



RESPONSE TO REQUESTS FOR REVIEW

BUREAU VERITAS CERTIFICATION has performed the validation of the CDM Project “Talimarjan Clean Energy Generation Project”. The UNFCCC reference number of the project activity is 9654.

Subsequently, there have been 2 requests for review.

We give below our response to the request for review.

Request #1 submitted by the CDM team	In the absence of the relevant information on the other contracts related to the project activity, e.g. EPC contract, equipment contract or construction contract for the project activity, the DOE is requested to further substantiate the project start date, the date of the "Framework Agreement" between the SJSC “Uzbekenergo” and Synecta, being the earliest date at which either the implementation or construction or real action of a CDM project activity begins. Please refer to Glossary of CDM Terms version 07.0.
DOE comment	Upon request SJSC “Uzbekenergo” presented a copy of “EPC Contract Agreement (Contract No. : SJSC/UzbekEnergo/ICB-2010-001)” between Talimarjan TPP Unitary Enterprise of SJSC UZBEKENERGO and Hyundai Engineering & Construction and Daewoo International Consortium concerning Talimarjan Thermal Power Plant Expansion Project – Construction of two Combined Cycle Power Plant (Gross 929 MW). The contract is dated 07.03.2013. The contract scope is to engage the Contractor to design, manufacture, test, deliver, construct, install, complete and commission certain facilities viz. [Gas Turbine and Generator, Steam Turbine and Generator, Auxillary equipment, Civil and Building stated in the contact agreement] and provide training to the Employer’s technical personnel. The date this agreement is accepted as a project start date instead of previous date (25/06/2012 when a Framework Agreement" between the SJSC “Uzbekenergo” and the company “Synecta a.s” was signed). Corresponding changes to the PDD and Validation Report were performed regarding the project start day and project timeline.

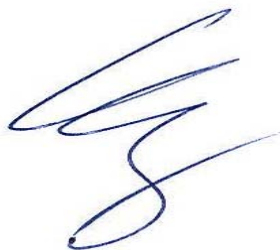
Request #2 submitted by the CDM team	<p>2) The DOE is requested to further substantiate the suitability of the input values in line with the VVS version 07.0 paragraph 127(b) and 127(c), in particular:</p> <p>(a) The sources of input values for each alternative. The PDD page 13 indicates the source for the project activity being the Letter #5145 and the document ADB ‘Financial analysis (Talimarjan power project), whereas the PDD page 14 shows the source for all alternatives including the project activity being the Letter #5144. Furthermore, page 24 of the Validation Report states that that input values are taken from FSR, which was finalized in March 2012;</p> <p>(b) How it has crosschecked the following input values for each</p>
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	<p>alternative: The Investment cost for each alternative, Maintenance and management costs for each alternative, Capital repair for each alternative, Cost of coal, Internal electricity consumption for each alternative, Technical losses and Commercial losses, as the Validation Report has not provided information how it has crosschecked the aforementioned input values, and it only checked the sources;</p> <p>(c) How it has validated the Efficiency of the plant for each alternative, and Plant load factor. In doing so, the DOE shall explain how the Technical feasibility study developed by Teploelectroproject was used to crosscheck the technical data, and the result of the crosschecking. And for plant load factor, the DOE is also required to explain how it has been validated in line with the EB48 Annex 11. Please refer to VVS version 07.0 paragraph 23(a)(ii), VVS version 07.0 paragraph 127(b) and 127(c).</p>
DOE comment	<p>(a) Validation Report was corrected as the FSR was used to cross check data indicated in the Letter #5144 and Letter #5145.</p> <p>(b) Crosschecking of the input values for each alternative was added into the Validation Report as follows Following a request for review, under review and subsequently to further substantiate the suitability of the input values in line with the VVS version 07.0 paragraph 127(b) and 127(c) additional information was searched in the internet and requested from the PPs. PPs presented new evidencing documents that were not available at the moment of decision taking but related to the time after the project start date. These are “EPC Contract Agreement (Contract No.: SJSC/UzbekEnergo/ICB-2010-001)” between Talimarjan TPP Unitary Enterprise of SJSC UzbekEnergo and Hyundai Engineering & Construction and Daewoo International Consortium concerning Talimarjan Thermal Power Plant Expansion Project – Construction of two Combined Cycle Power Plant (Gross 929 MW) of 07.03.2013, and updated FSR developed by Teploelectroproject approved at November 07, 2013. (Feasibility study on “Talimarjan PP enhancement by construction of two combined power plants, 450MW each” volume 1, approved by Uzbekenergo Board Chairman and Uzneftegaschimproect 04.10.2013 and by the President of Uzbekistan Republic 07.11.2013.)</p> <p>The revised PDD has been submitted by the PP and correspondingly the validation report has been updated to incorporate the information submitted in response to the request for review and under review, regarding the suitability of the input values of the baseline alternatives.</p> <p>Further information towards the validation of suitability of input values to the alternatives taking into account the VVS version 07.0 paragraph 127(b) and 127(c) is included, as follows:</p>

	<p>The project scenario alternatives were re-evaluated by the PPs. As far as the amount of coal needed for alternatives based on the coal-fired power plant is within the range of the coal production in Uzbekistan (please see https://ru.wikipedia.org/wiki/%D0%AD%D0%BA%D0%BE%D0%BD%D0%BE%D0%BC%D0%B8%D0%BA%D0%B0_%D0%A3%D0%B7%D0%B1%D0%B5%D0%BA%D0%B8%D1%81%D1%82%D0%B0%D0%BD%D0%B0#cite_note-autogenerated2-17).</p> <p>Moreover the government is planning to redirect one of the TPP(Novo-Angren TPP) which uses coal part time to fire coal full time that will require to almost double coal extraction in the country. This was cross checked in the internet http://sreda.uz/index.php?newsid=537, http://www.gazeta.uz/2014/04/16/coal/ and found justified.</p> <p>The input values of the baseline alternatives are indicated in the letters from Uzbekenergo #5144 and #5145 (Category 2 documents #65-66) were checked from other sources as follows.</p> <p><i>Total rated capacity</i> has been checked from feasibility study report and the EPC contract. EPC Contract gives 929 MW (in the PDD figure 820 MW is more conservative).</p> <p><i>Plant Load Factor</i> was checked from ADB financial analysis where it was taken as 85% (Category 2 documents #40, also at http://www.adb.org/Documents/RRPs/?id=43151-02-3)</p> <p>Following a request for review, under review and subsequently the guidance provided in EB-48 meeting report, Annex 11, the ex-ante definition of the plant load factors validation was checked.</p> <p>The Teploelectroproject is a third party contracted by the project participants, contract agreement was presented by PPs, see Category 2 documents #70.. This is in accordance with option (b) of the ex-ante definition of the plant load factors. A plant load factor that derives from the FSR performed by the engineering company Teploelectroproject (Category 2 documents #68) makes 8000 hours/8760 hours = 91.3% (85% taken in the PDD is more conservative)</p> <p><i>Internal electricity consumption</i> was checked from Teploelectroproject calculation FSR (Category 2 documents #68) and also from ADB financial analysis where it was taken as 85% (Category 2 documents #40, also at http://www.adb.org/Documents/RRPs/?id=43151-02-3), same value is indicated 3.45%.</p> <p><i>Efficiency</i> of the two CCGT units for the project is 57.4%. This was checked from the FSR for Talimarjan project makes 57,4% (Siemens option). Same is indicated in the pg. 9 of ADB financial analysis, at</p>
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	<p>http://www.adb.org/Documents/RRPs/?id=43151-02-3. Efficiency of for steam-cycle unit is estimated as 34% at the FSR by Teploelectroproject (Category 2 documents #68) and this is confirmed in the ADB financial analysis.</p> <p><i>Investment Cost</i> was checked from the EPC contract investment costs per MW are $861.8/929 = 0.928$ mln.\$/MW. In the PDD for calculations 0.995 mln. \$/MW were applied which is more conservative. (Category 2 documents #69). For OCGT plant the investment was estimated as 0.62 mln.\$/MW. The following documents were reviewed by DOE for cross-checking this value:</p> <ol style="list-style-type: none"> 1. Projected costs of Generation Electricity, International Energy Agency, 2010 Edition, page 61 Gas Turbine (Germany) – \$ 0.52 mln./MW 2. PDD for “Samra 300 MW combined cycle project” (registration date - 20 Sep 11) Gas turbine (Jordan) – \$ 0.479 mln./MW http://cdm.unfccc.int/Projects/DB/DNV-CUK1309497987.25/view 3. PDD for “Afam Combined Cycle Gas Turbine Power Project” (registration date - 29 Oct 12) OCGT power plant (Nigeria) -\$ 0.456 mln./MW http://cdm.unfccc.int/Projects/DB/DNV-CUK1325573884.39/view <p>In the calculation value of \$ 0.62 mln./MW was applied which is higher cost and therefore conservative.</p> <p><i>Maintenance and management costs</i> for each alternative, was checked from final FSR where they are estimated as \$ 0,95 mln. (taken the exchange rate 2178.56 valid at 07 November 2013). Assuming the higher capacity of the final project data can be considered as consistent. (Category 2 documents #68)</p> <p><i>Natural gas cost</i> is available from the Internet data, Uzbekneftegas site http://ns.uzneftegaz.uz/ru/business/tarifs/ (for wholesale consumers). It also was checked from the Uzbekistan Ministry Finance decree №19-03-22-05-PY3-9-2012 of 15 March 2012, 0.053 US\$/ m3</p> <p><i>Water costs</i> - 1. In Teploelectroproject calculation water costs are assumed as 0,0153 \$ per m3. Which are equivalent to \$ 6.5 mln. \$ assuming 57 600 m3/hour water consumption (6.9 was applied in the PDD for calculation). For OCGT plant the estimation of these costs in absolute numbers was 1.05 mln. \$ which were conservatively applied to the calculations.</p> <p><i>Capital repair</i> for CCGT alternative was checked from the final FSR,</p>
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	<p>capital repairs are estimated as \$ 34.3 mln. This is bigger figure comparatively to the initial FSR where it was indicated</p> <p><i>Technical losses</i> were checked from the ADB financial analysis where it was taken as 85% (Category 2 documents #40, also at http://www.adb.org/Documents/RRPs/?id=43151-02-3)</p> <p><i>Commercial losses</i> were checked from the ADB financial analysis where it was taken as 85% (Category 2 documents #40, also at http://www.adb.org/Documents/RRPs/?id=43151-02-3)</p> <p>(c) Following a request for review, under review and subsequently the guidance provided in EB-48 meeting report, Annex 11, the validation report has been revised.</p> <p>The Teploelectroproject is a third party contracted by the project participants, contract agreement was presented by PPs. This is in accordance with option (b) of the ex-ante definition of the plant load factors. It was verified that a plant load factor is more conservative than one which derives from the FSR performed by the engineering company Teploelectroproject.</p>
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