Saba Power Company (Private) Limited

BEFORE THE NATIONAL ELECTRIC

POWER REGULATORY AUTHORITY

MOTION FOR LEAVE FOR REVIEW

AGAINST THE TARIFF DETERMINATION

DATED May 12th, 2015

BY: SABA POWER COMPANY (PRIVATE) LIMITED

Dated: 20th May 2015

Saba Power Company (Private) Limited

Name of the Petitioner

Saba Power Company (Private) Limited (the "Company" or "Saba" or the "Petitioner")
10 Ali Block, New Garden Town, Lahore
Tel: (042) 3591-1164
Fax: (042) 3591-1168
Email:

1. Background

1.1 Saba owns and operates a 125.5 MW (net) oil-fired IPP (the "Plant" or the "Project") put up under the 1994 Power Policy (the "1994 Policy"). This Plant is located in Farooqabad, near Sheikhupura, and achieved Commercial Operations Date on December 31, 1999.

1.2 Pursuant to the approval of the Economic Coordination Committee ("ECC") of the Cabinet allowing the conversion of boiler based four (4) residual fuel oil (RFO) power plants of Hub Power Company Limited, Lalpir Power Limited, Pakgen Power Limited and Saba over to coal firing (the "Conversion"), the Company applied to National Electric Power Regulatory Authority ("NEPRA" or the "Authority") for a new coal based tariff to undertake the Conversion.

1.3 Accordingly, the Company filed a tariff petition dated 24th July 2014 (the "Petition") under and pursuant to the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (the "Act") and the rules framed thereunder. On the Petition, the Authority delivered its determination dated 12th May, 2015, bearing No. NEPRA/TRF-279/Saba-2014/7026-7028 (the "Impugned Determination"), which was received by Saba on 14th May, 2015.

1.4 Under and pursuant to, among others, Rule 16(6) of the Tariff Standards and Procedure Rules, 1998 (the "Rules") and the NEPRA Review Procedure Regulations, 2009 (the "Regulations"), Saba files this motion for the review of the Impugned Determination (the "Review Motion"). Saba reserves its right to adopt,

inter alia, the legal position it has taken in the Petition if appropriate relief is not available.

1.5 The Petitioner is of the view that the Authority has not considered certain important aspects of the case and information given in the paras below, which, among others, are sufficient reasons for the Review Motion.

1.6 Accordingly, this Review Motion focuses on primarily three aspects (a) unrealistic and unsubstantiated reduction in allowable capital cost, (b) the change in proposed efficiency and the denial of part load factor/degradation which has been all allowed to all projects since 2000, and (c) incorrect calculation of current working capital calculation for purposes of reduction of the same from the existing capacity payment. While the Petitioner disagrees with the reduction in the construction period, again without any substantiation, the Petitioner understands the position of the Authority that the same first needs to be extended by the Government of Pakistan, and therefore, the Petitioner reserves the right that if and when the same is done by the GOP, the Petitioner will seek the same from the Authority and expects that at such time the Authority will not deny it for any other reason.

2. Capital Cost

2.1 The Authority has taken the position that the price submitted by the Petitioner is not binding since the EPC contract is not signed. This may be so for another project, but the Authority has erroneously assumed so in the case of Saba also since this is not the true characterization of the position in the case of the Petitioner.

2.2 As explained in the Petition, the Petitioner went through a detailed process and fully negotiated the EPC contract with parties including the binding prices by them. The full agreed contract with both parties was also submitted as a part of the Petition, together with the letters of final binding prices by both. The Petitioner could have simply put the agreed price in the fully negotiated contract and executed it. It chose to not do so for the following reasons:

(i) Since prices are not kept fixed indefinitely, the Petitioner was not agreeable to taking financial obligations vis-à-vis the EPC contractor when it was not certain (a) whether the Authority's order was even going to be acceptable to it for conversion, and (b) how long it would take the Authority to decide the matter and whether the price would remain binding in that period. As it has turned out, the Authority has reduced the capital budget by more than 25% and has taken 10 months to issue the Impugned Determination (after full submission of documents) (c) the fixed price available for civil works (as detailed in the Dongfang commitment) was higher than what was achievable in the opinion of the Petitioner so the Petitioner took the risk of asking for a lower price.

(ii) While the Petitioner had the option of once again simply inserting the price in the negotiated contract and submitting the "binding" agreement as a part of this Review Motion, the Petitioner remains uncertain whether the Authority will issue a "financeable" tariff as a part of this Review Motion, and therefore, still does not wish to take on financial obligations until it is certain that it is proceeding with the Conversion. Meanwhile, the Company has indeed received a binding offer for the civil works, which was originally estimated and submitted (being lower than the fixed Dongfang offer anyway). With this background, the Petitioner submits that the Authority has not given proper consideration to its application and has simply applied the same template in issuing its Determination, and even large portions of the same text, that it used in the case of Pakgen and Lalpir coal conversion determinations.

2.3 The Petitioner is likely to be the first coal fired plant to come into operations, given its size, if a financeable tariff is issued by the Authority. In some ways, the conversion project is easier than a new coal project on account of existing facilities, but as far as the boiler and integration is concerned, it is much harder. This is so because the existing facilities other than the boiler do not have to be changed, but the integration with the existing facilities for water, steam and electrical interfaces makes it much more complicated. Neither the Government of Pakistan ("GOP") nor NEPRA have issued any guidelines for Conversion of existing RFO based IPPs to coal. As such, the Petitioner has to follow the hybrid approach

while filling the Petition. Therefore, the CAPEX numbers have been taken from the negotiated lowest bid of Dongfang Electric Corporation Limited of China, whereas some others parameters were taken from the Upfront Tariff announced by the Authority and notified by the GOP on 4 September 2013 which was subsequently reconsidered by the Authority on 26 June 2014. We wish to express gratitude to the Authority for accepting this approach but have certain reservations on the numbers used by the Authority for capital cost.

In the Impugned Determination, the learned Authority has treated the capital cost portion of this as a standard green-field project. Resultantly, the learned Authority has arrived at incorrect conclusions by adopting a relatively simplistic approach. Certain specific distinctions of a coal conversion project vis-à-vis green filed coal power project were ignored or not adequately and comprehensively addressed. It is to be noted that it is not mandatory for the Petitioner to convert this plant and if a financeable tariff is not awarded by the Authority, then the Petitioner will not be able to finance the Conversion and it shall continue to operate as RFO fired unit. The Petitioner feels that this will be a lost opportunity for the Power Purchaser to lower its cost of purchased power. It is respectfully submitted that the Petitioner's decision to undertake the coal conversion project is not solely motivated on profit considerations but also in a spirit of benefitting the consumers as well. But if the conversion cannot be financed, then the Petitioner cannot move forward with this conversion.

2.4 The Petitioner has submitted a CAPEX price of US$ 99.04 million in the Petition based on Dong Fang offer of US$ 70 million (without civil work portion) and including life extension of certain equipment. The civil works were negotiated with the local firm and we arrived at an indicative price of US$ 22 million; the cost of the life extension equipment is US$ 4 million and other costs amounting to USD 3.04 million. The cost break was provided in the Petition is as under:

Project Activity		**Cost** (Figures in USD Million)
I.	Boiler and Auxiliaries	44.00
II.	Coal/Ash Handling Equipment	13.00
III.	DCS & Electronics	2.00
IV.	Erection and Commissioning	11.00
V.	Civil works	22.00
VI.	Life Extension Equipment	4.00
VII.	Other Costs	3.04
	Grand Total	99.04

2.5 In the Impugned Determination the learned Authority has reduced the CAPEX from USD 99.04 million to USD 72.711 million, both numbers exclusive of customs duties and financial charges. This reduction of USD 26.3 million has rendered the Conversion unviable. While assessing the "reasonableness" of capital cost, the Authority considered standard modules, which is not correct in the case of Conversion. The learned Authority has adopted a relatively simplistic approach instead of in depth study of the offer of DongFang submitted with the Petition and allocated 27.20% for boiler including auxiliaries, 5.22% for coal handling equipment, 2.83% for ash handling equipment, 5.5% for electrical work and 5% for civil work resulting in the total cost of 46% of the capital cost of a new project. The procedure adopted by the learned Authority in the Impugned Determination is not prudent and is flawed on the following reasons and, therefore, needs review:

CIVIL WORK

(i) In the Impugned Determination the learned Authority has allocated 5% of CAPEX cost to civil works, which is not practical. The design of civil work foundation is dependent on the soil strata, soil bearing capacity, type of foundations, etc. which varies for each project site. Geologically speaking, the Saba site, and indeed a large part of north central Punjab, is an alluvial

plain having clay-silt as soil with very low load bearing capacity. This requires deep friction piles for any heavy loads. Indeed the current power plant sits on 564 piles. Even the spread footings would have a larger volume of concrete as compared to hard soil. The cost allocated by the learned Authority to the civil works in the Impugned Determination is approximately USD 7.9 million against the requirement of USD 22 million. The cost of civil work submitted by the Petitioner is based on the required pile foundation, raft foundations and spread footing designed on the basis of soil strata and soil bearing capacity at site. At the time of the initial submission, we had gotten a firm price from Dongfang for civil work, which was considered high, and as a result we sought, and obtained, a lower price for civil works from a local contractor, Albario for about PKR 2.2 billion. Since then we have firmed up the Bill of Quantities and recently gotten a firm price from Albario of Rs. 1.95 billion. The price offered by the local contractor and the detailed B.O.Q which is attached herewith as Annexure 'A'.

(ii) For reference, it is submitted for kind information of learned Authority that Central Power Generation Company Limited (Ex-WAPDA GENCO) has undertaken 747 MW Guddu project in the public sector which has civil work contract of USD 68.7 million whereas the EPC contract was for USD 660 million, resulting in 10.4% of the cost to be for the civil works. Therefore, the Petitioner requests a reconsideration of the same to allow Rs. 1.95 billion.

ERECTION AND COMMISSIONING COST

(i) The learned Authority while determining the Impugned Determination has not considered any cost for erection and commissioning of the plant and equipment. The Petitioner had requested in the Petition for USD 11 million under erection and commissioning cost on the basis of Dongfang offer. It is submitted that the erection and commissioning cost is always a

separate line item. The same practice is followed in any PC-1 approved by ECNEC for public sector generation projects. The tariff petition filed by Jamshoro Power Generation Company for tariff determination for 1320 MW coal fired power plant at Jamshoro during September, 2014 clearly provides erection charges as a separate cost item, which is approximately 6% of CAPEX, for a green field project. It is already in the knowledge of learned Authority that the conversion of existing RFO based power plant on coal has added complexities due to interfacing of the existing ends of the plant with new plant and equipment. The interfacing point are generally in mechanical, electrical system, I&C system, chemical system, water supply, piping and fire protection system which will require six months extra time period as compared to similar work is case of a green field project . The erection and commissioning cost claimed by the petition is USD 11 million (7% of CAPEX Cost) which is comparable with cost of power project in the public sector at Jamshoro. It is, therefore, requested that the erection and commissioning cost of USD 11 million may be allowed.

OTHER COST

(i) The Petitioner has requested for the other cost as follows in the Petition which has been disallowed by the learned Authority:

	Description	**USD Million**
a)	Fuel during Testing before Synchronization	0.65
b)	Independent Engineer for Testing	0.25
c)	Construction Management	0.65
d)	Insurance-All Risk on additional Equipment	1.49
		3.04

(ii) While the Petitioner may not agree, but can understand the rationale of the not including items (a-c) in the total since they are assumed to be

already included in a typical new project cost, but the Authority has also taken the position that no additional Insurance during construction is required. It appears that the same has been done on a mistaken assumption that one piece of equipment is being replaced by another, and so no additional insurance is needed. This is completely erroneous. First, it is agreed that the existing plant will continue to operate for the entire period during construction except for last six months. Therefore, the complete existing plant insurance has to remain in place, but at the same time most of the capital on the new boiler would have been spent, and this additional equipment will require fresh insurance, thereby resulting in an increased requirement of insurance. Second, other than the boiler itself, all other equipment in the way of coal handling, unloading, preparation, ash handling, electrical and civil works are additional equipment. Even when the new boiler is integrated, the old boiler is not removed and remains in place, thereby once again requiring inclusion in the insurance amount. So the approach taken by the Authority is misguided and incorrect.

2.6 In addition, since the existing plant would have exhausted 18 years of its 30 year design life when the Conversion project will start, the bare minimum life extension cost of $4 million was requested.

2.7 However, the Authority has neither included any of these costs, nor explained why they are not being allowed. Instead, it has just made one simple statements that it is allowing 46% without providing any real basis of this subjective judgment. This goes against the norms of the regulatory orders and needs reconsideration. If the above mentioned costs are not actually incurred in the field, then the Authority may ignore them, but since these are real costs, incurred both in public and private sector projects, completely ignoring the same is not justified.

2.8 While Saba is prepared to accept the percentages of the boiler cost, the civil costs are impractically low, the erection and commissioning is altogether missing, and the other costs are also completely ignored. We request a reconsideration of the same based on the above arguments.

3.0 Efficiency

3.1 The Petitioner has submitted detailed calculations in its Petition drawn from the Heat Balance Diagram (HBD) to arrive at the efficiency after Conversion. This calculation has taken actual efficiency achieved by equipment that is not being replaced (i.e. turbine, auxiliaries, transformer, cooling tower etc.), together with new boiler efficiency and new additional auxiliary load committed by the EPC contractors. This calculation is being repeated below for ease of reference, and shows that the net efficiency achievable at full load is 35.5%:

The efficiency of Steam Turbine: original design 1997: 44.95%

Current degraded efficiency of Steam Turbine after 15 years: 44.1%

Efficiency of Generator: Original design 1997: 99%

Current Efficiency of Generator: 98.5%

The efficiency of the proposed new boiler is 92%.

Transformer losses: 0.5%

Blow-down Losses: 0.35%

Auxiliary consumption: 9%

3.2 The total gross plant efficiency is obtained by multiplying the efficiency of boiler, turbine, and generator and the subtracting the transformer and blow-down losses and adjustment for 9% auxiliary consumption:

((0.441x0.985x0.92)x0.91-(0.005+0.0035)) = 35.52%

3.3 It appears that rather than taking this process, which reflects the reality, the Authority has taken the position that the original efficiency was 38.6% and simply applied adjustment for existing auxiliary load versus proposed auxiliary load of 9% to it and arrived at 36.33% net efficiency for this plant. This approach has several flaws as below:

3.4 The original efficiency is based on oil firing, while the post Conversion is on coal. It is an established fact that an oil fired plant will always have a better efficiency than coal fired plant for various reasons even beyond auxiliary load, with the higher operating temperature being one. Therefore, using the same 38.6% as the starting point is technically indefensible.

3.5 The 38.6% efficiency was committed as "new and clean" efficiency using a bulk tariff derived from "avoided cost" methodology and not an "upfront tariff" derived from cost plus methodology. Therefore, using the actual efficiency of the current plant, at actuals based on today's numbers, is reflective of the "cost plus" approach. That is what the Petitioner did in providing the actual HBD and replacing the boiler in it to arrive at the new gross heat rate, which is then converted into net by using the 9% auxiliary load used in the upfront tariff, despite the fact that for this size of a plant the auxiliary load is more in the range of 10%. However, the approach that the Authority has taken is akin to mixing apples and oranges and therefore needs reconsideration.

3.6 Despite the above factors which reflect the technical and factual positions supporting the Petitioner's position, the Petitioner is willing to accept the 36.33% net efficiency, and indeed accept even a 36.5% efficiency, if it is allowed degradation and partial load factor as has been done in all other case under 2002 Policy and is also being done as per the Upfront Tariff. We believe that this is not only fair and non-discriminatory, it is also reflective of what will really be necessary to match actual heat rate over time and under partial loading conditions. So, while we still believe that a new and clean 36.5% is not achievable without replacing other equipment which is presently not in the budget, if we are

allowed degradation, we will only have a fuel loss in the first one or two years and then we will be matching the actual situation.

3.7 To reiterate, we request reconsideration to either (a) revise the required efficiency down to 35.52%, or (b) go to 36.5% but allow degradation and partial loading factor, based on vendor data, as part of the PPA as is standard with all other new projects.

4.0 WORKING CAPITAL

4.1 In calculating the portion of the old capacity payment to be continued, one adjustment done by the Authority was to deduct the current working capital on RFO from the capacity payment, and add the new working capital on coal in the new tariff. As a principle, we fully agree with this and accept this position. However, it appears that the Authority has used the calculation of existing working capital of some other project perhaps without realizing that this number is incorrect and cannot be applied to Saba.

4.2 The Petitioner had provided this number via its letter SPCL/CUH/NEPRA/2014/04 dated September 30, 2014 wherein it had calculated a rate of PKR 0.19/kwh. The Authority seem to have overlooked this and deducted a number of PKR 0.43/kwh, which is the same number used in the determinations of Pakgen and Lalpir project, and also not provided any working of this number. In doing so, the Authority has used an RFO rate of Rs 70,000 which needs a justification, but even assuming this for a moment, the calculation has the following errors:

(a) The payment cycle of Saba is 30 days of storage and 25 days for payment, resulting in a total requirement of 55 days for working capital and not 60 days as calculated by the Authority. Clause 9.7(b) which provides for this 25 days payment cycle in the Saba PPA is attached as Annexure 'B'.

(b) The maximum WAPDA can run the plant for is 86% of the total hours in the year, after allowing for the scheduled and forced outage in a non-

major-maintenance year, and 77.8% in a major-maintenance year. Since the major maintenance is every 5 years, the average maximum availability requirement under the PPA is 84.4%. Therefore, any calculation of working capital cannot exceed such load factor. The Authority seems to have done the calculation at 100%.

(c) The interest rate used by the Authority in the determination uses KIBOR of 11.91%. While this may have been the number when the filings were done, and the use of this older rate for determination of new capacity payment is not problematic, the Authority must use current KIBOR number for its determination for purposes of adjustment to old capacity on account of working capital. This is necessary since the reference rate for old capacity is being adjusted one time on account of this calculation and does not float with actual KIBOR in the future. Unlike this, the use of 11.91% KIBOR for determination of new capacity charges is trued up at COD for capitalization purposes and then post COD at every quarter. Therefore using older rates for new tariff is not a problem since it only a reference rate, but using an older rate for reset and fixation of the old capacity is erroneous since it does not have any true up for KIBOR moving forward and is to be fixed once and for all.

(d) The current capacity has two streams, one for non-escalable, and one for escalable. The non-escalable stream represents debt, and in this case the working capital since the main term debt portion has been paid off. So in arriving at the net allowable old capacity payment to continue, the Authority must first reduce the existing non-escalable component to zero and if any further reduction is required on account of working capital to be deducted, only then can this excess be reduced from the escalable portion. The Authority seems to have inadvertently reduced the entire amount only from the escalable component. This needs to be corrected.

(e) The current tariff does not provide a breakdown of or subcomponents of capacity other than just "escalable" and "non-escalable" component. This has also been independently verified by the Authority as stated in in paragraph 12.11.3 of the Impugned Determination. However, in order to arrive at the notional amount representing working capital if full 30 days stock was maintained, the following calculation shows that even if we use PKR 70,000/ton as the fuel price:

(1) Capacity 124,033 kw
(2) Max Availability Required (avg 5 year cycle): 84.4%
(3) Working capital cycle required: 55 days
(4) Total Hours for working cap cycle: 55x24x84.4%=1,114 hours
(5) Units for this working capital: 1114x124033=138,172,762 kwh
(6) FCC at Ref: PKR 0.645/kwh at fuel price of PKR 2843.5/ton
(7) FCC at PKR 70,000/ton: (0.645x 70,000)/2843.50= 15.87 Rs/kwh
(8) Working capital = 15.878x 138,172,762= PKR 2,193,951,188
(9) Interest rate = KIBOR 7.9%+3.5% spread = 11.4% p.a.
(10) Daily interest on WC = 2,193,951,188*11.4%/365=PKR 685,234
(11) Daily generation = 124,033x24x0.844=2,512,412 kwh
(12) Unit rate = 685,234/2,512,412= PKR 0.272/kwh of WC

4.3 As is evident from the above, the calculation used by the Authority arriving at PKR 0.43/kwh, which has not been described in the order anyway, is incorrect, and the correct number is PKR 0.272/kwh even at the price of PKR 70,000/ton for RFO.

4.4 The additional question that requires justification is use of the price of PKR 70,000/ton for RFO price. While the number may have been PKR 70,000, or any other number, on the day of submission by the Petitioner, the Authority must use the average rate for the last 15 years, which is significantly lower, or at most the current rate of PKR 46,000/ton inclusive of 17% GST.

4.5 If we repeat the same calculation at an oil price of PKR 46,000/ton, the working capital component comes out to Rs 0.17/kwh.

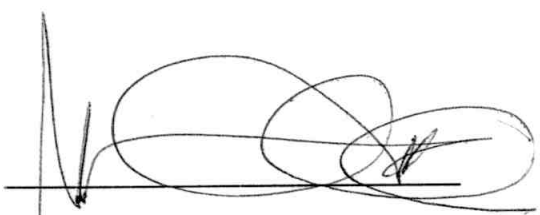
4.6 The Petitioner requests the Authority to (a) correct the calculation and deduct the correct working capital component, as calculated above, from the old capacity to be continued, and (b) in the first instance this deduction be applied to the non-escalable component and only if the applicable deduction is in excess of the non-escalable component, does the excess get subtracted from the escalable component of the old capacity to be continued.

5.0 ASSUMPTIONS

The Authority is requested to provide for the assumptions which were stated in the Petition, along with the other general assumptions as per the standard IA and the PPA approved by ECC to avoid any confusion in the future.

6.0 PRAYER

Accordingly, the Authority is requested to please accept the Review Motion.



Saba Power Company (Private) Limited

Through

Chief Executive Officer

Dated: 25th May 2015

ANNEXURE 'A'

Albario Engineering (Pvt) Ltd.

91-C, Model Town,
Lahore - Pakistan

Tel: +92 42 35852301-3
Fax: +92 42 35839519
Email: aepl91c@aepl.com.pk

May 18, 2015

Mr. Nadeem Babar
Chief Executive

Saba Power Company (Pvt) Limited
10 Ali Block, New Garden Town, Lahore

Subject: **Saba Power Project – Coal Conversation**

Dear Sir,

Please refer to our commercial offer (July 20, 2014) of civil works of Saba Power Project –Coal Conversation Project.

We offered Rs. 2.2 billion as a budgetary price for civil works subject to the review of civil drawings and civil BOQ.

Many thanks for issuing us the detailed BOQ for civil works. We have examined the BOQ thoroughly and as per the scope of work we are pleased to offer a final price of Rs. 1.95 billion for civil works.

We shall appreciate your comments on our proposal and would like to discuss further in details about the execution plan and methodology.

Our offer is valid for a period of 90 days from the date of issuance of this letter subject to signing of the contract.

Please do not hesitate to contact us in case of any query or any clarification required on our submitted proposal.

Assuring you our best support and services at all time.

Sincerely,

ALBARIO ENGINEERING (PVT) LTD.

Sheikh Ibrahim Atif
Director

Saba 1x134 MW Power plant coal conversion project

ESTIMATE OF PROJECT

SUMMARY

No	STRUCTURE NAME	AMOUNT OF STRUCTURE	REMARKS
1	**BOILER BAY**		
a	Boiler bay	1,094,272,280	
2	**CRUSHER HOUSE**		
a	Extensive Crusher House	94,607,900	
b	Under ground Bunker	15,534,400	
c	No 1 Conveyor gallery	125,614,400	
d	No 2 Conveyor gallery	183,010,200	
e	Coal Handling Systems	44,906,000	
3	**ASH HANDLING**		
a	Fly Ash Silo	44,181,900	
b	Air Compressor House	3,672,000	
c	Buildings	345,613,000	
d	Equipment Foundation	7,170,000	
e	Chimney	268,244,000	
4	**HYDRAULIC STRUCTURE**		
a	Hydraulic structure	22,822,600	
	Total Estimated Amount of Project =	**2,249,648,680**	RS
	Special Discount	299,648,680	
	Final Firm Price	1,950,000,000	

Saba 1x134 MW Power plant coal conversion project

NAME : BOILER BAY

STRUCTURAL CHARACTER:STEEL FRAME WITH CONCRETE SLAB

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
1	**BUNKER BAY**					
	VOLUME OF EXCAVATION	m^3	15000	700	10,500,000	
	DRAINAGE BY WELL POINT(INSTALL AND REMOVE)	Strip	4	150,000	600,000	
	DRAINAGE BY WELL POINT(OPERATE)	SETxDAY	4x60	200,000	400,000	
	ISOLATED FOOTING OF REINFORCED CONCRETE OF BUNKER BAY	m^3	1470	20,000	29,400,000	
	ISOLATED FOOTING OF REINFORCED CONCRETE OF BOILER	m^3	2940	20,000	58,800,000	
	CONCRETE BEDDING CUSHION	m^3	180	14,000	2,520,000	
	SHEAR WALL	m^3	88	28,000	2,464,000	
	CAST INPLACE REINFORCED CONCRETE PILE (Not Included cost of steel)	No	360	620,000	223,200,000	THE DIAMETER OF PILE IS 600mm, THE LENGTH OF PILE IS 30m
1.1						
	COMPOSITE SLAB WITH CORRUGATED METAL SHEET AS BED FORMWOR AT EL.5.0					
	COMPOSITE SLAB WITH CORRUGATED METAL SHEET AS BED FORMWOR AT EL.9.0	m2	126	5,000	630,000	
	COMPOSITE SLAB WITH CORRUGATED METAL SHEET AS BED FORMWOR AT EL.20.00	m2	252	5,300	1,335,600	
	COMPOSITE SLAB WITH CORRUGATED METAL SHEET AS BED FORMWOR AT EL.37.00	m2	357	5,800	2,070,600	
	COMPOSITE SLAB WITH CORRUGATED METAL SHEET AS BED FORMWOR AT ROOF	m2	558	7,000	3,906,000	
	IRONITE GROUND IN BUNER BAY	m2	558	7,200	4,017,600	
	FINE AGGREGATE CONCRETE FLOOR	m2	558	8,000	4,464,000	
	WATERPROOF AND INSULATING LAYER	m2	558	8,000	4,464,000	
	OTHER BEAMS USED FOR SLAB	T	110	350,000	38,500,000	
1.2						
	STEEL BUNKER	T	202	350,000	70,700,000	
	COAL BUNKER BEAM	T	550	350,000	192,500,000	
	STAINLESS STEEL LINING OF 3mm	T	10	350,000	3,500,000	
2	**BOILER FRONT FLOORS**					

NAME : BOILER BAY

STRUCTURAL CHARACTER:STEEL FRAME WITH CONCRETE SLAB

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
	COMPOSITE SLAB WITH CORRUGATED METAL SHEET AS BED FORMWOR AT EL.20.00	m2	366	5,800	2,122,800	
	OTHER BEAMS USED FOR SLAB	T	65	350,000	22,750,000	
	ENCLOSE OF BOILER FRONT FLOORS WITH SINGEL CORRUGATED METAL	m2	366	5,000	1,830,000	
	IRONITE GROUND IN BOILER FRONT FLOORS	m2	366	4,000	1,464,000	
3	**OTHERS**					
	STEEL STAIRS IN BUNKER BAY	T	10	350,000	3,500,000	
	STAINLESS STEEL HANDRAIL	T	4.2	1,100,000	4,620,000	
	STEEL WALK PATH	T	1.6	350,000	560,000	
4	**BOILER HOUSE**					
	IRONITE GROUND	m2	1138	4,000	4,552,000	
	STEEL FRAME OF BUNKER BAY	T	780	300,000	234,000,000	
	ARCHITECTURAL DECORATION OF BUNKER BAY					
	CORRUGATED METAL SHEET WALL	m2	1054	8,000	8,432,000	
	ALUMINIUM ALLOY DOOR AND WINDOW	m2	110	18,000	1,980,000	
7	**LIFT SHAFT OF BOILER**					
	STEEL	T	45	2,400,000	108,000,000	
	REINFORCED CONCRETE FOUNDATION	m3	20	20,000	400,000	
	SINGAL CORRUGATED METAL SHEET OF OUTSIDE WALL WITH	m2	1100	6,000	6,600,000	
	SINGAL CORRUGATED METAL SHEET ON THE ROOF	m2	30	8,000	240,000	
	EQUIPMENT FOUNDATION	m3	400	20,000	8,000,000	
	CONCRETE BEDDING CUSHION	m3	28	14,000	392,000	
	BOLTS RACKS	T	10	350,000	3,500,000	
	STEEL STAIR	T	6	350,000	2,100,000	
	ARCHITECTURAL DECORATION FOR BUILDING OF ELECTRICITY AND I&C					
	ACID PROOF TILE FLOOR	m2	54	5,000	270,000	
	TILE FLOOR	m2	672	4,600	3,091,200	
	OIL BOUND DISTEMPER INTERNAL WALL	m2	1648	780	1,285,440	
	ACID PROOF PAINTING INTERNAL WALL	m2	264	860	227,040	

NAME : BOILER BAY

STRUCTURAL CHARACTER:STEEL FRAME WITH CONCRETE SLAB

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
	Rack of HP feedwater piping, main steam piping hot reheat steam piping cold reheat steam piping	m3	78	28,000	2,184,000	
	Comples rack for pile to fuel oil storage area	T	52	350,000	18,200,000	
			Sub Total (A) =		**1,094,272,280**	

Saba 1x134 MW Power plant coal conversion project

NAME:EXTENSIVE CRUSHER HOUSE

STRUCTURAL CHARACTER: CAST-IN-PLACE REINFORCED CONCRETE STRUCTURE

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
1	**CRUSHER HOUSE(LENGTH×WIDTH×HEIGHT : 15mx15mx31m)**					
	VOLUME OF EXCAVATION	m^3	3600	700	2,520,000	
	DRAINAGE BY WELL POINT(INSTALL AND REMOVE)	Strip	2	150,000	300,000	
	DRAINAGE BY WELL POINT(OPERATE)	SETxDAY	2x230	200,000	200,000	
	REINFORCED CONCRETE BOTTOM SLAB (UNDER GROUND) 1:2:4	m^3	350	20,000	7,000,000	
	REINFORCED CONCRETE SIDE SLAB (UNDER GROUND) 1:2:4	m^3	545	26,800	14,606,000	
	CONCRETE BEDDING CUSHION 1:4:8	m^3	25	14,000	350,000	
	FINE AGGREGATE CONCRETE WATERPROOF GROUND 1:2:4	m^3	225	26,800	6,030,000	
	CAST-IN-PLACE REINFORCED CONCRETE FLOOR (0.20m Thick)	m^2	675	4,900	3,307,500	
	FINE AGGREGATE CONCRETE WATERPROOF FLOOR COVER (0.12m Thick)	m^2	675	3,600	2,430,000	
	CAST-IN-PLACE REINFORCED CONCRETE ROOF	m^2	225	3,600	810,000	
	WATERPROOF AND INSULATING LAYER ON THE ROOF	m^2	225	3,600	810,000	
	REINFORCED CONCRETE BEAM AND COLUMN(OVER GROUND)	m3	230	27,600	6,348,000	
	EXTERNAL WALL(DOUBLE PLASTERING AND PAINTING)	m^2	1860	1,780	3,310,800	
	INTERNAL WALL(DOUBLE PLASTERING AND PAINTING)	m^2	260	2,260	587,600	
	ALUMINIUM ALLOY DOOR AND WINDOW	m^2	295	18,400	5,428,000	
	STEEL STAIR PLATFORM HANDRAIL	T	7	340,000	2,380,000	
	STEEL RAIL	T	3.5	340,000	1,190,000	
	ELASTIC SPING FOR ISOLATION	RMB	250000	40	10,000,000	
	CAST INPLACE REINFORCED CONCRETE PILE	No.	45	600,000	27,000,000	
			Sub Total (A) =		**94,607,900**	

Saba 1x134 MW Power plant coal conversion project

NAME: UNDER GROUND BUNKER

STRUCTURAL CHARACTER: CAST-IN-PLACE REINFORCED CONCRETE WITH BOX SECTION (ONE FLOOR UNDER GROUND) 8.5x8.5x7.3

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
	VOLUME OF EXCAVATION	m^3	1350	700	945,000	
	DRAINAGE BY WELL POINT(INSTALL AND REMOVE)	Strip	1	150,000	150,000	
	DRAINAGE BY WELL POINT(OPERATE)	SETxDAY	1x30	200,000	100,000	
	CONCRETE BEDDING CUSHION 1:4:8	m^3	10	14,000	140,000	
	CAST-IN-PLACE REINFORCED CONCRETE SIDE SLAB	m^3	278	26,800	7,450,400	
	CAST-IN-PLACE REINFORCED CONCRETE BOTTOM SLAB	m^3	91	20,000	1,820,000	
	CAST-IN-PLACE REINFORCED CONCRETE BUNKER SLAB	m^3	23	26,800	616,400	
	MICROCRYSTALLINE SLAB	m^2	44	3,600	158,400	
	CAST-IN-PLACE REINFORCED CONCRETE TOP COVER	m3	44	26,800	1,179,200	
	STEEL GRATING	T	7	350,000	2,450,000	
	OTHER STEEL STRUCTURE	T	1.5	350,000	525,000	
			Sub Total (B) =		15,534,400	

Saba 1x134 MW Power plant coal conversion project

NAME: NO.1 CONVEYOR GALLERY

STRUCTURAL CHARACTER: BOX SECTION UNDER GROUND,CAST-IN-PLACE FRAME ON THE GROUND AND STEEL FRAME

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
1	**COVERED WAY UNER GROUND 6mx2.5mx24m**					
	VOLUME OF EXCAVATION	m^3	1720	700	1,204,000	
	DRAINAGE BY WELL POINT(INSTALL AND REMOVE)	Strip	5	150,000	750,000	
	DRAINAGE BY WELL POINT(OPERATE)	SETxDAY	5x60	200,000	500,000	
	CONCRETE BEDDING CUSHION 1:4:8	m^3	18	14,000	252,000	
	REINFORCEMENT SIDE SLAB,BOTTOM SLAB,TOP SLAB	m^3	420	26,800	11,256,000	
	PAINTING ON INTERNAL WALL	m2	408	780	318,240	
2	**METAL REMOVAL HOUSE 6.7x12x12**					
	VOLUME OF EXCAVATION	m^3	570	700	399,000	
	ISOLATED FOOTING OF REINFORCED CONCRETE	m^3	180	20,000	3,600,000	
	CONCRETE BEDDING CUSHION	m^3	10	14,000	140,000	
	CAST-IN-PLACE REINFORCED CONCRETE FRAME	m^3	68	26,800	1,822,400	
	CAST-IN-PLACE REINFORCED CONCRETE SLAB ON THE ROOF	m2	81	26,800	2,170,800	
	DISCHARGE ON THE ROOF	m2	81	8,000	648,000	
	FINE AGGREGATE CONCRETE GROUND	m2	81	9,000	729,000	
	EXTERNAL WALL	m^3	41	28,000	1,148,000	
	PAINTING ON EXTERNAL WALL(DOUBLE PLASTERING AND PAINTING)	m2	822	1,780	1,463,160	
	ALUMINIUM ALLOY DOOR AND WINDOW	m2	24	18,000	432,000	
	STEEL DOOR	m2	10	14,000	140,000	
	MONORAIL	T	3	350,000	1,050,000	
3	CONVEYOR GALLERY OVERGROUND 6mx2.5mx146m					
	VOLUME OF EXCAVATION	m^3	2590	700	1,813,000	
	ISOLATED FOOTING OF REINFORCED CONCRETE	m^3	385	20,000	7,700,000	
	CONCRETE BEDDING CUSHION	m^3	26	14,000	364,000	
	CAST-IN-PLACE REINFORCED CONCRETE FRAME	m^3	176	26,800	4,716,800	
	CAST-IN-PLACE REINFORCED CONCRETE SLAB ON STEEL BEAM	m2	876	8,000	7,008,000	
	CORRUGATED METAL SHEET AS BED FORMWOR	m2	876	5,000	4,380,000	

NAME: NO.1 CONVEYOR GALLERY

STRUCTURAL CHARACTER: BOX SECTION UNDER GROUND,CAST-IN-PLACE FRAME ON THE GROUND AND STEEL FRAME

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
	STEEL TRUSS	T	117	350,000	40,950,000	
	TOP RACING	T	15	350,000	5,250,000	
	STEEL BEAM (ON TOP AND BOTTOM NODE)	T	44	350,000	15,400,000	
	ROOF WITH COMPOUND INSULATION CORRUGATED METAL SHEET	m2	876	5,000	4,380,000	
	SIDE ENCLOSE WITH SINGAL CORRUGATED METAL	m2	730	5,000	3,650,000	
	ALUMINIUM ALLOY DOOR AND WINDOW	m2	110	18,000	1,980,000	
			Sub Total (B) =		**125,614,400**	

Saba 1x134 MW Power plant coal conversion project

NAME: NO.2 CONVEYOR GALLERY

STRUCTURAL CHARACTER: BOX SECTION UNDER GROUND,CAST-IN-PLACE FRAME ON THE GROUND AND STEEL FRAME

No	Item Name	Unit	Qty	Rate / Unit	Amount
1	**METAL REMOVAL HOUSE 6.7x12x12**				
	VOLUME OF EXCAVATION	m^3	570	700	399,000
	ISOLATED FOOTING OF REINFORCED CONCRETE	m^3	180	20,000	3,600,000
	CONCRETE BEDDING CUSHION	m^3	10	14,000	140,000
	CAST-IN-PLACE REINFORCED CONCRETE FRAME	m^3	68	26,800	1,822,400
	CAST-IN-PLACE REINFORCED CONCRETE SLAB ON THE ROOF	m2	81	9,000	729,000
	DISCHARGE ON THE ROOF	m2	81	8,000	648,000
	FINE AGGREGATE CONCRETE GROUND	m2	81	7,000	567,000
	EXTERNAL WALL	m^3	41	28,000	1,148,000
	PAINTING ON EXTERNAL WALL	m^2	411	700	287,700
	PAINTING ON INTERNAL WALL	m^2	411	700	287,700
	ALUMINIUM ALLOY DOOR AND WINDOW	m^2	24	18,000	432,000
	STEEL DOOR	m^2	10	14,000	140,000
	MONORAIL	T	3	350,000	1,050,000
2	**VERTICAL GRAVITY TAKE UP TOWER 10.6x15x16**				
	VOLUME OF EXCAVATION	m^3	920	700	644,000
	ISOLATED FOOTING OF REINFORCED CONCRETE	m^3	280	20,000	5,600,000
	CONCRETE BEDDING CUSHION	m^3	15	14,000	210,000
	CAST-IN-PLACE REINFORCED CONCRETE FRAME	m^3	23	26,800	616,400
	CAST-IN-PLACE REINFORCED CONCRETE SLAB ON THE ROOF	m^2	159	9,000	1,431,000
	DISCHARGE ON THE ROOF	m^2	159	8,000	1,272,000
	FINE AGGREGATE CONCRETE GROUND	m^2	159	9,000	1,431,000
	EXTERNAL WALL	m^3	41	28,000	1,148,000
	PAINTING ON EXTERNAL WALL(DOUBLE PLASTERING AND PAINTING)	m^2	1690	1,780	3,008,200
	ALUMINIUM ALLOY DOOR AND WINDOW	m^2	11	18,000	198,000
	STEEL DOOR	m^2	10	14,000	140,000

NAME: NO.2 CONVEYOR GALLERY

STRUCTURAL CHARACTER: BOX SECTION UNDER GROUND,CAST-IN-PLACE FRAME ON THE GROUND AND STEEL FRAME

No	Item Name	Unit	Qty	Rate / Unit	Amount
	MONORAIL	T	3	350,000	1,050,000
3	**COVERED WAY UNER GROUND 6mx2.5mx32m**				
	VOLUME OF EXCAVATION	m^3	2990	700	2,093,000
	DRAINAGE BY WELL POINT(INSTALL AND REMOVE)	Strip	7	150,000	1,050,000
	DRAINAGE BY WELL POINT(OPERATE)	SetxDay	5x60	200,000	500,000
	CONCRETE BEDDING CUSHION	m^3	22	14,000	308,000
	REINFORCEMENT SIDE SLAB,BOTTOM SLAB,TOP SLAB	m^3	580	26,800	15,544,000
	PAINTING ON INTERNAL WALL	m2	544	700	380,800
4	**CONVEYOR GALLERY OVERGROUND 6mx2.5mx188m**				
	VOLUME OF EXCAVATION	m^3	4050	700	2,835,000
	ISOLATED FOOTING OF REINFORCED CONCRETE	m^3	640	20,000	12,800,000
	CONCRETE BEDDING CUSHION	m^3	32	14,000	448,000
	CAST-IN-PLACE REINFORCED CONCRETE FRAME	m^3	450	26,800	12,060,000
	CAST-IN-PLACE REINFORCED CONCRETE SLAB ON STEEL BEAM	m^2	1128	8,000	9,024,000
	CORRUGATED METAL SHEET AS BED FORMWOR	m^2	1128	5,000	5,640,000
	STEEL TRUSS	T	151	350,000	52,850,000
	TOP RACING	T	19	350,000	6,650,000
	STEEL BEAM (ON TOP AND BOTTOM NODE)	T	57	350,000	19,950,000
	ROOF WITH COMPOUND INSULATION CORRUGATED METAL SHEET	m^2	1128	5,000	5,640,000
	SIDE ENCLOSE WITH SINGAL CORRUGATED METAL	m^2	940	5,000	4,700,000
	ALUMINIUM ALLOY DOOR AND WINDOW	m^2	141	18,000	2,538,000
			Sub Total (B) =		**183,010,200**

Saba 1x134 MW Power plant coal conversion project

NAME:CHP COMPLEX BUIDING (CONTAINING SWITCHGEAR OF COAL HANDING SYSTEM)

STRUCTURAL CHARACTER:CAST-IN-PLACE FRAME ON THE GROUND

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
1	**(LENGTH×WIDTH×HEIGHT : 22m×18m×6m)**					
	VOLUME OF EXCAVATION	m^3	2082	1,400	2,914,800	
	DRAINAGE BY WELL POINT(INSTALL AND REMOVE)	Strip	2	300,000	600,000	
	DRAINAGE BY WELL POINT(OPERATE)	SetxDay	2x30	400,000	100,000	
	ISOLATED FOOTING OF REINFORCED CONCRETE	m^3	600	40,000	24,000,000	
	CONCRETE BEDDING CUSHION	m^3	18	28,000	504,000	
	CAST-IN-PLACE REINFORCED CONCRETE FRAME	m^3	72	53,600	3,859,200	
	CAST-IN-PLACE REINFORCED CONCRETE ROOF	m2	396	18,000	7,128,000	
	WATERPROOF AND INSULATING LAYER	m2	396	10,000	3,960,000	
	ALUMINIUM ALLOY DOOR AND WINDOW	m2	20	36,000	720,000	
	STEEL STAIR,HANDRAIL	T	1.6	700,000	1,120,000	
			Sub Total (B) =		44,906,000	

Saba 1x134 MW Power plant coal conversion project

NAME : FLY ASH SILO(Φ12X28m)

STRUCTURAL CHARACTER:BARREL STRUCTURE OF REINFORCEMENT CONCRETE

No	Item Name	Unit	Qty	Rate / Unit	Amount
	FLY ASH SILO				
	VOLUME OF EXCAVATION	m^3	1133	700	793,100
	DRAINAGE BY WELL POINT(INSTALL AND REMOVE)	Strip	2	150,000	300,000
	DRAINAGE BY WELL POINT(OPERATE)	SETxDAY	2x30	200,000	200,000
	CONCRETE BEDDING CUSHION	m^3	21	14,000	294,000
	MACROPLATE FOUNDATION	m^3	710	20,000	14,200,000
	CAST-IN-PLACE REINFORCED CONCRETE SILO WALL SLAB	m^3	450	26,800	12,060,000
	CAST-IN-PLACE REINFORCED CONCRETE SLAB	m2	230	8,000	1,840,000
	CAST-IN-PLACE REINFORCED CONCRETE ROOF	m2	115	9,000	1,035,000
1.1	WATERPROOF AND INSULATING LAYER	m2	115	5,000	575,000
	COMPLEX GROUND （CEMENT PASTE COVER）	m2	115	4,000	460,000
	CEMENT PASTE FLOOR	m2	230	5,000	1,150,000
	REINFORCED CONCRETE BEAM AND COLUMN	m^3	35	28,000	980,000
	PAINTING ON THE SILO	m2	1056	800	844,800
	PAINTING ON THE SILO m2 1056 STEEL STAIR,STEEL PLATFORM,STEEL HANDRAIL	T	27	350,000	9,450,000
			Sub Total (A) =		**44,181,900**

Saba 1x134 MW Power plant coal conversion project

NAME:AIR COMPRESSOR HOUSE (CONTAINING SWITCHGEAR OF ASH HANDING SYSTEM)

STRUCTURAL CHARACTER: STEEL STRUCTURE WITH,SIDE ENCLOSE WITH SINGAL CORRUGATED METAL

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
	AIR COMPRESSOR HOUSE 15x12x6					
	COMPLEX GROUND(FINE AGGREGATE CONCRETE COVER)	m2	180	3,600	648,000	
	ROOF WITH SINGAL CORRUGATED METAL	m2	180	5,000	900,000	
	WALL WITH SINGAL CORRUGATED METAL	m2	324	5,000	1,620,000	
	STEEL FIRE DOOR	m2	28	18,000	504,000	
			Sub Total (A) =		3,672,000	

Saba 1x134 MW Power plant coal conversion project

NAME: BUILDINGS BETWEEN BOILER AND CHIMNEY

STRUCTURAL CHARACTER: STEEL STRUCTURE FOR DUILDINGS OVER GROUND

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
	BUILDINGS BETWEEN BOILER AND CHIMNEY					
	DRAINAGE BY WELL POINT(INSTALL AND REMOVE)	Strip	4	150,000	600,000	
	DRAINAGE BY WELL POINT(OPERATE)	SETxDAY	4x45	200,000	1,000,000	
1	**flue gas duct racks**					
	VOLUME OF EXCAVATION	m3	1100	700	770,000	
	ISOLATED FOOTING	m3	270	20,000	5,400,000	
	CONCRETE BEDDING CUSHION	m3	12	14,000	168,000	
	STEEL FRAME	T	210	350,000	73,500,000	
	CONCRETE GROUND	m2	168	5,000	840,000	
	STEEL STAIR	T	2	350,000	700,000	
2	**flue & PAF/FDF, PAF/FDF**					
	VOLUME OF EXCAVATION	m3	3540	700	2,478,000	
	ISOLATED FOOTING	m3	473	20,000	9,460,000	
	CONCRETE BEDDING CUSHION	m3	20	14,000	280,000	
	STEEL BEAM AND COLUMN	T	308	350,000	107,800,000	
	CONCRETE GROUND	m2	750	5,000	3,750,000	
	MONORAIL CRANE	T	11	350,000	3,850,000	
	STEEL STAIR	T	6	350,000	2,100,000	
3	**Racks of IDF**					
	VOLUME OF EXCAVATION	m3	2820	700	1,974,000	
	ISOLATED FOOTING	m3	370	20,000	7,400,000	
	CONCRETE BEDDING CUSHION	m3	16	14,000	224,000	
	STEEL BEAM AND COLUMN	T	296	350,000	103,600,000	
	CONCRETE GROUND	m2	574	5,000	2,870,000	
	MONORAIL CRANE	T	10	350,000	3,500,000	
4	**FOUNDATION OF STEEL FRAME SUPPORTING ESP**					
	VOLUME OF EXCAVATION	m3	2442	700	1,709,400	

NAME: BUILDINGS BETWEEN BOILER AND CHIMNEY

STRUCTURAL CHARACTER: STEEL STRUCTURE FOR DUILDINGS OVER GROUND

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
	ISOLATED FOOTING	m3	360	20,000	7,200,000	
	CONCRETE BEDDING CUSHION	m3	15	14,000	210,000	
	CONCRETE GROUND	m2	496	5,000	2,480,000	
	RACK FOR FIXING BOLT	T	5	350,000	1,750,000	
			Sub Total (A) =		**345,613,400**	

Saba 1x134 MW Power plant coal conversion project

NAME: EQUIPMENT FOUNDATION BETWEEN BOILER AND CHIMNEY

STRUCTURAL CHARACTER: STEEL STRUCTURE FOR DUILDINGS OVER GROUND

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
	Equipment Foundation between boiler and chimney					
	FOUNDATION COMPRESSED AIR VESSEL	m3	128	20,000	2,560,000	
	FOUNDATION OF BOTTOM ASH BIN	m3	160	20,000	3,200,000	
	FOUNDATION OF BOTTOM ASH BIN	m3	60	20,000	1,200,000	
	CONCRETE BEDDING CUSHION	m3	15	14,000	210,000	
			Sub Total (A) =		**7,170,000**	

Saba 1x134 MW Power plant coal conversion project

CHIMNEY(120m/7.0m)ONE-FLUE CHIMNEY

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
	CHIMNEY(120m/7.0m)ONE-FLUE CHIMNEY					
	1 VOLUME OF EXCAVATION	m3	3800	700	2,660,000	
	CAST INPLACE REINFORCED CONCRETE PILE	No.	86	620,000	53,320,000	
	FOOTING OF REINFORCED CONCRETE	m3	930	20,000	18,600,000	
	CONCRETE BEDDING CUSHION :	m3	45	14,000	630,000	
	DRAINAGE BY WELL POINT(INSTALL AND REMOVE)	Strip	2	150,000	300,000	
	DRAINAGE BY WELL POINT(OPERATE)	SetxDay	2x60	200,000	200,000	
	RC CHIMNEY	m3	1800	26,800	48,240,000	
	STEEL FLUE	T	180	350,000	63,000,000	
	NON-CORROSIVE STEEL	T	17	350,000	5,950,000	
	STEEL BEAMS	T	130	350,000	45,500,000	
	STEEL STAIR(WITH ANTI-FOULING PAINT)	T	15	350,000	5,250,000	
	STEEL GRID	m2	200	10,000	2,000,000	
	COMPOSITE SLAB WITH CORRUGATED METAL SHEET AS BED FORMWOR	m2	235	5,000	1,175,000	
	ANTI-FOULING PAINT FOR STEEL	T	130	71,200	9,256,000	
	STEEL ATTACHMENT （WITH ANTI-FOULING PAINT）	T	30	71,200	2,136,000	
	AVIATION PAINT	m2	2500	1,700	4,250,000	
	ACID-PROOF CERAMIC TILE	m2	100	4,950	495,000	
	ALUMINIUM ALLOY WINDOW	m2	40	18,000	720,000	
	BOLTS	T	1	350,000	350,000	
	HIGH-TEMPERATURE PAINT	m2	5400	780	4,212,000	
			Sub Total (A) =		**268,244,000**	

Saba 1x134 MW Power plant coal conversion project

1. The name of the structure: Coal water settling pond(single)

The plan size of the main pond is about 21×5m, and about 4.5m deep underground. The plan size of the side pump house is about 4.5×6m, the net height of superstructure above the ground is about 6.0m. And The plan size of the outdoorframe is about 5×5m, the net height is about 7.5m.

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
1	**Excavation works and drainage**					
1.1	Excavation volume	m^3	2265	700	1,585,500	
1.2	The length for the installation and removal of light drainage well	m	101	20,000	2,020,000	
1.3	The operation of light drainage well	SETxDAY	2x45	200,000	200,000	
2	**The establishment on the ground and undergroud**					
	The volume of the reinforced concrete base slab	m^3	106	20,000	2,120,000	
	The area of the 0.00m cast-in-situ reinforced concrete floorsalb (thickness is 0.20m)	m2	27	9,000	243,000	
	The area of the semi-underground sand-cement grout floor	m2	27	5,000	135,000	
	The area of the 0.00m cast-in-situ reinforced concrete walkway slab(thickness is 0.2m)	m2	20	9,000	180,000	
	The volume of the reinforced concrete basin wall	m^3	181	28,000	5,068,000	
	The volume of the plain concrete (C15) slope	m^3	85	26,800	2,278,000	
3	**Roofing works**					
	The area of cast-in-situ reinforced concrete roof board(thickness is 0.12m)	m2	27	9,000	243,000	
	The area of the drainage insulation work and waterproofing	m2	27	5,000	135,000	
4	**Walling works**					
	The volume of the 300mm thick external wall (concrete block)	m3	58.5	28,000	1,638,000	
	The paint of the external wall （latex paint)	m2	152	800	121,600	
	The paint of the internal wall	m2	135	700	94,500	
5	**The volume of the cast-in-situ reinforced concrete frame structure**	m3	25	28,000	700,000	
6	**The parking area**					
	The cast-in-situ reinforced concrete frame	m3	10	28,000	280,000	
	The sand-cement grout complex floor	m2	29	5,000	145,000	
7	**Foundation works**					
	The foundation of the reinforced concrete individual column V=14m3	m3	14	14,000	196,000	
8	**Steel structure works**					
	The steel ladder handrail etc.	T	1.5	350,000	525,000	

1. **The name of the structure: Coal water settling pond(single)**

The plan size of the main pond is about 21×5m, and about 4.5m deep underground. The plan size of the side pump house is about 4.5×6m, the net height of superstructure above the ground is about 6.0m. And The plan size of the outdoorframe is about 5×5m, the net height is about 7.5m.

No	Item Name	Unit	Qty	Rate / Unit	Amount	Remarks
	The rail and connection of the electric single-beam crane	T	1.2	350,000	420,000	
	The weight of the anti-fouling paint for the steel structure	T	2.7	350,000	945,000	
9	**Doors and windows**					
	The area of the steel door	m2	5	14,000	70,000	
	The area of the plastic-steel window	m2	10	10,000	100,000	
10	**Anti-corrosion of the foundation**					
	The mud mat with cement polymer	m3	20	9,000	180,000	
	The area of the foundation with anti-corrosion(500μm thick epoxy asphalt coating)	m2	400	8,000	3,200,000	
			Sub Total (A) =		**22,822,600**	

ANNEXURE 'B'

9.6 Bonus.

(a) In the event that the Net Electrical Output during any of the Bonus Months in any Agreement Year is in excess of the Bonus Threshold for the applicable Bonus Month, then WAPDA shall pay, to the Company within sixty (60) Days of the end of such Bonus Month, in addition to any other payments due to the Company pursuant to Section 9.2, an amount equal to Rs. 0.08 for each kWh by which the Net Electrical Output of the Complex during such Bonus Month in the Agreement Year is greater than the Bonus Threshold for such Bonus Month.

(b) The amount of the bonus payable pursuant to this Section 9.6 shall be adjusted from time to time in accordance with Schedule 6.

9.7 Billing.

(a) From and after the Commercial Operations Date, the Company shall invoice WAPDA for the Capacity Payment due for each Month at any time following the tenth (10th) Day of such Month, unless the eleventh (11th) Day of such Month is not a Business Day for WAPDA, in which case the Company may invoice WAPDA on the first Day preceding such Day that is a Business Day for WAPDA. Each such invoice shall be substantially in the form included as Annex I to Schedule 6 and shall set forth the Capacity Purchase Price for such Month, as determined in accordance with Schedule 6, and the Dependable Capacity for such Month. Each invoice delivered pursuant to this Section 9.7(a) shall state that the due date for payment of such invoice by WAPDA shall be the date twenty-five (25) Days following the date of delivery of such invoice. WAPDA shall pay the sum due, less any disputed amounts, according to each such invoice on or before such twenty-fifth (25th) Day.

(b) (i) For each Month in which the Company delivers Net Electrical Output to WAPDA prior to the Commercial Operations Date, the Company shall read the Metering System in accordance with Section 8.4 and shall prepare an invoice showing the amount of the payment due under Section 9.2(a) for such Month. Such invoices shall show the reading of the Metering System taken in accordance with Section 8.4 on or near the end of the Month for which the invoice is submitted, the reading of the Metering System taken on or near the end of the preceding Month and such other information and calculations, in reasonable detail, to permit WAPDA to confirm the consistency of the invoice with the provisions of Section 9.2(a).

(ii) From and after the Commercial Operations Date, the

Company shall invoice WAPDA for the Energy Payment due for each Month. Each such invoice shall be substantially in the form included as Annex II to Schedule 6 and shall set forth the Energy Purchase Price for such Month, determined in accordance with Schedule 6. For each Month in which the Company delivers Net Electrical Output to WAPDA, the Company shall read the Metering System in accordance with Section 8.4 and shall show on such invoice the reading of the Metering System taken in accordance with Section 8.4 on or near the end of the Month for which the invoice is submitted, the reading of the Metering System taken on or near the end of the preceding Month and such other information and calculations, in reasonable detail, to permit WAPDA to confirm the consistency of the invoice with the provisions of Schedule 6.

(iii) Each invoice delivered to WAPDA pursuant to this Section 9.7(b) shall state that the due date for payment of such invoice by WAPDA shall be the date twenty-five (25) Days following the date of delivery of such invoice. WAPDA shall pay the sum due (less any disputed amounts) according to each such invoice on or before such twenty-fifth (25th) Day.

(c) Unless specifically provided otherwise in Section 10 of Schedule 6, any amounts or portions of amounts that are Supplemental Charges may be invoiced by the Company on a Monthly basis at any time after the first Day of the Month following the Month in which any such Supplemental Charges are incurred by the Company. Each invoice delivered pursuant to this Section 9.7(c) shall state that the due date for payment of such invoice by WAPDA shall be the date twenty-five (25) Days following the date of delivery of such invoice. WAPDA shall pay the sum due according to each such invoice (less any amounts disputed by WAPDA) on or before such twenty-fifth (25th) Day. With respect to invoices for Pass-Through Items, such invoices from the Company to WAPDA shall be accompanied by the invoice to the Company for which recovery from WAPDA is being sought.

(d) Either Party shall have the right to review an invoice or statement prepared by the other Party, and if it disagrees with the determination of the amount payable by or to such Party under such invoice or statement, may request clarification and substantiation of such invoice or statement. No Party shall waive the right to seek revision of an invoice and payment of the corrected amount unless such Party fails to deliver an Invoice Dispute Notice within the period provided in Section 9.8(a).

(e) Late payments by either Party shall bear interest at a rate per annum equal to the Base Rate plus four percent (4%) per annum, compounded semiannually, and shall be computed for the actual number of Days on the basis of a three