

Response to the request for review #3 for “Refurbishment of Enguri Hydro Power Plant, Georgia” CDM project

A. The DOE is requested to further substantiate how it validated the investment barrier - lack of private capital, considering that the PP had access to both national loan (USD 200,000 from Georgian Procredit Bank) and international loans (approximately USD 30 million from EBRD) as sources of finance for the project activity. In doing so, please refer to the 'Combined tool to identify the baseline scenario and demonstrate additionality', sub-step 2a. Investment barriers, page 7. (EB 60, Annex 7).

Summary

In order to understand the justification of the Investment Barrier (Lack of Private Capital), it is important to note the different phases of the project, the various issues encountered and when the different sources of financing came into play. The following points provide an overview of the key stages of the project and the subsequent sections provide more details and supporting evidence for the arguments that are made here:

- **1. Initial EBRD loan (2001):** the initial loan provided in 2001 by EBRD amounted to USD 14.8 million and was contracted to carry out the following scope of work:
 - Complete reconstruction of Unit 3 which was out of operation since 1993.
 - General maintenance on Units 1 and 2 (not technical upgrade). For technical reasons, Unit 1 was later replaced by Unit 4.

Note: the scope of work to be conducted under the EBRD loan differs drastically from the CDM project activity. First of all, two more units (Units 4 and 5) are included in the CDM project. More importantly, the CDM scope of work on Units 1 and 2 goes beyond what was planned under the EBRD loan. Instead of only carrying out general maintenance on the existing equipment of Units 1 and 2, the CDM project activity proposes to fully upgrade the installations, following the example of Unit 3.

- **2. Start of works (2003):** The works on Enguri HPP have been phased in order to minimize disruptions to the plant operations. The contract with Voith-Siemens was signed in 2002 and works started on Unit 3 in 2003, with the two other units to follow.
- **3. Financial difficulties (2004-2005):** by the end of 2005, the project had experienced significant delays, cost overruns and financial difficulties. In addition, the effective value of funds available through the EBRD loan reduced considerably because of the devaluation of the US Dollar against the Euro. The EBRD loan was denominated in US Dollars, whilst the major equipment purchases were denominated in Euro. From 2001 to 2006 the Dollar had lost more than 30% of its value compared to the Euro, meaning that when supplier invoices (predominantly in Euros) came due for payment, the EBRD loan (in US Dollars) was far less sufficient to pay these Euro invoices than originally intended.
- As a result, in 2005, work on site was disrupted on several occasions due to non-payment of contractors, which resulted in further delays in the completion of Unit 3. This situation was further aggravated by the assault on a member of staff, and by riots in the region. As a result of these non-payment and security issues, on December 12 2005 works on site ceased, and the contractor's and sub-contractors' staff were demobilized and left the site (see evidence provided in section 3 below).
- **4. Consideration of other sources of financing, including CDM:** at the end of 2005, the project company drew from the remaining funds under the 2001 EBRD loan to cover the outstanding payments to complete Unit 3 and initiate works at Unit 2. The Meeting of the Board of Directors of “Engurhesi” Ltd of December 25, 2005 demonstrates the

intention of carrying on with the rehabilitation programme while highlighting financial issues and the need for more funding to complete the works. At this time, Engurhesi identified CDM as a way to “*support mitigation of financing deficit for Unit 2 and for remaining units*” i.e. to cover the financing gap left by the currency devaluation and the need to refurbish other units. After months of negotiations with EBRD, additional funds of USD 10 million were allocated to the project via the Second Novation Loan with the explicit condition that the project company will pursue CDM revenues in order to repay the loan.

- The Second Novation Loan was signed in December 2006 with the purpose of completing works on Unit 2, and undertaking rehabilitation works on the remaining units. The lack of funding led to delays in project implementation (as mentioned in the PDD version 07, page 24).

Below a detailed explanation of the above points is provided, with references to supporting evidence. **Note:** Although Unit 3 is **not** part of the CDM project (as works were fully completed with the initial EBRD loan and without support of CDM revenues), it is important to discuss its rehabilitation as it greatly impacted the amount of funding available for the rehabilitation of the other units and caused severe delays in the overall rehabilitation schedule.

1. Initial loan agreement provided by EBRD to cover the reconstruction of Unit 3 and the repair of Units 1 and 2

In 2001, Engurhesi signed a loan agreement with the European Bank for Reconstruction and Development (EBRD), amounting to USD 14.8 million. This loan was contracted to "rebuild" Unit 3 (which had been completely dismantled and was out of operation since 1993), replace outdated auxiliary and control equipment (transformers, etc.), and perform general maintenance only on two more units¹. The EBRD loan was to be disbursed in US Dollars and at that time (with exchange rate: 1\$=1.116€), the loan amount was expected to be sufficient to cover all project costs of the three units (Unit 3, Unit 1 and Unit 2). It is important to note that the loan was provided as a lump sum and that the loan agreement did not specify the detailed scope of works and how funds would be allocated.

2. Phased project

The works on the Enguri HPP have been phased unit by unit in order to minimize disruptions to the plant operations. Unit 3 was the first to be upgraded (as it was out of operation since 1993).

The cost of rehabilitating Unit 3, as per the 2002 contract with Siemens², was broken down into a EUR and a USD component: **EUR 6,263,892** and **USD 1,796,084** for plant and equipment including mandatory spare parts supplied from abroad, and **EUR 1,299,679** for installation and other services.

After the rehabilitation of Unit 3, the project plan was to conduct general maintenance on Unit 2 and then on Unit 1. The cost of rehabilitating Units 1 and 2, as per the 2002 contract with

¹ Unit 1 and Unit 2; yet, due to technical reasons, Unit 1 was later replaced by Unit 4 via amendment agreement signed with the contractor, Voith Siemens, in 2007. The Amendment states: “*during the execution of rehabilitation works the Employer requested the contractor, due to unforeseen design deviations (turbine head cover) within Employers scope of supply and works, to rehabilitate Unit #4 instead of Unit #1*” (Amendment No.6 to the Contract Agreement for the Electro-Mechanical Equipment of the Enguri HPP, page 1).

² Annex 1: Appendix 2 to the Contract Agreement between Engurhesi Ltd. and Voith Siemens Hydro of 2002 (Unit 3)

Siemens³, was broken down into a EUR and a USD component. For each unit: **EUR 2,905,637 and USD 1,442,929** were planned for plant and equipment supplied from abroad, and **EUR 906,394** for installation and other services.

As showed by the cost breakdown above, Engurhesi had to pay the contractor (Siemens) mainly in Euros. Unit 3 which was the first unit to undergo works represented particular high costs, including a significant EUR component. At the time of contract signing with Siemens, the US Dollar had devalued vs the Euro (1US\$=1.005€), compared to the exchange rate that was in effect when the loan was signed. The US Dollar then continued to devalue in subsequent years to reach 0.7766 US\$/€ in June 2006.

In other words, Engureshi entered the contract with Siemens based upon an assumed dollar amount that was equivalent to the Euro amount at a low Euro rate to the Dollar. When, much later they came actually to pay those contractor invoices (in Euro), the Euro exchange rate had recovered meaning that they effectively had to pay significantly more dollars equivalent than anticipated. This meant they no longer had enough dollars under the loan to cover the work.

This is mentioned in the PDD version 07 (dated 31 January 2012), Section B.4., page 22-24.

3. Financial difficulties and failure to pay contractors

The rehabilitation of Unit 3 demonstrated that all the other units could be technically upgraded (and not only repaired as originally envisioned), if more investment was provided. Yet, as explained in the PDD (version 07) page 19, the project was already experiencing financial difficulties due to the following reasons:

- i. The US Dollar experienced a drastic devaluation of about 30% vis-à-vis the Euro⁴,
- ii. Increased costs were incurred due to delays in the schedule of rehabilitation works,
- iii. Increased costs were caused by the necessary scope expansion for the rehabilitation works.

As a result, by the end of 2005, Engurhesi had completed works on Unit 3 but was unable to start works on Unit 2 (an estimated **shortfall of US\$1.1 million** was recognized for the rehabilitation work on Unit 2⁵), let alone Unit 1 (which was planned to undergo maintenance 13-14 months afterwards). Because of these severe financial difficulties, Engurhesi could not pay the contractors in a timely manner.

This situation was further aggravated by the assault on a member of staff, and by riots in the region. The VSPO (contractor's) car was attacked on the way back from Zugdidi to Saberio (inside Abkhazia). During that incident the security chief Mr. Shish lost his life and several persons in the car were injured. On **12 December 2005** works on the ground stopped completely, and the contractor's and sub-contractors' staff were demobilized and left the site. After this date, no activity was conducted on site until the financials and security issues were

³ Annex 2 and Annex 3: Appendix 2 to the Contract Agreement between Engurhesi Ltd. and Voith Siemens Hydro of 2002 (Unit 2 and Unit 1, respectively)

⁴ Based on historical exchange rates (December 2001 and May 2006) as per PDD (version 07), page 22-23

⁵ Minutes of Meeting of the Board of Directors of "Engurhesi" Ltd on December 25, 2005, page 4: "1. Due to USD/EUR devaluation since allocation of EBRD loan until end of November 2005, which is over 20%, deficit of financing for Unit#2 already reached 500 thousand USD" and "2. Considering requirement for additional supplies and works on Unit #2, additional funding shall be sought for Unit #2 in the range of 1.1 million USD."

resolved. As such, this date – backed up by the letter from the contractor⁶ – is treated as **the cessation date** of rehabilitation works (as required by EB41, Para 67).

Evidence supporting non-payments of contractors by Engurhesi is provided below:

- a) Status Meet Protocol – 2005-09-27; Internal meeting within Voith Siemens, page 1: *“Suspension of Contractor’s Activities: On 22 September workers of local sub-contractor of Siemens for assembly works (“Sakenergoremonti Ltd.”) stopped working due to non-payment of outstanding salaries for July-August. Employer should provide timely transfer to stop further delays of works”*
- b) Status Meet Protocol – 2005-11-19: *“Notice on Suspension of Planned Start of Unit 2: Works again suspended from 3.11.05 due to repeated delay of payments to sub-contractor of Siemens. According to updated schedule of works Unit #3 cannot be completed until end of December 2005. Statement of Contractor: Unless financial problems are satisfactorily resolved by Engurhesi the Contractor gives a preliminary notice of suspension of works for the start of rehabilitation of Unit #2, which was planned to start on 22.12.05”*.

As per the Minutes of the Meeting of the Board of Directors of “Engurhesi” Ltd on 21 December 2005 (page 4): *“the donor society shall be informed about the existing funding deficit and additional funding must be requested to complete the rehabilitation program”*.

Evidence supporting security threats:

- a) Email Communication of 19 December 2005: Security measures to be implemented; VSHK/PIU-0449 (Annex 4);
- b) Engurhesi Rehabilitation Project Status-Protocol of 21 December 2005 (page 2): *“Assault on VSPO Car. On 11.12.05 the VSPO car was attacked on the way back from Zugdidi to Saberio (inside Abkhazian). During that incident the security chief Mr. Shish lost his life and several persons in the car were injured. Due to that assault and the insecure situation at site all VS /Siemens /VSPO personal left Enguri site to Tbilisi on 12.12.05 and back to Germany on 14.12.05 Clarification about return to site is under progress between Contractor and Employer headquarters and security departments”*.

In summary: The 2001 Loan Agreement with EBRD was expected to cover works on Unit 3⁷, Unit 2 and Unit 1. In 2002, Engureshi entered into a contract with Voith Siemens to carry out the works. Most payments under this contract were to be made in Euros while the EBRD loan was in US Dollars. Because of the Dollar devaluation against the Euro between the date of loan signing and the payment of contractor invoices, the loan turned out to be only sufficient to complete works on Unit 3 and initiate works at Unit 2⁸. As a result of these financial issues and also security issues, the work on site stopped completely and the contractor staff were demobilised, before any work on Unit 2 (or subsequent Units 1, 4 and 5) started.

⁶ Annex 5: Voith Siemens Letter on work stop and restart

⁷ Unit 3 is not part of the CDM project scope, as its rehabilitation has been fully financed under the 2001 EBRD Loan Agreement.

⁸ As shown in the EBRD Loan Drawdown Notice as of 31 December 2005 (Annex 6), only USD 5.95 million were remaining as of the end of 2005 while actual cost of Unit 2 based on Voith-Siemens invoices and payments (Annex 7) totaled USD 7.35 million (exchange rate used as per Annex 6 at the end of 2005: 1 USD=0.832 EUR) . As such, Engurhesi was short of USD 1.4 million to complete Unit 2, let alone Unit 1.

4. Consideration of other sources of financing, including CDM

At the end of 2005, Engurhesi drew from the remaining funds under the 2001 EBRD loan to cover the outstanding payments to complete Unit 3 and to initiate works at Unit 2.

As shown in the EBRD Loan Drawdown Notice as of 31 December 2005⁹, only USD 5.95 million were remaining as of the end of 2005 while actual cost of Unit 2 based on Voith-Siemens invoices and payments totaled USD 7.35 million (exchange rate used as per Annex 6 at the end of 2005: 1 USD=0.832 EUR)¹⁰. As such, Engurhesi was short of USD 1.4 million to complete Unit 2, let alone Unit 1.

As included in the Minutes of the Board's Meeting on 21 December 2005, one of the Board's resolutions states: *"the Project Manager of PIU [Project Implementation Unit] to initiate discussions with EBRD for registration of the Enguri HPP rehabilitation project in the UNFCCC with the view of obtaining additional source of funding through potential Carbon Credits generated by the Rehabilitation Project"* (Minutes of Meeting of the Board of Directors of "Engurhesi" Ltd on December 25; page 4).

In this context, Engurhesi started negotiations with the EBRD to seek additional funding. In the meantime, given the fact that such negotiations require time, the company applied to a domestic bank, ProCredit Bank, for an emergency loan, to cover the immediate financing gap ((i) ongoing operation costs and (ii) ongoing rehabilitation works)¹¹. However, this approach presented a number of issues:

- a) **High interest rates:** the interest rates Georgian commercial banks applied for industrial public sector companies were considered very high by Engurhesi¹². The interest rate applied by ProCredit Bank was 15%¹³.
- b) **Limited loan capacity:** Georgian banks are too small to provide loans for such a large rehabilitation project, including capacity addition of approximately 200MW. ProCredit Bank was able to provide only USD 100,000 of the requested USD 200,000¹⁴.
- c) **Short repayment period:** loan terms are generally too short for a long term investment such as the refurbishment of a major power plant, including capacity addition of approximately 200MW. The loan from ProCredit Bank was due to be repaid in 12 months¹⁵.

As a result, the domestic loan that was obtained was lower than requested and not sufficient to cover the deficit for works already undertaken, let alone the remaining rehabilitation works. Also, the loan conditions provided by the domestic banks made it a non viable option to fund the entire Enguri project. It was merely intended to bridge the period, until the Second Novation Agreement (which explicitly requires the pursuit of CDM finance) provided much larger fund to complete the work.

Therefore, the main source of funding was still considered to be EBRD. After months of negotiations, the Second Novation Agreement was signed in 2006 for an additional USD 10

⁹ Annex 6: EBRD Loan Drawdown Notice as of 31 December 2005

¹⁰ Annex 7: Actual invoice from Voith Siemens for works on Unit 2

¹¹ Annex 8: Letter to ProCredit Bank of 22 Dec 2005 explaining reasons for seeking additional funds, Document #22 mentioned in the PDD (version 07), page 35

¹² National Bank of Georgia, Bulletin of Monetary and Banking Statistics (January-September, 2006)

¹³ Annex 9: 2006 Loan Agreement with ProCredit Bank; page 1

¹⁴ Annex 8 and 9: Letter to ProCredit Bank of 22 Dec 2005; and 2006 Loan Agreement with ProCredit Bank (page 1)

¹⁵ Annex 9: 2006 Loan Agreement with ProCredit Bank; page 1

million. Its purpose was to finance the deficit for the completion of Units 2 and 1 (which was later replaced by Unit 4 in the schedule), and undertake the refurbishment works for the other units, with an explicit requirement to seek CDM financing to serve as a key source of revenue to meet the loan repayment obligations.

As evidence:

- a) Minutes of the Meeting of the Board of Directors of “Engurhesi” Ltd on December 25, 2005 (page 4): *“Potential additional sources of revenues through Carbon Credits will support mitigation of financing deficit for Unit #2 and for remaining units”*.
- b) Schedule 2 to the Second Novation Loan Agreement on Enguri Hydro Power Plant Rehabilitation project of 29 December 2006 – “Categories and Drawdowns” – sets forth the categories of items to be financed out of the proceeds of the loan, the allocation of the loan to each category, and the maximum percentage of expenditures for items to be financed in each category. Amongst 14 categories, the following two are listed:
 - (3) *Electrical and Mechanical Works for Units 1, 2 and 3*¹⁶
 - (10) *Electrical and Mechanical Works for Unit 4 and/or 5, additional civil engineering works (...)*.

Note: “and/or” was written because a lot of uncertainties remained at the time, in particular regarding: a) which of the last two units would be refurbished first, b) to what extent the additional EBRD funds would cover the required works, c) what would the total amount of funding available be, given the fact that a maximum of USD 10 million was available as an additional loan after negotiations with EBRD and that CDM revenues were planned to co-finance the rest.

The CDM component has been essential to secure additional investments in the Enguri HPP rehabilitation. Paragraph (e) in Section 3.01 (“Other Alternative Project Covenants”) of the Second Novation Loan Agreement on Enguri Hydro Power Plant Rehabilitation project of 29 December 2006 states: *“undertake and/or procure that all necessary steps are taken to enable the Project to qualify for the Clean Development Mechanism and ensure that the funds raised through the CDM are used in priority for meeting the Borrower’s and the Novation Project Company’s obligations regarding the Project”*.

In other words, despite the constant breach of financial covenants (as proved by the Quarterly Reports)¹⁷, EBRD accepted to lend additional funds to Engurhesi on the basis that CER revenues will be used to repay the loan.

In summary: From 21 December 2005 onwards, steps were undertaken to secure funding for completion of the entire rehabilitation programme that is covered by the proposed CDM

¹⁶ Unit 3 is mentioned in the Loan Agreement as, although works on Unit 3 were completed in 2005, the commissioning process took another 1.5 years and Unit 3 was finally commissioned in March 2007.

¹⁷ Q1 2004 - 18th Quarterly Project Report; Q2 2004 - 19th Quarterly Project Report; and Q3 2004 - 20th Quarterly Project Report; Q1 2005 - 22nd Quarterly Project Report; Q2 2005 - 23rd Quarterly Project Report; Q3 2005 - 24th Quarterly Project Report – as mentioned in the PDD page 25. For example: Q3 2005 - 24th Quarterly Project Report, page 17 – 18, an exemplary covenant in breach include: *“Selected End-users and the distribution company to pay into the Revenue Collection Account to be used in priority for the payments into the Debt Service Account for loan servicing until minimum of 6 months debt service is covered, before the revenues are re-allocated. Covenant is in breach: Although the unified Revenue Collection Account has been set up for transfers from the Distribution Market (GWEM), Engurhesi Ltd (Project Company), as well as the GSE (Borrower), due to low collection of revenues by GWEM which is the sole consumer of power produced by Enguri HPP, are unable to either accumulate or repay the loan principle and interest as set forth in NLA Section 2.02 (d).*

project scope, i.e. Unit 2, Unit 1, Unit 4, and Unit 5. Before this date, no works had started on any of these units.

With the explicit intention of seeking CDM revenues, Engurhesi started negotiations with EBRD to receive additional funding. Yet, given the fact that such negotiations require time, the project company drew from the remaining amount under the 2001 EBRD Loan to settle outstanding payments and applied for an emergency loan to a domestic bank. Both actions were taken to avoid further delays in the project implementation.

Finally, since 2001, EBRD has indeed been a key source of funding for Engurhesi. However, the Second Novation Loan signed in 2006 (after long negotiations which started shortly after Engurhesi's board decision at the end of 2005) was granted with the requirement that Engurhesi would seek CDM benefits in order to meet its loan repayment obligations..

5. Reference to the 'Combined tool to identify the baseline scenario and demonstrate additionality', sub-step 2a. Investment barriers, page 7. (EB 60, Annex 7):

As per the 'Combined tool to identify the baseline scenario and demonstrate additionality', sub-step 2a. Investment barriers, page 7: *"No private capital is available from domestic or international capital markets due to real or perceived risks associated with investments in the country where the project activity is to be implemented, as demonstrated by the credit rating of the country or other country investment reports of reputed origin"*.

As stated in the PDD (version 07), page 18: No private capital was available from domestic or international markets due to real and perceived risks associated with investment in Georgia. This has been demonstrated by the credit rating of Georgia provided, for example, by Standard & Poor's.

In December 2005, Standard & Poor's awarded Georgia long-term sovereign credit rating B+ and short-term sovereign credit rating B¹⁸. In subsequent years, the rating almost didn't change, as written in the PDD (version 07), page 18.

Standard & Poor's rating varies on scale of values between CCC- (the lowest) and AAA+ (the highest). The range between AAA to BBB is for investment grade countries, while BB to C are non-investment grade.¹⁹

Furthermore, investments in the Abkhazia region where the project is located have been perceived as risky, because of the political and social instability in the area, as reported by the UN Security Council in its reports²⁰.

B. The DOE is requested to further substantiate how it validated the investment barrier - risks due to level of tariffs, considering that the generation tariff was reduced in June 2006 from 2.13tetri/kWh to 1.187tetri/kWh, which is after the date of investment decision (21/12/2005). Please refer to VVM paragraph 118 (a), (b).

In sub-step 2b (PDD version 07, page 24), the project proponent is referring to the very low levels of generation tariffs in general. This has been recognized by the EBRD, which requested Engurhesi to increase their overall tariff to a sustainable level. However, this debt covenant was

¹⁸ Credit Rating Agency Gives 'Positive Outlook' on Georgia: <http://www.civil.ge/eng/article.php?id=11302>

¹⁹ Standard & Poor's: http://en.wikipedia.org/wiki/Standard_%26_Poor%27s

²⁰ UN Secretary-General's reports: <http://www.un.org/docs/>

constantly in breach. Indeed, covenant 3.01 (d) (i) of the “Status of Covenant Compliance of the Novation Agreements (October-December 2004)” refers to reaching the desired level of 1.5 US cents/kWh²¹. Using the exchange rate in effect at the end of 2004 (US\$ 1 = Lari 1.77)²², 1.5 US cents are equivalent to 2.66 tetri.

Even the tariff amounting to 2.13 Georgian tetri/kWh was far too low to make the project implementation financially attractive. At this tariff level, Engurhesi should have gathered GEL 57,898,218 in 2004 and GEL 54,000,645 in 2005, as demonstrated in the table below²³. Yet, the collection rate on average was 25.70% and 30.63%, accordingly.

Year	2003	2004	2005
Tariff level	2.13	2.13	2.13
Total Revenue Billed	55,106,242	57,898,218	54,000,645
Total Actual Collection	13,637,362	14,878,009	16,541,364
Collection %	27.75%	25.70%	30.63%

After converting GEL to USD, the collected amounts equal: USD 6.57 million in 2003, USD 8.15 million in 2004, and USD 9.23 million in 2005²⁴.

Considering the cost of the rehabilitation program (as mentioned in the first part of this response), Engurhesi would have had to have put aside its total annual revenues for at least three consecutive years, if it had wanted to finance the project. And this is disregarding the regular maintenance and operation costs, as well as the debt repayment obligations of Engurhesi.

In addition, the Consolidated Statement of Profit and Loss for 2002-2004 (Annex 11), demonstrates that Engurhesi has been a loss making company and has not been able to secure sufficient funds to finance the running costs.

It is also important to point out that the reference to the reduction of tariff in 2006 serves only as an additional comment referring to the risks arising from the non-market nature of the tariff regulation in Georgia. It does not serve as the proof of the financial barrier itself and is only mentioned as a strengthening argument.

The above information has been added to the PDD (version 07, dated 31 January 2012), pages 24-25.

Relevant information was added to the Validation Report rev.05 section 3.7.4, p.24.

²¹ Annex 10: Status of Covenant Compliance of the Novation Agreements (October-December 2004)

²² <http://www.geres.ge/currency/rates.html?lang=en&d=27&m=12&y=2004&go.x=13&go.y=5>

²³ Based on Engurhesi’s records, as presented in the authorized document “Collection of Bills 2003-2005”, Document 20 mentioned in the PDD (version 07), page 34

²⁴ Rates as of 31 Dec of a given year.

Source: <http://www.geres.ge/currency/rates.html?lang=en&d=31&m=12&y=2003&go.x=7&go.y=8>.

Appendices

Annex 1: Appendix 2 to the Contract Agreement between Engurhesi Ltd. and Voith Siemens Hydro of 2002 (Unit 3)

PRICES SCHEDULE N° 1.a - PLANT AND EQUIPMENT INCLUDING MANDATORY SPARE PARTS SUPPLIED FROM ABROAD UNIT 3 REHABILITATION

Name of Contractor: VOITH SIEMENS HYDRO Power Generation GmbH & Co. KG

Item reference	Item description	Total price per item and per currency	
		EUR	USD
1a.1	Rehabilitation of the generator		
1a.1.1	- Replacement of stator winding	1,792,780	1,489,371
1a.1.2	- Stator bars cooling system	472,104	
1a.1.3	- Rehabilitation of rotor	141,286	158,638
1a.1.4	- Replacement of magnetic core	585,043	71,175
1a.1.6	- Replacement of eight air coolers	187,533	
1a.2.1	Voltage regulator and excitation system	549,296	
1a.3.1	Supply of a new generator circuit breaker and disconnecter	494,129	
1a.4	Low voltage equipment and accessories	225,657	
1a.5	Unit control / protection / monitoring system	755,365	
1a.6	Rehabilitation of speed governor	338,504	
1a.7	Rehabilitation of spherical valve operating mechanism	57,483	
1a.8	Mandatory spare parts for units (will be used also for all units)	597,035	76,900
1a.9	Liaison meetings (will be used also for all units)	87,677	
Total amount		6,263,892	1,796,084

PRICES SCHEDULE N° 4.a - INSTALLATION AND OTHER SERVICES UNIT 3 REHABILITATION

Name of Contractor: VOITH SIEMENS HYDRO Power Generation GmbH & Co. KG

Item reference	Item description	Total price per item and per currency	
		EUR	USD
4a.1	Rehabilitation of the generator		
4a.1.1	- Replacement of stator winding	484,652	0
4a.1.2	- Stator bars cooling system	29,683	0
4a.1.3	- Rehabilitation of rotor	85,083	0
4a.1.4	- Replacement of magnetic core	210,527	0
4a.1.6	- Replacement of eight air coolers	3,429	0
4a.2.1	Voltage regulator and excitation system	43,777	0
4a.3.1	Supply of a new generator circuit breaker and disconnecter	20,463	0
4a.4	Low voltage equipment and accessories	41,129	0
4a.5	Unit control / protection / monitoring system	42,714	0
4a.6	Rehabilitation of speed governor	114,936	0
4a.7	Rehabilitation of spherical valve operating mechanism	78,464	0
4a.8	Mandatory spare parts for units (will be used also for all units)	0	0
4a.9	Liaison meeting and training (will be used also for all units)	144,522	0
Total amount		1,299,679	0

Annex 2: Appendix 2 to the Contract Agreement between Engurhesi Ltd. and Voith Siemens Hydro of 2002 (Unit 2)

PRICES SCHEDULE N° 1.c - PLANT AND EQUIPMENT SUPPLIED FROM ABROAD UNIT 2 REHABILITATION

Name of Contractor: VOITH SIEMENS HYDRO Power Generation GmbH & Co. KG

Item reference	Item description	Total price per item and per currency	
		EUR	USD
1c.1	Rehabilitation of the generator		
1c.1.1	- Replacement of stator winding	705,688	1,275,397
1c.1.2	- Stator bars cooling system	427,027	0
1c.1.3	- Rehabilitation of rotor	152,215	146,985
1c.1.4	- Replacement of magnetic core	453,880	20,547
1c.1.6	- Replacement of eight air coolers	164,460	0
1c.2	Low voltage equipment and accessories	175,204	0
1c.3	Unit control / protection / monitoring system	594,251	0
1c.4	Rehabilitation of speed governor	195,676	0
1c.5	Rehabilitation of spherical valve operating mechanism	37,236	0
Total amount		2,905,637	1,442,929

**PRICES SCHEDULE N° 4.c - INSTALLATION AND OTHER SERVICES
UNIT 2 REHABILITATION**

Name of Contractor: VOITH SIEMENS HYDRO Power Generation GmbH & Co. KG

Item reference	Item description	Total price per item and per currency	
		EUR	USD
4c.1	Rehabilitation of the generator		
4c.1.1	- Replacement of stator winding	378,471	0
4c.1.2	- Stator bars cooling system	23,567	0
4c.1.3	- Rehabilitation of rotor	67,553	0
4c.1.4	- Replacement of magnetic core	157,895	0
4c.1.6	- Replacement of eight air coolers	3,429	0
4c.2	Low voltage equipment and accessories	32,655	0
4c.3	Unit control / protection / monitoring system	49,423	0
4c.4	Rehabilitation of speed governor	114,937	0
4c.5	Rehabilitation of spherical valve operating mechanism	78,464	0
	Total amount	906,394	0

Annex 3: Appendix 2 to the Contract Agreement between Engurhesi Ltd. and Voith Siemens Hydro of 2002 (Unit 1)

**PRICES SCHEDULE N° 1.b - PLANT AND EQUIPMENT SUPPLIED FROM ABROAD
UNIT 1 REHABILITATION**

Name of Contractor: VOITH SIEMENS HYDRO Power Generation GmbH & Co. KG

Item reference	Item description	Total price per item and per currency	
		EUR	USD
1b.1	Rehabilitation of the generator		
1b.1.1	- Replacement of stator winding	705,688	1,275,397
1b.1.2	- Stator bars cooling system	427,027	0
1b.1.3	- Rehabilitation of rotor	152,215	146,985
1b.1.4	- Replacement of magnetic core	453,880	20,547
1b.1.6	- Replacement of eight air coolers	164,460	0
1b.2	Low voltage equipment and accessories	145,204	0
1b.3	Unit control / protection / monitoring system	624,251	0
1b.4	Rehabilitation of speed governor	195,676	0
1b.5	Rehabilitation of spherical valve operating mechanism	37,236	0
	Total amount	2,905,637	1,442,929

**PRICES SCHEDULE N° 4.b - INSTALLATION AND OTHER SERVICES
UNIT 1 REHABILITATION**

Name of Contractor: VOITH SIEMENS HYDRO Power Generation GmbH & Co. KG

Item reference	Item description	Total price per item and per currency	
		EUR	USD
4b.1	Rehabilitation of the generator		
4b.1.1	- Replacement of stator winding	376,256	0
4b.1.2	- Stator bars cooling system	23,567	0
4b.1.3	- Rehabilitation of rotor	67,553	0
4b.1.4	- Replacement of magnetic core	157,895	0
4b.1.6	- Replacement of eight air coolers	3,429	0
4b.2	Low voltage equipment and accessories	32,655	0
4b.3	Unit control / protection / monitoring system	51,639	0
4b.4	Rehabilitation of speed governor	114,937	0
4b.5	Rehabilitation of spherical valve operating mechanism	78,464	0
	Total amount	906,395	0

Annex 4: Extract from the email communications of 19 December 2005

The safety measures are based on the incident that took place on December 11th, 2005.

Today we got additional information concerning the situation in Abkhazia. According to the News, there are new riots in the critical zone of Abkhazia, in particular in the Gali region. As reported, the armed forces of Abkhazia are recruiting young Georgian and Abkhazian men under constraint. In connection with the constraint recruiting the Abkhazian forces shot also against the inhabitants of the villages. Therefore we are really concerned that the situation is now even worse compared with the situation last week.

We will observe the situation and will appreciate your support for more information. In case that these riots will hold on or will increase we have to review our concept and we have to adapt our position accordingly.

Annex 5: Letter from Voith Siemens

VOITH

Voith Hydro

Voith Hydro GmbH & Co. KG
Alexanderstraße 11
89522 Heidenheim, Germany
Phone +49 7321 37-0
Fax +49 7321 37-7126
www.voithhydro.com

Voith Hydro GmbH & Co. KG, P.O. Box 20 10, 89510 Heidenheim, Germany

A Voith and Siemens Company

Engurhesi Ltd.
The Director of the Enguri HPP Rehabilitation
Project Implementation Unit

50, I. Chavchavadze Av

0179 Tbilisi/GEORGIA

Ihr Zeichen
Ihre Nachricht
Unser Zeichen **wk-Unr**

Telefon Durchwahl **-7219**
Telefax Durchwahl **-7090**
Datum **2010-12-06**
E-Mail **Joachim.Unruh@voith.com**

To Whom It May Concern:


1. The rehabilitation works at the Enguri Hydro Power Plant were stopped on several occasions in the year 2005-2006 due to financial difficulty faced by the employer (leading to late payments) and security issues.
2. The rehabilitation works was stopped on several occasions in the year 2005 but on the following dates the work was fully stopped and all expatriate staff of Voith-Siemens, Siemens and its sub-contractors were demobilized from the construction site:

13 December 2005 – 12 January 2006.

3. The rehabilitation works at the site were re-started after both the over-due payments were made by the Employer to and the security issues were addressed.
4. The rehabilitation work was re-started on 13 January 2006 when engineers from Voith-Siemens arrived at site and sub-contractor's personnel were mobilized back to work.
5. Information provided in this letter is accurate and based on historical records.

Yours faithfully
VOITH Hydro GmbH & CO KG

J. Unruh
Commercial Project Manager


M. Thomczyk
Project Manager

Board of Management
Aage Dalsjöe, Chairman
Roland Köhnle
Herbert Vergé

Commercial Register
Reg.-Court Ulm
HRA 661050
USt-Id Nr. DE 183806124
Steuer-Nr. 84004/08689

General Partner
Voith Hydro Verwallungs GmbH
Reg.-Court Ulm, HRB 661288

Chairman Supervisory Board
of the General Partner
Dr. Roland Münch

Bank Account
Commerzbank AG, Heidenheim
Bank Code No. 63240016
Acc. No. 20 63 014
IBAN DE79 6324 0016 0206 3014 00
Swift Code COBADE33

Germany
Land of Ideas

Official Partner

Annex 6: EBRD Loan Drawdown Notice as of 31 December 2005

Annex 3-2: Drawdown of Funds from EBRD Loan (in USD)							
As of 31 December 2005							
				Date	Value		
A Payment from EBRD							
C Payment for Package 2, Electro-Mechanical Works, Voith-Siemens Hydro					Total EBRD Budget, USD		
	Invoice No.	Payment Value Date EBRD	Drawdown Application		14 810 000,00	EUR	Ex. Rate
1 Advance payment	652 709	19 май 2003	027		1 334 353,47		
2 Advance payment	652 709	19 май 2003	028		3 152 255,29	2 745 388,7 €	0,87
3 Payment for Shipment N051- FOB	653 081	13 апр 2004	034		546 993,95	452 248,0 €	0,83
4 Payment for Shipment N051- CIF	653 096	13 апр 2004	037		22 791,82	18 844,0 €	0,83
5 Payment for Shipment NN001, 054- CIF, N057- FOB	653-090/091/1:	02 июн 2004	039		611 452,88	499 023,0 €	0,816
6 Payment for Shipment N055- FOB	653-125	10 июн 2004	041		580 787,09	470 883,0 €	0,811
7 Payment for Shipment NN002, 052, 056, 065, 064, 066- CIF	653-226/227/2/	28 сен 2004	044		969 632,86	787 743,0 €	0,812
8 Payment for Shipment NN055, 059, 4341-3- CIF, LM2, Progress	653-261/262/2/	28 сен 2004	045		353 635,11	287 298,0 €	0,812
9 Payment for Shipment N055, 057, 070- CIF	653-126/128/2:	28 сен 2004	046		76 351,50	62 029,0 €	0,812
10 Payment for Shipment N4341-29, 072, 076, 077- CIF	653-276/277	16 ноя 2004	050		42 705,00		
11 Payment for Shipment N4341-39, (082)- CIF	653-297/298	16 ноя 2004	051		68 399,46	52 908,0 €	0,774
12 Payment for Three Design Liaison Meetings (I+II+60% of III)	653-333	17 дек 2004	054		132 422,67	98 978,0 €	0,747
13 Progress Payment for Unit 3 and Auxiliaries Rehabilitation	653-364	24 фев 2005	059		363 659,17	274 937,0 €	0,756
14 Completion of Auxiliaries	653-391/392/3/	25 май 2005	064		168 047,46	133 413,4 €	0,794
15 Payment for Shipment N009, FOB+CIF	653-482	26 авг 2005	071		146 503,51	119 947,2 €	0,819
16 Payment for completion of Deliveries on Unit3 and Auxiliaries	653-593	20 дек 2005	080		292 540,69	103 346,6 €	\$168 264,0 0,832
Disbursed					8 862 531,92		
Undisbursed					5 947 468,08		

Annex 7: Actual invoice from Voith Siemens for works on Unit 2

Enguri HPP

Invoices and Payments, VOITH-SIEMENS

UNIT #2			
Invoice No.	Payment	EUR	USD
Advance Payment	19.05.2003	1 191 826,0	411 234,8
Advance portion of Enguri	23.03.2004	294 664,6	78 032,4
653-123	02.06.2004	640,0	
653-091	02.06.2004	15 358,0	
653-125	10.06.2004	60 137,0	
653-126	28.09.2004	2 881,0	
653-482	26.08.2005	119 947,2	
653-752	11.08.2006	1 481 731,0	802 192,0
653-765	11.08.2006	10 800,0	
653-753	11.08.2006	92 850,0	
653-754	11.08.2006	5 860,0	
653-761	11.08.2006	4 145,6	1 105,0
654-040	13.08.2007	54 566,4	
654-046	07.09.2007	28 336,9	
654-065	14.09.2007	1 034,0	
654-057	14.09.2007	12 206,6	
654-058	14.09.2007	23 209,8	
654-059	14.09.2007	13 847,6	
654-060	14.09.2007	1 432,1	
654-061	14.09.2007	7 668,6	
654-062	14.09.2007	54 550,6	
653-927	29.05.2007	4 530,0	
653-936	29.05.2007	23 246,6	
653-855	29.05.2007	17 412,0	
653-935	29.05.2007	8 744,0	
653-933	29.05.2007	22 200,0	
653-755	29.05.2007	14 802,6	
653-852	29.05.2007	44 380,7	
653-878	29.05.2007	332 969,8	
653-972	29.05.2007	142 697,9	
653-974	29.05.2007	2 952,2	
653-920	29.05.2007	24 251,9	
653-918	29.05.2007	17 251,3	
654-108	28.01.2008	220 558,4	79 323,8
654-107	28.01.2008	125 710,7	
654-187	26.02.2008	51 588,8	
654-186	26.02.2008	26 788,7	1 029,4
654-182	26.02.2008		10 333,9
654-242	12.05.2008	207 831,4	
654-243	12.05.2008		72 146,6
654-315	31.07.2008	3 034,6	
654-314	31.07.2008	8 704,0	
654-313	31.07.2008		4 317,2
654-298	31.07.2008	15 228,7	
654-302	31.07.2008	3 570,6	
654-304	31.07.2008	2 080,6	
654-244	15.09.2008	16 704,6	
654-351	15.09.2008	29 246,4	
654-355	15.09.2008	5 249,6	
654-356	15.09.2008	5 572,6	
654-353	15.09.2008	18 713,6	
654-352	15.09.2008	12 582,6	
654-354	15.09.2008	9 186,8	
		€ 4 904 092,40	\$ 1 459 714,91

Annex 8: Letter to ProCredit Bank of 22 Dec 2005

შპს ენგურესი ENGURHESI LTD

№ 8-01/97 22 12 2005 წ. / წ.

მმართველი
RE.

“პროკრედიტბანკის” ქუთაისის ფილიალის
ზუგდიდის განყოფილების მმართველს
ბატონ კახა გაბესკირიას

ბატონო კახა,

გთხოვთ განიხილოთ შპს “ენგურესი” საკრედიტო ხაზის გახსნის შესახებ გთხოვთ განიხილოთ 200,000 აშშ დოლარის ოდენობით აღნიშნული თანხების მიზნობრიობა განიხილოთ ორგანიზაციის მიმდინარე საოპერაციო ხარჯებისა და გადასახდელი სარეაბილიტაციო სამუშაოების თანა-დაფინანსების მიზნებისათვის.

დადებითი გადაწყვეტილების შემთხვევაში გთხოვთ გვაცნობოთ თუ რა სახის დოკუმენტაციის წარმოდგენა მოითხოვება საკრედიტო განაცხადის განხილვის მიზნით.

პატივისცემით,

ფინანსური მენეჯერი  გ. შონია

www.engurhesi.ge

საბურთალოს რაიონის 0179, ჭავჭავაძის ქაზი, №40. ტელ: +995 (32) 29-43-62. ფაქსი: +995 (32) 29-37-83
საბურთალოს რაიონის 2100, რუსთაველის ქაზი, №40. ტელ: +995 (315) 5-22-34. ფაქსი: +995 (315) 5-51-00; +995 (315) 5-22-94
ელ.ფოსტა: info@engurhesi.ge

50 Chavchavadze Ave, Tbilisi 0179, Georgia Tel: +995 (32) 29-43-62 Fax: +995 (32) 29-37-83
90 Rustaveli st, Zugdidi 2100, Georgia Tel: +995 (315) 5-22-34; Fax: +995 (315) 5-51-00; +995 (315) 5-22-94
E-mail: info@engurhesi.ge

Translation

z-01/97

Date: 22 December 2005

To: Kakha Gabeskiria

Head, Zugdidi Branch of Procredit Bank

Dear Mr. Kakha,

Please review the possibility of opening a credit line for Engurhesi Ltd. in the amount of USD 200,000. These funds are planned to be used for ongoing operation costs of organization and for co-financing of urgent rehabilitation works.

In case of positive decision please let us know what documentation of the company will be required for approving the requested credit line.

Sincerely,

Financial Manager

(signed)

G. Shonia

Annex 9: 2006 Loan Agreement with ProCredit Bank; page 1

1. ხელშეკრულების საგანი *Loan amount in USD.*

1.1. წინამდებარე ხელშეკრულების პირობებისა და მოთხოვნების თანახმად "ბანკი" უხსნის "მსესხებელს" საკრედიტო ხაზს, რომლის მაქსიმალური ოდენობა შეადგენს **100000.00** (ასი ათასი) აშშ დოლარს.

1.2. მსესხებელი ვალდებულია დაუბაროს მის მიერ ათვისებული საკრედიტო რესურსები, გადისხადოს მათზე დარიცხული პროცენტები და შეასრულოს სხვა წინამდებარე ხელშეკრულებით გათვალისწინებული პირობები.

2. საკრედიტო ხაზის პირობები *duration 12 months*

2.1. "ბანკი" საკრედიტო ხაზს "მსესხებელს" უხსნის **12** თვე ვადით, ..

2.2. წინამდებარე ხელშეკრულების საფუძველზე ათვისებული საკრედიტო რესურსი (შემდგომში კრედიტი) დაფარული უნდა იქნას 2007 წლის 10 აგვისტომდე.

2.3. კრედიტის სარგებლობისთვის "მსესხებელი" უხდის "ბანკს" გათვალისწინებული თანხის **15%** წელიწადში

2.4. ბანკი უფლებამოსილია ცალმხრივად შეცვალოს წინამდებარე ხელშეკრულების 2.3 პუნქტში განსაზღვრული საპროცენტო განაკვეთი

მსესხებელი *in interest 15% annual*

/მპს/ენგურაძე/ მისი დირექტორის ლეგენტი *ბანკი*

Annex 10: Status of Covenant Compliance of the Novation Agreements (October-December 2004)

Novation Loan Agreement Covenant Document Section - 3.01 (d) (i)

Borrower to ensure the Project Company prepares the tariff applications to GNERC to enable the Project Company to comply with the financial covenants in Sec. 3.03 of the Project Agreement and with aim of reaching average bulk supply power price of no less than 1.5 US cents/kWh from January 2002

Covenant is in breach:

During the report quarters no action or development took place in regard to the above covenants.

Annex 11: Consolidated statement of profit and loss (2002-2004)

ENGURI HPP AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF PROFIT AND LOSS

FOR THE PERIOD ENDED 31 December 2004

All amounts stated in GEL'000

	31 дек 2004	31 дек 2003	31 дек 2002
<i>Sales of electricity</i>	62 401	58 760	69 369
<i>Other Income (Exchange rate gain/loss)</i>	561	228	
<i>Other Income</i>		907	1 617
<i>Cost of sales</i>	-17 321	-12 599	-13 297
<i>Depreciation expense</i>	6 029	6 029	6 512
<i>Inventory</i>	1 930	666	273
<i>Taxes including production costs</i>	623	542	917
<i>Wages and social Insurance expenses</i>	2 526	2 428	1 751
<i>Repairing expense</i>	5 319	2 559	3 783
<i>Other</i>	893	376	61
GROSS PROFIT	45 641	46 161	57 663
<i>General and administrative expense</i>	-48 767	-70 772	-53 660
<i>Inventory</i>	108	76	20
<i>Bank charges</i>	212	46	21
<i>Salaries and social Insurance expenses</i>	1 277	871	846
<i>Taxes</i>	381	1 044	540
<i>Payments for work and service provided</i>	3 357	1 115	1 909
<i>Insurance expense</i>	120	130	24
<i>Provision for doubtful debts</i>	41 449	65 883	40 938
<i>Net Change Unwinding Cost (Capitalized into Loan)</i>			6 690
<i>interest expenses</i>	971	1 576	990
<i>Other</i>	892	31	1 682
<i>Non deductible expense</i>	-59	-390	-2 327
<i>Tax penalties</i>		63	2 203
<i>Other non deductible expenses</i>	59	327	124
NET PROFIT BEFORE TAXATION	-3 185	-23 866	3 293
Income Tax			-1 114
NET PROFIT/LOSS	-3 185	-23 866	2 179