fish migration.

Validation

Both passage-ways were visible on site, the construction at the second ladder upstream was evidently taking place. The second fish ladder is already operating on site close to the power house.

As opposed to initial declaration DSI is in control of monitoring the fish activity, however the actions taken to support migration is done in close cooperation with DSI.

Point 0 Score: 5

2.6 Carbon Resource

Additionality

Brief SCR description

The project is considered additional according to criteria stated in a monitoring methodology approved by the CDM Executive Board.

Validation

The project was validated additional according to the CDM “tool for the demonstration and assessment of additionality”, v05.2 which is applicable to the UNFCCC methodology ACM0002 “Consolidated methodology for grid-connected electricity generation from renewable sources”, v.11 (EB52). A three step approach including investment analysis was chosen including Step1, identification of project alternatives, Step2, investment analysis and Step3, Common practice analysis and barrier analysis. All steps have been verified by the validation team.

Point 0 Score: 6

Emissions Reductions Calculations & Monitoring

Brief SCR description

The project possesses a methodology to calculate emissions reductions and a monitoring plan based on a methodology approved by the CDM Executive Board.

Validation

The emission reductions (Baseline Emissions) were calculated using the UNFCCC methodology ACM0002 “Consolidated methodology for grid-connected electricity generation from renewable sources”, v.11 (EB52) including the UNFCCC methodological “Tool to calculate the emission factor for an electricity system”, v.02. The emission reduction calculations were verified in the course of Verification against VCS v.3 and the Verification Report has been successfully issued.

Point 0 Score: 6

Validation & Verification

Brief SCR description

Validation/ Verification are conducted by a Designated Operational Entity according to UNFCCC specifications.

Validation

The validation and verification was conducted by TUV Rheinland accredited under DOE-E-0013.

Point 0 Score: 6

Project Performance

Brief SCR description

5-Good: 76% to 95% of carbon credits predicted for the period were effectively generated.

Validation

The estimated ER as per validated PDD are 116,217 tCO₂/annum which is equivalent to 9685 tCO₂/month. The Verified ER for the monitoring period from November 17, 2009 to October 31 2011 amount to 213,059 tCO₂. This is equivalent to an average (23.5 months) of 9066 tCO₂/month. The fraction is calculated to be 93.6 %.

Point 0 Score: 5

3 VERIFICATION STATEMENT

Bereket Enerji Üretim San. ve Tic. A. Ş.

15 Mayıs Mh.. 832 Sk.

No:2 K:2 75. Yıl Esnaf Sarayı DENİZLİ

Turkey

December 28th, 2011

RE: Verification Statement Koyulhisar Hydro Electricity Power Plant, Turkey under VCS, first monitoring period from 17.11.2009 to 31.10.2011 under SocialCarbon for verification of Point 0.

Bereket Enerji Üretim San. ve Tic. A. Ş with registered office at 15 Mayıs Mh.. 832 Sk. No:2 K:2 75. Yıl Esnaf Sarayı DENİZLİ, Turkey, has engaged TÜV Rheinland to review and verify the SCS Monitoring Report and all assertions related to the GHG project under Social Carbon Methodology respectively. The assertions made in the SCR Version 2, December 22nd 2011, submitted December 22nd 2011, indicate a Social Carbon performance as follows:

Social Resource: 4.17

Human Resource: 3.25

Financial Resource: 3.00

Natural Resource: 3.77

Biodiversity Resource: 4.00

Carbon Resource: 5.75

We have conducted the verification of the Social Carbon assertion in accordance with the requirements of the Social Carbon program requirements. The project information verified includes the Social Carbon report delivered to TÜV Rheinland Energie und Umwelt GmbH and all relevant information and evidence acquired during the verification process as stated in the verification report "Validation of Point 0 Koyulhisar HEPP 21218413" as of December 28th 2011.

We have come to the conclusion that based on our review and all available documentation the assertions above are made in accordance with the requirements of the Social Carbon program and are material correct and fairly represents the socioeconomic parameters without material discrepancies.

Cologne, December 28th 2011



Roland Wollenweber,



Norbert Heidelmann

4 LIST OF CORRECTIVE ACTION REQUESTS

CAR	CL	List of		
		Observation (CAR/CL)	Reference	Summary of project owner response
		The generation license was requested to be extended to 63MW, however the Pre-EIA was made with the assumptions of design water flow of 53 m3/s, whereas the updated flow rate is 84 m3/s. Can you please clarify whether this has clearly been communicated to DSI, what the implication were and how or if this affected the guaranteed environmental discharge of 10% of the natural river flow. Furthermore please clarify the status as to the extension of the generation license.		The DSI has been informed and extension request is awaiting to be addressed by the government party as soon as we get the necessary documentation we shall pass this to DOE
1		Please provide documented proof for compensation, i.e. deposition of funds or communication.	Indicator 1, Population displacement	The proof of depositing the money will be provided but it may not be possible to provide a document if the funds have reached the relevant parties as the process is not completed yet.
2		The indicator score 3 is more applicable since no permanent communication platform has been established yet.	Indicator 2, Communication	This score will be updated in the new version of the SCS Report. (version 2.0)
3		Please provide supporting evidence related to the scientific and legal approach as to the flooding issue affecting persons living underneath the conveying channel.	Indicator 3, Acceptance	The communications that address the issue with the stake holder driven community will be addresses in the present situation and the targets to solve the concerns will also be addressed. Also the report by the committee will be summarized and put as an annex to the new version of the SCS Report.
	2	Please clarify whether the flooding issue identified at Indicator 3 is the only factor that reduces or limits the acceptance. Are there no other acceptance issues?	Indicator 3, Acceptance	No other acceptance issues
4		Please provide supporting evidence of the training the employees receive, Please provide training plan or record sheet or certificates that proof participation.	Indicator 7, Resource availability capacity building initiatives	Please see the attached document
5		Please clarify the exact nature of benefit as the areas are: - Education - Health - Retirement assistance - Other (leisure, sports, and meal vouchers, among others). With free meals and transfer only the area "OTHER" is covered. If no other activities are identified please amend indicator accordingly.	Indicator 9, Benefits	The benefits are that the employees are given trainings and the bonus and free lunch, the situation is updated in the new version of the SCS report, and the score is also updated .
6		Please provide supporting evidence of the receivable bonus for the employees	Indicator 9, Benefits	This will be provided
	3	It is understood that no official lawsuit was filed. However there were some concerns related to the flooding issue (see CAR3), this may also be seen as an official claim or warning if it reached the Kaymakamlik, Otherwise please confirm that the concerns raised were purely unofficial	Indicator 17, Legal procedures	The score is revised in the new version to address the warning by the Kaymakamlik.
7		Please substantiate in more detail where and of which nature the erosion or landslide problems occur (i.e. reservoir or downstream).	Indicator 21, erosion Landslides	The erosion or land slide problems is elaborated in the new version of the social carbon report
8		Please substantiate the statement that OHS system is really effective on-site. There seem to be no actual OHS instructions on-site. Only one video exists.		The related indicator is updated to reflect the present situation
9		Please provide the Environmental Risk Management Plan		The related indicator is updated to reflect the present situation and this document is being planned and put into targets.
10		please in more detail refer to the fish observation that is apparently conducted on behalf of DSI and not initiated by PO		The present situation regarding the fish research will be updated