



**National Electric Power Regulatory Authority**  
**Islamic Republic of Pakistan**

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No. NEPRA/TRF-438/SCHPL-2018/9283-9285  
June 14, 2018

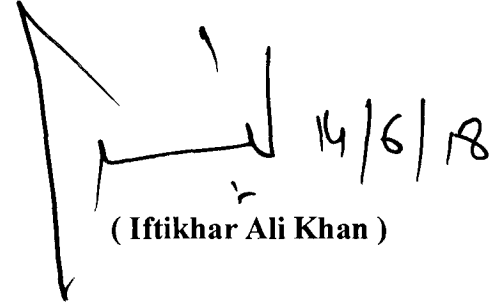
Subject: **Decision of the Authority in the matter of Approval of Tariff for Saifco Hydropower Ltd. [Case No.NEPRA/TRF-438/SCHPL-2018]**

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annexure-I, II, III, IV & V (19 pages) in Case No. NEPRA/TRF-438/SCHPL-2018.

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

Enclosure: As above

  
( Iftikhar Ali Khan )

Secretary  
Ministry of Energy (Power Division)  
'A' Block, Pak Secretariat  
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.

National Electric Power Regulatory Authority  
(NEPRA)

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Determination of the Authority

In the matter of Approval of Tariff for Saifco Hydropower Limited for  
its 102 MW (net capacity) Hydroelectric Power Plant at Lower Dir

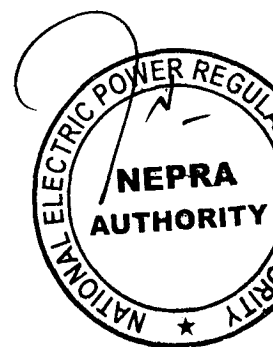
14<sup>th</sup>  
June , 2018

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## BACKGROUND

1. The Government of Khyber Pakhtunkhwa (the "GoKP") through the Pakhtunkhwa Energy Development Organization (hereinafter referred to as "PEDO" or the "Relevant Agency") intends to implement the 102 MW Shigo Kas Hydropower Project (HPP) (the "Project") under the KP Hydropower Policy 2016 (the "Policy"). The Project is to be developed as an Independent Power Producer ("IPP") on a Build-Own- Operate-Transfer (BOOT) basis. The Project is located in the Khyber Pakhtunkhwa (KP) province on the Panjkora River, Distirct Lower Dir.
2. The project history provided by PEDO has highlighted that the Shigokas HPP is a run of river scheme on Panjkora River in Lower Dir District of Khyber Pakhtunkhwa. The Project is located on the left bank of Panjkora River and is accessible through metaled road from Chakdara to Timergara. Feasibility Study of the project was conducted by PEDO through M/s ELECTRA Consultants in association with M/s INTEGERATION.
3. Under the initiative, the Project and 5 other sites were identified by PEDO for the development of hydropower projects. These projects shall contribute 518 MW in total to the national grid. Accordingly, PEDO simultaneously processed these projects for award of tariff through competitive bidding. On 12th February 2016, PEDO's BoD decided to advertise the following Six (6) Solicited Hydropower Projects for development in Private Sector on BOOT basis as per KP Hydropower Policy 2016:

	Description	MW	Location
1	NARAN	188	Kunhar River Kaghan Naran
2	SHIGO KAS	102	Panjkora River, Distirct Lower Dir
3	ARKARI GOL	99	Arakari, District Chitral
4	BATAKUNDI	96	Batakundi, District Mansehra
5	GHORBAND	20.6	Ghorband, District Shangla
6	NANDIHAR	12.3	Nandihar Khawar, District Battagram
	Total	518	

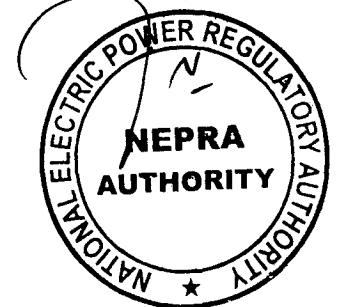


4. PEDO proceeded to develop a generic Request For Proposal (RFP) applicable for all six of the above projects, and submitted the same for approval to the Authority. Approval of the RFP, with certain amendments, was granted by the Authority, on 26-10-2016, under the National Electric Power Regulatory Authority Competitive Bidding Tariff (Approval Procedure) Regulations, 2014 (the "CBTR 2014"). Subsequently, vide letter dated 14-11-2016 and 03-04-2017, the Authority further approved amendments to the RFP on the subjects of sharing of spread (in case of lower negotiated spreads with lenders) and

assessment of custom duties and cess. Further clarifications were also provided to PEDO on other matters, including geological risk mitigation through reopeners.

5. The Authority, thereby, approved PEDO's RFP to undertake competitive bidding of the above-mentioned six hydropower projects in accordance with the provisions of the CBTR 2014. The Authority did not issue a Benchmark tariff on the condition that NEPRA reserved the right to reject PEDO's recommended successful bidder where the quoted rate is found to be imprudent or unreasonable, as provided under Regulation 5 of the CBTR 2014.
6. PEDO then proceeded with the competitive bidding process and called for bids of all six projects. Upon receiving and processing of all bids, PEDO proceeded to submit the Bid Evaluation Reports to the Authority for approval, including the Bid Evaluation Report for the Project on 19-10-2017. Further information and documents-in-support were sought by the Authority, vide letter dated 08-12-2017. Revised documents were then sent by PEDO on 26-12-2017.
7. As per the information submitted by PEDO, notice of invitation of bids for the Project was published in two international newspapers and one local newspaper, from 18-03-2016 till 11-04-2016. In response, eleven registrations were made with PEDO by interested parties and the same quantity of Pre-Qualification Documents ("PQDs") were purchased. Subsequently, eleven Proposal/Statement of Qualifications ("SOQs") were submitted to PEDO by private sponsors.
8. As per the information submitted, PEDO advertised the above mentioned Hydropower Projects in two international and one local newspaper from 18th March 2016 to April 11, 2016. In response to the advertisement, Six (06) registrations were made who later purchased Pre-Qualification Documents (PQDs) from PEDO. Afterwards, Five (05) Proposals/Statement of Qualifications (SOQs) were submitted by the private sponsors.
9. PEDO hired an independent consultant for the evaluation of proposals namely Baker Tilly Mehmmod Idrees Qamar. After a detailed evaluation as per the criteria laid down in the PQDs, three (03) out of Five (05) applicants were pre-qualified for the said Hydropower Project.



10. Following is the list of firms as provided by PEDO who registered for the site and who were later pre-qualified:

Investor's Details		Registration & Pre-Qualification Details				
Company / Firm Name	Date of Registration	Date of Purchase of PQDs	Last Date for Submission of SOQs	Date of Submission of SOQs	Pre-Qualified or Not (remarks)	
1	M/S Saifco Group	22-Mar-2016	22-Mar-2016	14-Jun-2016	14-Jun-2016	Yes
2	Target Consultants Pvt Ltd	5-Apr-2016	24-Mar-2016	14-Jun-2016	No Submission	NA
3	M/S Siddiquesons	6-Apr-2016	5-Apr-2016	14-Jun-2016	13-Jun-2016	Yes
4	M/s Caostal Saba Power	10-May-2016	10-May-2016	14-Jun-2016	14-Jun-2016	No
5	Army Welfare Trust	3-Jun-2016	3-Jun-2016	14-Jun-2016	14-Jun-2016	Yes
6	SWEB, China	10-Jun-2016	10-Jun-2016	14-Jun-2016	14-Jun-2016	No

11. PEDO carried out ICB by adopting single stage two envelop process. All the Three (03) pre-qualified applicants purchased RFP. Subsequently, only one (01) Bid (Envelop-I & Envelop-II) was submitted by M/s Saifco Group and Sinomach Heavy Industries Corporation China JV (hereinafter referred as "Saifco J.V") against the purchased RFPs, on 25th April, 2017.

12. According to PEDO, as per RFP clause 3.3.1, Envelope-I (Technical Proposal) was opened by the Evaluation Committee of PEDO. The content of this envelop was evaluated by PEDO in view of the responsive test laid down in the RFP and accordingly technical qualification was done.

13. PEDO informed that the bidder provided the Project Cost breakdown as per the format given in the Proforma XI "Project Cost Summary" of its financial bid. PEDO provided the following comparison tables of bidder's key assumptions vs. Feasibility estimates:

Bidders	Local Portion	Foreign Portion		Total Cost @ Rs. 104.7	Cost / MW
	Millions PKR	Millions Equ.	USD	Millions USD	Millions USD
Saifco JV	25,470.21	85.33		328.99	3.22
Feasibility Study estimate @ Rs. 99/US\$	27,729.28	45.9		325.99	3.19

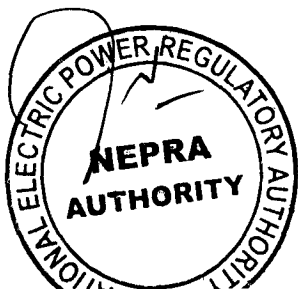
Bidders	Debt	Equity	Financing Period	Financing	
				(Rate, %)	Source
Saifco JV	80%	20%	10 Years	5.42%	3M LIBOR

	Unit	Saifco JV	Feasibility Study
Total Annual O&M Cost	US\$/Annum	5,141,000	5,009,369
	% of Proj. Cost	1.56%	1.52%
Variable O&M Cost	%	25	25
	US\$/Annum	1,285,350	1,252,342
Fixed O&M Cost	%	75	75
	US\$/Annum	3,856,050	3,757,027

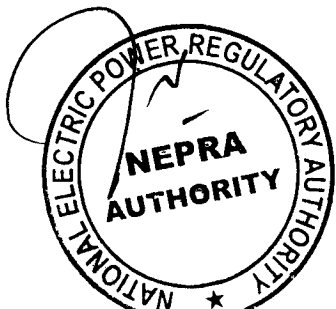
	Unit	Saifco JV	Feasibility Study & RFP
Project Cost	US\$ (Million)	328.99	329.53
EPC Cost	US\$ (Million)	237.86	250.47
Insurance Cost	% of EPC Cost	1%	1%
	US\$/Annum	2,378,600	2,504,685

#### Conclusions & Recommendations by PEDO

14. According to PEDO, bid received from M/s Saifco Group & China Sinomach Heavy Industries China Joint Venture is the only bid received for this project which is responsive with respect to the criteria laid down in the NEPRA approved RFP due to the following reasons:
- Total Project Cost quoted by the bidder as US\$ 328.99 (US\$ M 3.22 / MW) is 0.92% higher than the feasibility cost of US\$ 325.99 Million (US\$ M 3.19 / MW).
  - Total Annual O&M Cost quoted by the bidder is US\$ 5.14 Million which is slightly higher by 2.8% than the feasibility cost estimate of US\$ 5 Million.
  - Interest During Construction proposed by the bidder is US\$ 22.62 Million and is 21.65% lower than the estimated feasibility IDC of US\$ 28.87 Million.
  - Insurance cost quoted by the bidder is as per RFP and is lower than the estimated feasibility study annual insurance cost because of a lower EPC cost.



15. In view of the foregoing conclusions, PEDO concluded that the bid received from M/s Saifco Group & China Sinomach Heavy Industries China Joint Venture being reasonable may be accepted since it offers comparable investment cost, lower annual O&M cost and lower Interest During Construction compared to feasibility study estimates. PEDO further stated that the quoted tariff @ 8.2660 Rs/kWh or 7.9070 Cents/kWh has been calculated using the tariff model of the bidder Saifco JV and as per PEDO's evaluation the tariff of the bidder works out as as 8.9661 Rs/kWh or 8.5764 Cents/kWh.
16. The Authority noted numerous inconsistencies and deficiencies in the document submitted by PEDO including PEDO's evaluation of the bidder's tariff. It was found that the bid evaluation report is not strictly in the format as prescribed in the RFP and deviations therefrom have not been rationalized or explained in the PEDO's report.
17. These discrepancies were later raised with the relevant agency. Subsequently PEDO forwarded the bidder response in the matter on January 25, 2018. Saifco JV stated that it made certain secretarial error and submitted an old model however, Saifco JV stated that no change in tariff has therefore being made and thus the tariff remains at Rs 8.2660 per kWh as quoted in the bid. Saifco JV further stated that it has made changes to certain assumptions of the model chief among which is reduction in project cost and increase in the capacity and generation etc.
18. It has been noted by the Authority that PEDO has materially complied with the criteria and provisions prescribed in the RFP approved by the Authority. However, this tariff will be granted on the basis of the RFP approved by the Authority. As such, the base LIBOR submitted by Saifo Hydropower is revised from 0.8800% to 0.8716% and US\$ exchange rate has been revised from 104.54 to 104.7. These changes are made in this determination to bring the tariff in conformity with the reference values approved by the Authority, under the RFP, and consequently reduce the bidder's tariff from Rs. 8.2660 per kWh to Rs. 8.2658 per kWh.
19. Subsequently, after considering the bid evaluation report and other information and documents submitted by PEDO, the Authority declared M/s Saifco Group and China Sinomach Heavy Industry J.V as first ranked bidder (the successful bidder) vide notification No. NEPRA/TRF-100/PEDO (SKHP)-2018/2657-58 dated February 19, 2017 in the bidding process for establishment of 102 (net) Hydroelectric Project with an approved tariff of Rs 8.2658 per kWh.
20. Subsequently to the notification, Saifco Group and JV informed that it has incorporated a Special Purpose Vehicle with name of SAIFCO Hydropower Limited ("SHL" or the "Petitioner") to develop, build, own and operation the subject project. Accordingly SHL filed an Application for approval of tariff under Regulation 6 of the CBTR 2014 vide letter dated March 02, 2017.



21. The approved SHL bid tariff was based on the following project cost:

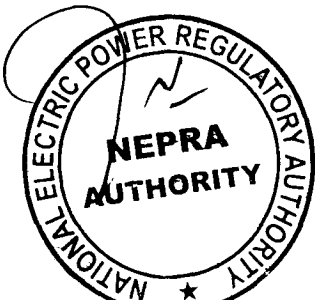
DESCRIPTION	Local Component	Foreign Component	Total Project Cost	Total Project Cost
	Rs million	Rs million	Rs million	US\$ million
<b>EPC COST</b>				
Preliminary Works	650.00	-	650.00	6.21
Civil Works	17,200.42	-	17,200.42	164.28
Electrical & Mechanical Works	646.94	4,403.20	5,050.14	48.23
Other EPC Cost	565.07	603.80	1,168.87	11.16
<b>TOTAL EPC COST</b>	<b>19,062.43</b>	<b>5,007.00</b>	<b>24,069.43</b>	<b>229.89</b>
<b>Customs Duty</b>				
Customs duty	-	112.12	112.12	1.07
<b>NON- EPC COST</b>				
Environment & Resettlement Costs (Cost of Land)	478.50	-	478.50	4.57
Construction Overheads of the Project	479.97	-	479.97	4.58
Construction Supervision Cost of the Project	382.60	-	382.60	3.65
Management Consultancy Cost @ 3% of Preliminary Work, Civil Work & E & M Works	554.92	-	554.92	5.30
<b>TOTAL BASE COST</b>	<b>20,958.43</b>	<b>5,119.12</b>	<b>26,077.55</b>	<b>249.07</b>
<b>Other Costs</b>				
Client Expenses, Admin & Legal Cost @ 1% Base Cost	209.58	51.19	260.78	2.49
<b>Interest During Construction</b>				
Interest During Construction	-	4,214.09	4,214.09	40.25
Loan Management Fee	-	244.78	244.78	2.34
Loan Commitment Fee	-	163.19	163.19	1.56
Investment Insurance	-	1,158.64	1,158.64	11.07
	-	<b>5,780.70</b>	<b>5,780.70</b>	<b>55.21</b>
<b>TOTAL PROJECT COST</b>	<b>21,168.01</b>	<b>10,951.01</b>	<b>32,119.02</b>	<b>306.77</b>

\*The above costs have been adjusted at reference Rs to US\$ exchange rate of 104.7 instead of Rs. 104.54 used by the bidder

22. The Petitioner provided the following sources of funds

Description	
Total Project Cost (US\$ million)	306.77
Equity Portion @ 20% (US\$ million)	61.354
Debt Portion @ 80% (US\$ million)	245.417
Repayment Period	10 Years
Interest rate	LIBOR 0.8716% + 4.54% $\neq$
Grace Period	4 years
Principal Repayment Frequency (Months)	Quarterly

23. The Application was admitted by the Authority under Regulation 12 of the NEPRA Competitive Bidding Tariff (Approval Procedure) Regulations, 2014, read with Section 31 (4) of Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.





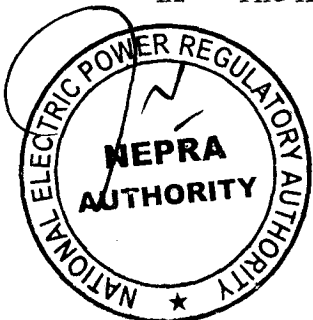
**ORDER:**

24. The Authority hereby approves the following generation tariff along-with adjustment/ indexations for the 102 MW (net capacity) hydroelectric power plant to be established by SAIFCO Hydropower Limited (“SHL” or the “Petitioner”) at district Dir, KPK for delivery of electricity to Power Purchaser

Tariff Components	1 – 10	11 – 30	Adjustment/ Indexation
	Years	Years	
<b>Capacity Charge (Rs./kW/Month)</b>			
Fixed O&M (Foreign)	135.382	164.922	Rs./ US\$ & US CPI
Fixed O&M (Local)	135.382	164.922	CPI (General)
Insurance	196.646	196.646	Rs./USD
ROE	970. 279	1010.639	Rs./ US\$
Debt Servicing	2,732.120	-	LIBOR & Rs./ US\$
Total	4,169.808	1,537.128	
<b>Variable Charge (Rs/kWh)</b>			
Variable O&M (Foreign)	0.330	0.330	Rs./ US\$ & US CPI
Water Use Charge	0.425	0.425	As per Policy

25. The reference tariff has been calculated on the basis of net contracted capacity of 102 MW (net) and net annual energy production of 525.4483 GWh.

- i. In the above tariff, no adjustment for Carbon Emission Reduction receipts (CERs) has been accounted for. However, upon actual realization of CERs, the same shall be distributed between the Power Purchaser and SHL in accordance with the GOP Policy for Power Generation Projects 2002 as amended from time of time.
- ii. The Hydrological Risk shall be borne by the Power Purchaser.
- iii. The above tariff is applicable for a period of thirty (30) years on BOOT basis commencing from Commercial Operation Date (COD).
- iv. Debt service will be paid in the first 10 years of commercial operation of plant after COD.
- v. Redemption of equity has been allowed 11 years onwards of commercial operations of the plant.
- vi. The reference PKR/Dollar rate has been assumed at 1 USD = 104.7 PKR.
- vii. The component wise tariff is indicated at Annex-I.
- viii. Debt Servicing Schedule is attached as Annex-II
- ix. The IDC Schedule is attached as Annex- III







- x. The prices of tunnels will be adjusted due to variation in rock type/classification in accordance with the mechanism attached herewith as Annex-IV. However, the total quantities including the unit rates in m<sup>3</sup> of tunneling shall remain fixed.

I. **One-Time Adjustments at COD**

a. **Adjustment in EPC Cost at the Commercial Operations Date:**

The SHL shall be required to provide all relevant details along with documentary evidences to NEPRA for the adjustments. The onetime adjustment mechanism at the COD shall be as under (reference values attached as Annex-V):

- a) 40% of the EPC cost will be adjusted over the construction months of a maximum period of 48 months from the date of financial close of the project for USD/PKR exchange rate variation.
- b) 60% of the EPC cost converted at reference USD/PKR exchange rate of Reference Date will be adjusted over construction months of a maximum period of 48 months starting from the date of financial close of the project according to the formula below:

$$P_n = 0.51 + 0.10*(C_n/Co) + 0.09*(S_n/So) + 0.15*(F_n/Fo) + 0.15*(L_n/Lo)$$

Where;

P<sub>n</sub> is the adjustment factor to be applied for civil works;

C<sub>n</sub> is the index value for the relevant month for Cement as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

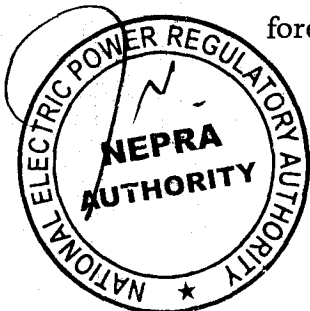
S<sub>n</sub> is the index value for the relevant month for Steel Bar & Sheets as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

F<sub>n</sub> is the index value for the relevant month for Diesel Oil as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

L<sub>n</sub> is the index value for the relevant month for Mason (Raj) for Rawalpindi as per the Wage Rates published in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

Co, So, Fo and Lo are the reference values of the price indices for Cement, Steel Bar & Sheets, Diesel Oil and Mason (Raj) respectively as available at the time of financial close of the project.

The One Time Adjustment of Civil Works will not be applied on items priced in foreign currency.



**b. Adjustment in Interest During Construction:**

Interest during construction the schedule of which is attached as Annex-III shall be re-established at COD by applying 3 months LIBOR of last day of the preceding quarter (plus spread of 4.54% thereon). The Debt-Equity Ratio and draw-down / phasing schedule, shall not be allowed to change at COD. In addition, the phasing of Civil Works Cost should also be in conformity with the draw-down / phasing schedule shown for calculation of Interest During Construction.

**c. Adjustment due to Custom Duties and Cess:**

In the approved bid rate of Rs 8.2658 per kWh custom duties and cess of Rs 112.12 million @ 6.05% has been assumed of the relevant offshore portion of EPC cost by the Successful Bidder. The same shall be subject to adjustment to the extent of the variation in the custom duties and cess rate only. No Adjustment on this account shall be allowed in case the principal amount on which the custom duties have been assumed is more than what has been quoted in the tariff.

**d. Adjustment due to Variation in Net Capacity:**

The reference tariff has to be quoted on the basis of net capacity. All the tariff components of capacity charge shall be adjusted at the time of COD based upon the Capacity tests to be carried out for determination of contracted capacity. Adjustment shall not be made if the net output is established less than the installed capacity minus auxiliary consumption established for the project under and in accordance with the terms of the PPA.

**e. Adjustment in Insurance:**

The insurance cost for the minimum cover required under contractual obligations with the Power Purchaser not exceeding 1% of the EPC cost shall be treated as pass through.

**II. Indexations:**

Following indexations shall be applicable to the reference tariff:

**i- Return on Equity (ROE):**

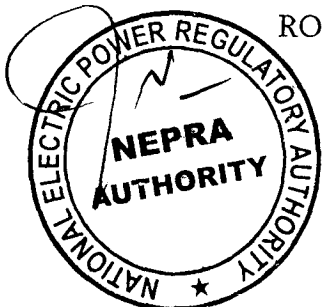
After COD, ROE component of tariff will be quarterly indexed on account of variation in PKR/US\$ parity according to the following formula:

$$\text{ROE(Rev)} = \text{ROE(Ref)} * \text{ER(Rev)} / \text{ER(Ref)}$$

Where;

$$\text{ROE(Rev)} = \text{Revised ROE Component of Tariff}$$

$$\text{ROE(Ref)} = \text{ROE Component of Tariff established at the time of COD}$$



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ER(Rev) = The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan  
ER(Ref) = The reference TT & OD selling rate at Reference Date

**ii- Indexation applicable to O&M:**

The O&M component of tariff will be adjusted on account of local Inflation (CPI) and foreign inflation (US CPI) and exchange rate quarterly on 1st July, 1st October, 1st January and 1st April based on the latest available information with respect to CPI notified by the Pakistan Bureau of Statistics (PBS), US CPI issued by US Bureau of Labor Statistics and revised TT & OD selling rate of US Dollar notified by the National Bank of Pakistan as per the following mechanism

$$F \quad V. = F \quad V. \quad O\&M \quad (REF) * US \quad CPI(REV) / US \quad CPI \quad O\&M(REV) \quad (REF)*ER(REV)/ER(REF)$$

$$L \quad F. \quad O\&M(REV) = L \quad F. \quad O\&M \quad (REF) * CPI \quad (REV) / CPI \quad (REF)$$

$$F \quad F. \quad O\&M(REV) = F \quad F. \quad O\&M \quad (REF) * US \quad CPI(REV) / US \quad CPI(REF)*ER(REV)/ ER \quad (REF)$$

Where:

F V. = The revised Variable O&M Foreign Component of tariff  
L F. O&M(REV) = The revised Fixed O&M Local Component of tariff  
F F. O&M(REV) = The revised Fixed O&M Foreign Component of tariff  
F V. O&M(REF) = The reference Variable O&M Foreign Component of tariff  
L F. O&M(REF) = The reference Fixed O&M Local Component of tariff  
F F. O&M(REF) = The reference Fixed O&M Foreign Component of tariff  
CPI(REV) = The revised CPI (General)  
CPI(REF) = The reference CPI (General) for the month of [ ]  
US CPI(REV) = The revised US CPI (All Urban Consumers)  
US CPI(REF) = The reference US CPI (All Urban Consumers) for the month of [ ]  
ER(REV) = The revised TT & OD selling rate of US dollar  
ER(REF) = The reference TT & OD selling rate at Reference Date

**iii- Indexation for LIBOR/KIBOR variation**

The interest part of capacity charge component will remain unchanged throughout the term except for the adjustment due to variation in interest rate as a result of variation in 3 months LIBOR according to the following formula:



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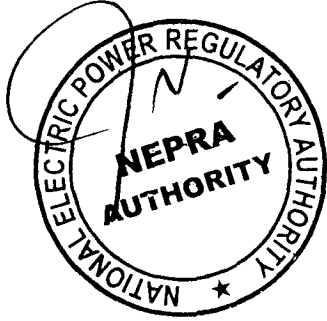
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$$\Delta I = P(\text{REV}) * (\text{LIBOR}(\text{REV}) - 0.8716\% / 4)$$

Where:

$\Delta I$  = the variation in interest charges applicable corresponding to variation in 3 months LIBOR.  $\Delta I$  can be positive or negative depending upon whether  $\text{LIBOR}(\text{REV})$  is  $>$  or  $<$  [ %]. The interest payment obligation will be enhanced or reduced to the extent of  $\Delta I$  for each quarter under adjustment applicable on quarterly basis.

$P(\text{REV})$  = The outstanding principal (as indicated in the attached debt service schedule to this order) on a quarterly basis on the relevant quarterly calculation date. Period 1 shall commence on the date on which the 1st installment is due after availing the grace period.



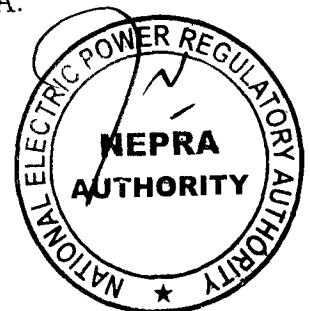
**iv- Water Use Charge:**

The Water Use Charge at the rate of Rs. 0.425 per kWh shall be paid by the SHL to the GOKP as per GOP Policy, amended from time to time.

**III. Other Terms and Conditions of Tariff**

- i- All plant and equipment shall be new and shall be designed, manufactured and tested in accordance with the acceptable standards.
- ii- The verification of the new machinery will be done by the independent engineer at the time of the commissioning of the plant duly verified by the power purchaser.
- iii- No provision for income tax, workers profit participation fund and workers welfare fund, any other tax, levy, charge, surcharge or other governmental impositions except the customs duties and cess have been accounted for in the tariff. If the SHL is obligated to pay any tax the exact amount will be reimbursed by power purchaser on production of original filing documents. However, withholding tax on dividend will not be passed through under this tariff.
- iv- No corporate income tax and no minimum turnover tax have been assumed.
- v- The plant availability will be not less than 93% for the first two years from the COD and 95% for the term of the Project.
- vi- The offered tariff shall be applicable for the term of 30 years from the date of commercial operation (COD).

- vii- No adjustment shall be allowed in this tariff to account for financial impact of any delay in project construction. However, the failure of the Sponsors to complete construction within the stipulated time will not invalidate the tariff granted to it.
- viii- The point of delivery will be the inter-connection point as per the PPA.
- ix- The grid interconnection study shall be approved by the power purchaser/NTDC.
- x- The dispatch shall be at appropriate voltage level mutually agreed between the power purchaser and the power producer.
- xi- The land shall be purchased / leased by the SHL, cost of which is already included in the tariff and which shall not be subject to adjustment
- xii- The tariff is based on financing plans proposed by the SHL. The SHL may change their lenders and financing plans with the prior written approval of PEDO/PPIB, however without any adverse change in the financing terms, tariff, GoP/Power purchaser obligation and project implementation schedule. The Debt-Equity Ratio and draw-down / phasing schedule, as submitted to NEPRA shall not be allowed to be changed at COD.
- xiii- In case the negotiated spread over LIBOR/KIBOR by the SHL is less than that proposed at the time of bidding, the saving in the spread over LI BOR/KIBOR shall be shared by the power purchaser and the power producer in the ratio of 60:40 respectively. The SHL/power producer shall submit relevant authentic documentary evidences to NEPRA, for the aforesaid adjustment within 15 days of COD.
- xiv- No adjustment for duties and/or taxes imposed either on the SHL or on third parties such as contractors, suppliers, etc. of the Project shall be allowed at COD.
- xv- The Contract Capacity for the purpose of calculation of Reference Tariff is the net capacity as committed by the SHL in its application at the Reference Hydrological Conditions.
- xvi- NTDC will be responsible for financing, constructing, operating and maintaining the interconnection to the grid unless agreed otherwise between the parties in accordance with the applicable regulations of NEPRA.
- xvii- General assumptions, which are not covered in this RFP and NEPRA's applicable documents may be dealt with as per the standard terms of the PPA.



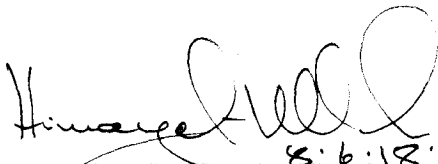
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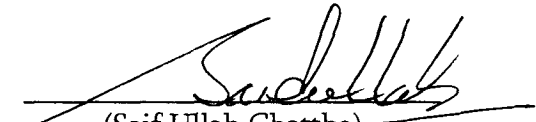
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The Authority, in exercise of the powers conferred by Section 31 (7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997), and Regulation 12 of National Electric Power Regulatory Authority Competitive Bidding Tariff (Approval Procedure) Regulations, 2014 read with all applicable law and all other powers enabling it in this behalf, and after taking into consideration all the submissions made by the parties, issues raised, evidence/record produced during the proceedings, and all other relevant material, hereby issues this determination.


AUTHORITY

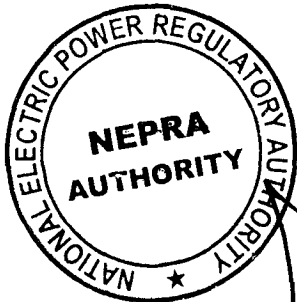
  
8.6.18  
(Himayat Ullah Khan)  
Member

  
11/6/18  
(Rehmatullah)  
Member

  
11.6.2018  
(Saif Ullah Chattha)  
Member

—  
(Syed Masood ul Hassan Naqvi)  
Vice Chairman

  
(Brig. (R) Tariq Sadozai)  
Chairman



14-6-18

**SAIFCO HydroPower Ltd.**  
**Reference Tariff Table**

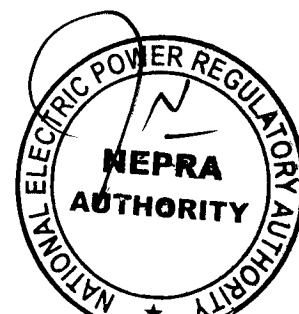
Year	Energy purchase price - EPP (Rs./KWh)				Capacity purchase price CPP (Rs./KW/Month)								Capacity charge at 58.81% plant factor	Total Tariff	
	WUC	Variable O&M		Total	Fixed O&M			Insurance	RoE	Loan Re-Payment	Interest Charges	Total CPP		Rs./KWh	Rs./KWh
		Foreign	Local		Foreign	Local	Total								
1	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	1,628.756	1,103.365	4,169.808	9.713	10.4011	9.9342
2	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	1,718.702	1,013.418	4,169.808	9.713	10.4011	9.9342
3	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	1,813.616	918.504	4,169.808	9.713	10.4011	9.9342
4	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	1,913.771	818.349	4,169.808	9.713	10.4011	9.9342
5	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	2,019.458	712.662	4,169.808	9.713	10.4011	9.9342
6	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	2,130.981	601.140	4,169.808	9.713	10.4011	9.9342
7	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	2,248.662	483.458	4,169.808	9.713	10.4011	9.9342
8	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	2,372.843	359.278	4,169.808	9.713	10.4011	9.9342
9	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	2,503.881	228.239	4,169.808	9.713	10.4011	9.9342
10	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	2,642.156	89.965	4,169.808	9.713	10.4011	9.9342
11	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
12	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
13	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
14	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
15	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
16	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
17	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
18	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
19	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
20	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
21	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
22	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
23	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
24	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
25	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
26	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
27	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
28	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
29	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
30	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	1,537.128	3.581	4.2685	4.0769
Average															
1--10	0.4250	0.2628	-	0.6878	135.382	135.382	270.764	196.646	970.279	2,099.282	632.838	4,169.808	9.7133	10.4011	9.9342
11--30	0.4250	0.2628	-	0.6878	164.922	164.922	329.843	196.646	1,010.639	-	-	3,906.540	3.5806	4.2685	4.0769
1--30	0.4250	0.2628	-	0.6878	155.075	155.075	310.150	196.646	997.186	699.761	210.946	3,643.272	5.6249	6.3127	6.0293
Levelized															
1--30	0.4250	0.2628	-	0.6878	145.667	145.667	291.335	196.646	984.332	1,312.101	468.726	3,253.138	7.5780	8.2658	7.8948

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**SAIFCO HydroPower Ltd.**  
**Debt Servicing Schedule (Foreign Currency Loan)**

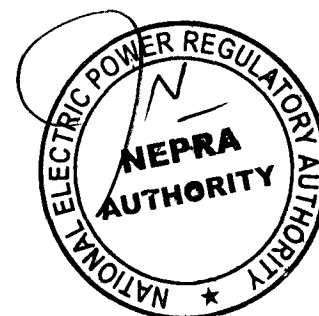
Period	Principal	Principal Repayment	Interest	Balance	Total debt service	Principal repayment	Interest	Debt servicing
	Million US \$					Rs./kWh/M	Rs./kWh/M	Rs./kWh/M
Q1	245.4176	4.6647	3.3203	240.7528	7.9850			
Q2	240.7528	4.7278	3.2571	236.0250	7.9850			
Q3	236.0250	4.7918	3.1932	231.2332	7.9850			
Q4	231.2332	4.8566	3.1284	226.3765	7.9850			
<b>Total of Year 1</b>		<b>19.0410</b>	<b>12.8989</b>		<b>31.9400</b>	<b>1,628.7556</b>	<b>1,103.3647</b>	<b>2,732.1202</b>
Q1	226.3765	4.9223	3.0626	221.4542	7.9850			
Q2	221.4542	4.9889	2.9961	216.4652	7.9850			
Q3	216.4652	5.0564	2.9286	211.4088	7.9850			
Q4	211.4088	5.1248	2.8601	206.2839	7.9850			
<b>Total of Year 2</b>		<b>20.0926</b>	<b>11.8474</b>		<b>31.9400</b>	<b>1,718.7022</b>	<b>1,013.4181</b>	<b>2,732.1202</b>
Q1	206.2839	5.1942	2.7908	201.0898	7.9850			
Q2	201.0898	5.2644	2.7205	195.8253	7.9850			
Q3	195.8253	5.3357	2.6493	190.4896	7.9850			
Q4	190.4896	5.4079	2.5771	185.0818	7.9850			
<b>Total of Year 3</b>		<b>21.2022</b>	<b>10.7378</b>		<b>31.9400</b>	<b>1,813.6160</b>	<b>918.5042</b>	<b>2,732.1202</b>
Q1	185.0818	5.4810	2.5040	179.6008	7.9850			
Q2	179.6008	5.5552	2.4298	174.0456	7.9850			
Q3	174.0456	5.6303	2.3547	168.4153	7.9850			
Q4	168.4153	5.7065	2.2785	162.7088	7.9850			
<b>Total of Year 4</b>		<b>22.3730</b>	<b>9.5669</b>		<b>31.9400</b>	<b>1,913.7714</b>	<b>818.3488</b>	<b>2,732.1202</b>
Q1	162.7088	5.7837	2.2013	156.9251	7.9850			
Q2	156.9251	5.8620	2.1230	151.0631	7.9850			
Q3	151.0631	5.9413	2.0437	145.1218	7.9850			
Q4	145.1218	6.0216	1.9634	139.1002	7.9850			
<b>Total of Year 5</b>		<b>23.6086</b>	<b>8.3314</b>		<b>31.9400</b>	<b>2,019.4578</b>	<b>712.6624</b>	<b>2,732.1202</b>
Q1	139.1002	6.1031	1.8819	132.9971	7.9850			
Q2	132.9971	6.1857	1.7993	126.8114	7.9850			
Q3	126.8114	6.2694	1.7156	120.5421	7.9850			
Q4	120.5421	6.3542	1.6308	114.1879	7.9850			
<b>Total of Year 6</b>		<b>24.9123</b>	<b>7.0276</b>		<b>31.9400</b>	<b>2,130.9806</b>	<b>601.1396</b>	<b>2,732.1202</b>
Q1	114.1879	6.4401	1.5448	107.7477	7.9850			
Q2	107.7477	6.5273	1.4577	101.2205	7.9850			
Q3	101.2205	6.6156	1.3694	94.6049	7.9850			
Q4	94.6049	6.7051	1.2799	87.8998	7.9850			
<b>Total of Year 7</b>		<b>26.2881</b>	<b>5.6519</b>		<b>31.9400</b>	<b>2,248.6622</b>	<b>483.4580</b>	<b>2,732.1202</b>
Q1	87.8998	6.7958	1.1892	81.1040	7.9850			
Q2	81.1040	6.8877	1.0973	74.2163	7.9850			
Q3	74.2163	6.9809	1.0041	67.2353	7.9850			
Q4	67.2353	7.0754	0.9096	60.1600	7.9850			
<b>Total of Year 8</b>		<b>27.7398</b>	<b>4.2002</b>		<b>31.9400</b>	<b>2,372.8426</b>	<b>359.2776</b>	<b>2,732.1202</b>
Q1	60.1600	7.1711	0.8139	52.9889	7.9850			
Q2	52.9889	7.2681	0.7169	45.7208	7.9850			
Q3	45.7208	7.3664	0.6186	38.3543	7.9850			
Q4	38.3543	7.4661	0.5189	30.8882	7.9850			
<b>Total of Year 9</b>		<b>29.2717</b>	<b>2.6682</b>		<b>31.9400</b>	<b>2,503.8808</b>	<b>228.2394</b>	<b>2,732.1202</b>
Q1	30.8882	7.5671	0.4179	23.3211	7.9850			
Q2	23.3211	7.6695	0.3155	15.6516	7.9850			
Q3	15.6516	7.7732	0.2118	7.8784	7.9850			
Q4	7.8784	7.8784	0.1066	(0.0000)	7.9850			
<b>Total of Year 10</b>		<b>30.8882</b>	<b>1.0517</b>		<b>31.9400</b>	<b>2,642.1555</b>	<b>89.9647</b>	<b>2,732.1202</b>



## SAIFCO HydroPower Ltd.

## Summary of Disbursement Schedule and Interest During Construction (IDC)

Year	Quarter	Expenditure		Interest Rate	Interest During Construction	Phasing %
		Currency	Amount			
1	Q1	US \$	4,625.14	5.41%	62.5735	18.00%
	Q2	US \$	9,250.28	5.41%	125.1470	18.00%
	Q3	US \$	13,361.51	5.41%	180.7679	16.00%
	Q4	US \$	15,931.03	5.41%	215.5310	10.00%
<b>Total of 1<sup>st</sup> Year</b>					<b>584.02</b>	
2	Q1	US \$	17,215.80	5.41%	232.9125	5.00%
	Q2	US \$	18,500.56	5.41%	250.2940	5.00%
	Q3	US \$	19,785.32	5.41%	267.6756	5.00%
	Q4	US \$	21,070.08	5.41%	285.0571	5.00%
<b>Total of 1<sup>st</sup> Year</b>					<b>1,035.94</b>	
3	Q1	US \$	21,840.93	5.41%	295.4860	3.00%
	Q2	US \$	22,611.79	5.41%	305.9149	3.00%
	Q3	US \$	23,195.30	5.41%	313.8093	2.27%
	Q4	US \$	23,709.21	5.41%	320.7619	2.00%
<b>Total of 1<sup>st</sup> Year</b>					<b>1,235.97</b>	
4	Q1	US \$	24,223.11	5.41%	327.7145	2.00%
	Q2	US \$	24,737.02	5.41%	334.6671	2.00%
	Q3	US \$	25,250.92	5.41%	341.6197	2.00%
	Q4	US \$	25,695.22	5.41%	347.6306	1.73%
<b>Total of 1<sup>st</sup> Year</b>					<b>1,351.63</b>	
<b>Total (Year 1 to Year 4)</b>					<b>4,207.56</b>	<b>100.00%</b>



*[Handwritten signature]*

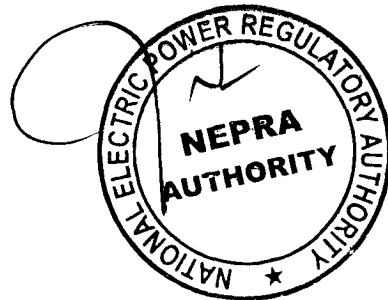
*[Handwritten initials]*

**Adjustment in the cost of Tunnelling Works due to Geological Conditions**

- a. Subject to the verification of the Re-opener Verifier, cost variation due to geological conditions related to underground tunnelling works will be allowed at Commercial Operation Date.
- b. The cost of the Tunnelling Work shall be allowed to vary depending on the category of rock encountered during construction of tunnels. The increase or decrease in the cost shall be subject to the baseline conditions given below.

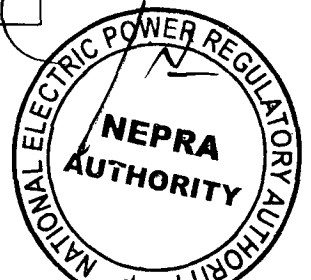
Sr.no	Rock	Rock Class		Tunnel Segment Length in Percentage %	RMR	Q	Quantity in m3	Unit Rate Rs./m3 of Tunnel	Total Cost of Construction Rs	Total Cost of Construction US\$*
	Classification									
1	Category A	R1	Exceptional Good	50%	>63.43	>4.9	673,850	6,800	4,582,180,000.00	43,764,852
2	Category B	R2	Good		>61	>4.2	38,250	9,900	378,675,000.00	3,616,762
3	Category C	R3	Fair	30%	>41	4.6	3,000	24,800	74,400,000.00	710,602
4	Category D	R4	Poor	19%	<39	0.09-0.05	42,850	18,786	804,980,100.00	7,688,444
5	Category F	R5	Very Poor		<33	<0.06	354,371	3,217	1,140,011,507.00	10,888,362
6	Category E	R6	Excavation in overburden	1%	<17	<0.04	13,789	5,600	77,218,400.00	737,521
<b>Total</b>							<b>1,126,110</b>		<b>7,057,465,007</b>	<b>67,406,543</b>

*\*This has been converted at the RFP given PKR to US\$ exchange rate of 104.7 instead of 104.54 mentioned by SHL*



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SAIFCO HYDROPOWER LIMITED								
Month	Reference values for monthly Escalation for Shigokas Hydro Power Project							
	PKR (Million)							
	Fixed	Cement	Steel	Fuel	Labour	Total Reference Amount	Escalated Amount	Total Final Amount
U	V	W	Y	Z	Tn	Pn	Tfn = Tn+Pn	
1	670.976215	130.286644	114.652246	191.521366	195.429966	1302.866437		
2	157.630730	30.607909	26.934960	44.993626	45.911863	306.079087		
3	155.987855	30.288904	26.654235	44.524689	45.433356	302.889038		
4	234.645774	45.562286	40.094812	66.976561	68.343429	455.622862		
5	170.748603	33.155069	29.176460	48.737951	49.732603	331.550686		
6	157.630730	30.607909	26.934960	44.993626	45.911863	306.079087		
7	159.199160	30.912458	27.202963	45.441314	46.368687	309.124582		
8	219.885029	42.696122	37.572588	62.763300	64.044183	426.961222		
9	164.973881	32.033763	28.189712	47.089632	48.050645	320.337633		
10	225.659754	43.817428	38.559337	64.411619	65.726142	438.174280		
11	204.763116	39.759828	34.988649	58.446948	59.639742	397.598283		
12	200.390467	38.910770	34.241478	57.198832	58.366155	389.107702		
13	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
14	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
15	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
16	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
17	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
18	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
19	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
20	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
21	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
22	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
23	174.363344	33.856960	29.794125	49.769731	50.785440	338.569600		
24	169.321028	32.877870	28.932525	48.330468	49.316804	328.778695		
25	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
26	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
27	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
28	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
29	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
30	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
31	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
32	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
33	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
34	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
35	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
36	135.489628	26.308666	23.151626	38.673739	39.462999	263.086657		
37	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
38	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
39	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
40	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
41	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
42	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
43	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
44	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
45	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
46	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
47	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
48	78.723971	15.286208	13.451863	22.470726	22.929312	152.862080		
<b>Total</b>	<b>7380.372320</b>	<b>1433.082004</b>	<b>1261.112163</b>	<b>2106.630546</b>	<b>2149.623006</b>	<b>14330.820038</b>		



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