



Thar Coal & Energy Board

Government of Sindh

No. TCEB/Registrar/2-1/2014/1047
Dated: 2nd October, 2015

To,
✓ The Secretary,
Energy Department,
Government of Sindh,
Karachi.

Subject: DECISION OF THAR COAL & ENERGY BOARD IN THE MATTER OF MOTION FOR LEAVE FOR REVIEW OF CONTRACT STAGE TARIFF DATED JUNE 05, 2015 FOR SINDH ENGRO COAL MINING COMPANY MINE OF 3.8 MTPA UP TO 6.5 MTPA AT BLOCK II THAR COALFIELDS, DISTRICT THARPARKAR, SINDH, PAKISTAN.

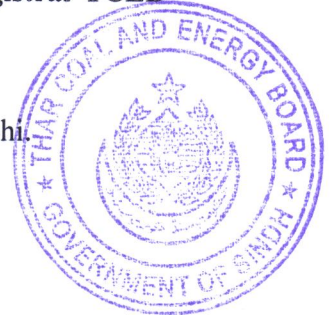
I am directed to enclose herewith the subject Decision of Thar Coal and Energy Board (12 pages) in Case No. TCEB/Registrar/2-1/2014.

2. The Decision is being intimated to the Government of Sindh for the purpose of the Notification of the subject decision in the Official Gazette (Extra Ordinary) pursuant to Rule 10(9) of Thar Coal Tariff Determination Rules, 2014.
3. Please note that only 'Revised Order' of Thar Coal and Energy Board at page 05 onwards along with Annexures A1, A2 and A3 needs to be notified in the Official Gazette (Extra Ordinary).

Shahab Qamar Ansari
2/10/15
(Shahab Qamar Ansari)
Registrar TCEB

A copy is forwarded for information to:

1. Chief Secretary Sindh, Karachi.
2. Principal Secretary to Chairman TCEB/ Chief Minister Sindh, Karachi.
3. ES to Managing Director Thar Coal and Energy Board, Karachi.
4. Master File





Thar Coal & Energy Board
Government of Sindh

No TCEB/Registrar/2-1/2014
September 29, 2015

**DECISION OF THAR COAL & ENERGY BOARD IN
THE MATTER OF MOTION FOR LEAVE FOR REVIEW
OF CONTRACT STAGE TARIFF DATED JUNE 05,
2015 FOR SINDH ENGRO COAL MINING COMPANY
MINE OF 3.8 MTPA UP TO 6.5 MTPA AT BLOCK II
THAR COALFIELDS, DISTRICT THARPARKAR,
SINDH, PAKISTAN**





Thar Coal & Energy Board Government of Sindh

No TCEB/Registrar/2-1/2014
August 08, 2015

**Decision of Thar Coal & Energy Board in the Matter of Motion for
Leave for Review of Contract Stage Tariff dated June 05, 2015 for
Sindh Engro Coal Mining Company Mine of 3.8 MTPA up to 6.5
MTPA at Block II Thar Coalfields, District Tharparkar, Sindh,
Pakistan**

Thar Coal Tariff Determination Committee

Constituted in Pursuance of Rule 3(1) of Thar Coal Tariff Determination Rules, 2014

Dr Abdul Ghani Pathan
Member

Mr Sultan Farooq Ahmed Khan
Member

Mr Ejaz Ahmed Khan
Member / Presiding Officer





Thar Coal & Energy Board Government of Sindh

No TCEB/Registrar/2-1/2014
September 29, 2015

In pursuance of the Rule 10(5) of the Thar Coal Tariff Determination Rules, 2014, it is certified that the Thar Coal & Energy Board, on the recommendation of the Thar Coal Tariff Determination Committee, has approved the Decision regarding Motion for Leave for Review of Determination of Contract Stage Tariff for Sindh Engro Coal Mining Company Mine of 3.8 MTPA up to 6.5 MTPA at Block II Thar Coalfields, District Tharparkar, Sindh, Pakistan, appended in the following pages.

Ejaz Ahmed Khan

Managing Director
Thar Coal & Energy Board





Thar Coal & Energy Board

Government of Sindh

1. INTRODUCTION

1.1. The Thar Coal and Energy Board (TCEB) vide its decision No. TCEB/Registrar/2-1/2014 dated June 05, 2015 determined the Contract Stage Coal Tariff for Sindh Engro Coal Mining Company (SECMC) for a 3.8 MTPA to 6.5 MTPA mining capacity at Block II Thar Coalfield District Tharparkar, Sindh, Pakistan. The Coal Tariff Determination Order of TCEB was notified vide Notification No. SO(COORD)/ED(Coal)/4-3/2015 dated June 09, 2015 in the Sindh Government Official Gazette. SECMC on June 30, 2015 filed motion for leave to review the decision of TCEB dated June 05, 2015.

1.2. The TCEB considered and admitted the review motion on July 16, 2015 in accordance with Thar Coal Tariff Determination Rules 2014.

2. GROUNDS OF REVIEW MOTION

The petitioners filed the review on the following grounds:

- 2.1. Debt:Equity Ratio
- 2.2. Treatment of non-EPC Costs
- 2.3. Reimbursement of Taxes & Duties by the Coal Off-taker
- 2.4. Working Capital Requirement
- 2.5. Indexation of Power Cost for mix of Grid & Diesel Power
- 2.6. Treatment of GoS Performance & Force Majeure Events; and
- 2.7. Calculation issues & Clarifications

3. HEARING

The Petitioner was afforded a hearing in the matter on July 28, 2015. A presentation was made by SECMC on various aspects of their motion for review.

4. DISCUSSION OF THE ISSUES

On the basis of the issues raised by the petitioners, the determination of TCEB is provided in the succeeding paragraphs.

4.1. Debt:Equity Ratio

4.1.1. SECMC petitions that:

- TCEB has fixed the Debt to Equity Ratio in the Tariff Determination at 80:20 with the provision that SECMC will be allowed a Debt to Equity ratio of 75:25 only if financing requirements necessitate injection of capital beyond USD 700 Million (i.e. the cover provided by the Sovereign Guarantee). The Tariff Determination further states that any capital injection in excess of 25% will be treated as commercial debt to the project at the prevailing rates but not exceeding KIBOR plus 3%.





Thar Coal & Energy Board Government of Sindh

- Mining is being undertaken in Pakistan for the first time. While the Project is backed by a Sovereign Guarantee, the Project is nevertheless categorized as a 'high risk' Project. As per the lenders consortium, an 80:20 Debt to Equity ratio is the highest leverage level and is usually allowed by banks for blue-chip ongoing companies with certainty of operations. Since the Project is a greenfield project, the lenders are not willing to extend such leverage to the Project. Furthermore, considering the fact that a project of this magnitude is being undertaken for the first time in Pakistan, the lenders want to structure this as a bankable project finance transaction and categorize the Sovereign Guarantee as only a secondary comfort.
- The term sheets received from local as well as Chinese lenders clearly state that the Debt to Equity Ratio of 70:30 should be maintained. Nevertheless, we have already initiated negotiations with the lenders to revise the Debt to Equity ratio upwards and, despite our best efforts, the Debt to Equity ratio of 80:20 may not be acceptable to the lenders. The lenders are willing to allow a Debt to Equity ratio of up to 75:25.

Accordingly, SECMC petitions TCEB to permit a Debt:Equity ratio of 75:25 at the Contract Stage Determination as that will facilitate and accelerate the achievement of Financial Close of the project.

4.1.2. TCEB has reviewed the plea of SECMC and taken due consideration of their standpoint. Further the Board notes that Debt Equity ratio of 80:20 is a special regulatory dispensation by SBP for infrastructure projects. Additionally, the Government of Pakistan has provided a Sovereign Guarantee of USD 700 million for facilitation of Project Debt for the SECMC project. The facility becomes frivolous if the local Banks do not recognize the structure and insist on higher equity stakes in the project. This is especially important where the full cover of sovereign debt also backs up the project debt. Additionally, if the project is loaded with higher equity of up to 25% it potentially has an impact of burdening the coal tariff by an increase of around USD 1.5 per ton. Accordingly, SECMC management and their Lenders also have to recognize the sustainability of business plan based upon a higher indigenous coal price and work towards integrating efficiencies in the structure of the coal price.

Notwithstanding, the present status of SECMC consultation with Lenders does not warrant a definitive fixation of debt terms as per the Motion for Leave for Review Petition of SECMC. The Petitioner is advised of an already existing provision in the Thar Coal Pricing Framework under which a review of tariff at Financial Close is available. The applicable clause of the Framework is quoted as follows:

Quote:

The Reference Coal Tariff shall be determined on the basis of certain assumptions with regards to debt terms including tenor, spread, and financing fees & charges. As long as the Licensee is able to secure financial closure for the project within the limits defined by these assumptions, the Reference Coal Tariff shall be trued up at the time of COD. However, if financial closure unable to be secured within the said limits, the Licensee shall have the option to file a limited scope Petition for Approval of Revised Financing Terms, on the approval of which the Reference Coal Tariff shall be revised.





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4.2. Treatment of non-EPC Costs

4.2.1. SECMC submitted that in their tariff petition to the TCEB, the costs were divided into two categories, i.e. controllable costs and uncontrollable costs. The Tariff Determination in some clauses seeks to cap the Non-EPC costs, excluding costs in respect of land acquisition and village relocation, and in some clauses seeks to actualize such costs. Additionally, there is a certain degree of ambiguity with respect to certain cost items, such as, legal and professional.

In view of the foregoing, SECMC seeks clarification as to how the concept of 'controllable' and 'uncontrollable' costs will be applied at the Commercial Operations Date of the Project. Additionally, SECMC Petitions that rather than having individual caps in respect of certain costs, there should be an overall aggregate cap on such costs.

4.2.2. The Determination is clear in this respect as only one category of 'uncontrollable' costs is identified as that relates to relocation costs of villages. All other costs are 'controllable' and subject to periodic review and audit control of the Petitioner's internal systems and subsequent reporting mechanism to TCEB. While some controllable costs are capped, they nonetheless will be subject to auditory review and reporting formats essentially because; (a) the exigencies of a cost-plus tariff regime require so and, (b) the open pit mining business in Pakistan has as yet to establish credible cost benchmarks and cost indices for various non-EPC Costs. Pending the maturity of open cast mining operations in Pakistan it is imperative that the mine developers adhere to a structured cost control and reporting mechanism.

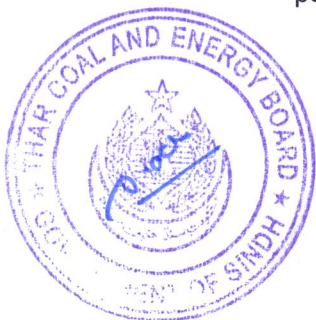
In essence all major cost heads will be subject to distinct controls notwithstanding the limits and caps as established in the Determination.

4.3. Reimbursement of Taxes & Duties by the Coal Off-taker

4.3.1. As per clause (x) of General Conditions of the Tariff Determination, any taxes, duties, levies, charges, surcharges or other governmental impositions paid by the SECMC (including those on account of Workers Welfare Fund and Workers Profit Participation Fund) are to be subsequently reimbursed by the Coal Purchaser on the basis of original tax receipts. Such taxes, duties, levies, charges, surcharges or other governmental impositions, payable by SECMC in respect of the Project, have not been accounted for in the Coal Tariff. We understand that reimbursement for such taxes, duties or other levies paid by SECMC in respect of the Project cannot be reimbursed by Coal Purchaser unless the same are treated as pass-through items under the Coal Tariff. Further, in case of reimbursements of such taxes from the Coal Purchaser, it would be difficult for the Coal Purchaser to recover the same from its tariff.

In view of the foregoing, it is requested that the TCEB allows all taxes, duties and other levies payable by SECMC in respect of the Project to be treated as a Pass-Through Item in the Coal Tariff over the relevant time period depending on the nature of such expenses.

4.3.2. The Determination already recognizes the concept of unforeseen duties and taxes as a pass-through in the tariff regime. In the event such situation emerges the tariff will be trued up as per established procedure.





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4.4. Working Capital Requirement

4.4.1. SECMC submits an incremental plea for accommodating mines fixed capacity payments within the permissible working capital allocation for one months fuel price storage. The plea emanates from a condition wherein the downstream power plant seems unable to commit to capacity payments to the mine primarily because the power purchaser is refusing to commit this component in the capacity payments of the power tariff.

4.4.2. TCEB has carefully examined this situation and is of the opinion that:

- The position of accommodating working capital for coal storage as per SECMC's petition has already been accepted and incorporated in the Determination.
- The review petition reflects a "reverse-flow" condition not linked with the Determination and originates from a condition triggered by a downstream contract.
- Accommodating the blow-back effect of subsequent contracts and agreements is unjustifiable.
- SECMC is advised to resolve this aspect with the power plant who in turn may appropriate this aspect within the ambit of the Power Purchase Agreement and seek necessary adjudication from NEPRA.

The Petitioner's request for incorporating capacity price in working capital requirements cannot be acceded to for reasons stated above.

4.5. Indexation of Power Cost for mix of Grid & Diesel Power

4.5.1. The Determination allows for actualization of the impact of cost of diesel and the proportionate use of diesel and utility power as per periodic reviews. SECMC seeks clarification on the process TCEB will deploy for accruing adjustments in the tariff.

4.5.2. For purposes of clarification it is notified that from the standpoint of Diesel Price and the proportionate mix of Diesel/Utility Power a quarterly review of tariff will be undertaken with appropriate adjustments.

4.6. Treatment of GoS Performance & Force Majeure Events

4.6.1. SECMC petitions that the Coal Tariff should incorporate an automatic trigger a compensatory mechanism in the event of a default in GoS obligations under the Implementation Agreement.

4.6.2. The Determination has already identified this to be an issue that recognizably needs to be addressed in the Implementation Agreement. Essentially the matter needs to be resolved under cover of the Implementation Agreement. In the event of an agreement on events of default and subsequent compensations, SECMC may petition TCEB, with the support and concurrence of GoS for incorporating the agreed compensations within the determination of the coal tariff regime.

4.7. Calculation issues & Clarifications

4.7.1. SECMC identified minor errors in the spreadsheet calculations for coal tariff. These errors are accordingly rectified. The salient numbers of the amended tariff table are tabulated in the Annexures A-1 ~ A-3 here under.





Thar Coal & Energy Board Government of Sindh

5. REVISED ORDER

No. TCEB/Registrar/2-1/2014: The Thar Coal and Energy Board (TCEB) vide its decision No. TCEB/Registrar/2-1/2014 dated June 05, 2015 determined the Contract Stage Coal Tariff for Sindh Engro Coal Mining Company (SECMC) for a 3.8 MTPA to 6.5 MTPA mining capacity at Block II Thar Coalfield District Tharparkar, Sindh, Pakistan. The Coal Tariff Determination Order of TCEB was notified vide Notification No. SO(COORD)/ED(Coal)/4-3/2015 dated June 09, 2015 in the Sindh Government Official Gazette. SECMC on June 30, 2015 filed motion for leave to review the decision of TCEB dated June 05, 2015.

The TCEB has considered the Motion for Review Petition and the following Decision with respect to review petition is adjudicated in accordance with Thar Coal Tariff Determination Rules 2014.

5.1. Debt:Equity Ratio

The Determination Order has addressed the Debt:Equity in the appropriate context and in accordance with the Coal Pricing Framework quoted here below:

Quote:

The Reference Coal Tariff shall be determined on the basis of certain assumptions with regards to debt terms including tenor, spread, and financing fees & charges. As long as the Licensee is able to secure financial closure for the project within the limits defined by these assumptions, the Reference Coal Tariff shall be trued up at the time of COD. However, if financial closure unable to be secured within the said limits, the Licensee shall have the option to file a limited scope Petition for Approval of Revised Financing Terms, on the approval of which the Reference Coal Tariff shall be revised.

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Any potential changes in Debt Equity ratio at the time of Financial Close will be subject to TCEB review and determination once the finalized terms of debt are established.

5.2. Treatment of non-EPC Costs

Notwithstanding the determination and capping of certain costs during Contract Stage Tariff Determination, the Non-EPC Costs, Controllable and Uncontrollable, are subject to review at appropriate stages of tariff review as per the Rules. In essence, all major cost heads will be subject to distinct controls.

5.3. Reimbursement of Taxes & Duties by the Coal Off-taker

The Determination already recognizes the concept of unforeseen duties and taxes as a pass-through in the tariff regime. In the event such situation emerges the tariff will be trued up as per established procedure.





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5.4. Working Capital Requirement

An incremental plea for accommodating mine's fixed capacity payments within the permissible working capital allocation for one month's fuel price storage cannot be acceded to for reasons detailed below:

- Working Capital requirements as petitioned by SECMC in their Contract Stage Tariff are already incorporated in the Tariff Determination Order.
- The review petition reflects a "reverse-flow" condition not linked with the Determination and originates from a condition triggered by a downstream contract i.e. the Power Purchase Agreement.
- SECMC is advised to resolve this aspect with the power plant who in turn may appropriate this aspect within the ambit of the Power Purchase Agreement and seek necessary adjudication from NEPRA.

5.5. Indexation of Power Cost for mix of Grid & Diesel Power

For purposes of clarification it is detailed that from the standpoint of Diesel Price and the proportionate mix of Diesel/Utility Power a quarterly review of tariff will be undertaken with appropriate adjustments.

5.6. Treatment of GoS Performance & Force Majeure Events

The Determination has already identified the potential impact due to non-performance of GoS obligations as an issue that needs to be addressed in the Implementation Agreement. In the event of an agreement on events of default and subsequent compensations, SECMC may petition TCEB, with the support and concurrence of GoS for incorporating the agreed compensations within the determination of the coal tariff regime.

5.7. Calculation issues & Clarifications

SECMC identified minor errors in the spreadsheet calculations for coal tariff. These errors are accordingly rectified and corrected table of tariff attached as Annexures A-1 to A-3.





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Annexure A-1

Annual Profile for Coal Price of 3.8 to 6.5 MTPA Mine Capacity in (USD/ton)

Year	Fuel Cost	Variable O&M	Asset Cost	Royalty	Total Prod	Fixed O&M	Fixed O&M	Insurance	Grid Power	Diesel Power	Cost of Working	Principal Debt	Interest Payment	Equity Returns	Total Capacity	Total
1	6.8171	4.8911	3.0441	-	14.7524	7.9868	7.8663	1.4952	1.5053	0.5731	0.5902	9.6803	14.7121	12.0206	56.4300	71.1824
2	5.7853	4.1806	2.2462	4.1754	16.3874	6.4534	6.2107	1.2112	1.1107	0.6357	0.5876	7.9565	10.3022	8.9914	43.4594	59.8468
3	5.6107	4.0797	1.7797	3.5711	15.0412	6.0446	5.0637	1.0451	0.8769	0.6701	0.5507	7.0128	7.6599	7.2205	36.1444	51.1856
4	5.3341	3.9003	1.7797	3.5072	14.5212	5.7477	4.9779	1.0451	0.8738	0.6701	0.5406	7.7103	6.9624	7.2205	35.7484	50.2696
5	5.0574	3.7209	1.7797	3.4487	14.0067	5.4508	4.9614	1.0451	0.8738	0.6701	0.5306	8.4771	6.1956	7.2205	35.4250	49.4316
6	5.0574	3.7209	1.6868	3.3813	13.8464	5.4508	4.1577	1.0451	0.8738	0.6701	0.5279	9.3202	5.3525	7.2205	34.6187	48.4650
7	5.0574	3.7209	1.6868	3.3813	13.8464	5.4508	4.1577	1.0451	0.8738	0.6701	0.5279	10.2472	4.4255	7.2205	34.6187	48.4650
8	5.0574	3.7209	1.6868	3.3813	13.8464	5.4508	4.1577	1.0451	0.8738	0.6701	0.5279	11.2663	3.4064	7.2205	34.6187	48.4650
9	4.9223	3.6215	1.6868	3.3633	13.5940	5.4508	4.1577	1.0451	0.8738	0.6701	0.5230	12.3868	2.2859	7.2205	34.6137	48.2078
10	4.9223	3.6215	1.6868	3.3633	13.5940	5.4508	4.1577	1.0451	0.8738	0.6701	0.5230	13.6188	1.0539	7.2205	34.6137	48.2078
11	4.9223	3.6215	1.6868	2.2570	12.4877	5.4508	3.6851	1.0451	0.8738	0.6701	0.5048	0.3669	0.0456	7.2205	19.8628	32.3505
12	4.9223	3.6215	1.6868	2.2411	12.4718	5.4508	3.6794	1.0451	0.8738	0.6701	0.5045	0.1921	0.0141	7.2205	19.6506	32.1224
13	4.9223	3.6215	1.6868	2.2252	12.4559	5.4508	3.6737	1.0451	0.8738	0.6701	0.5043	-	-	7.2205	19.4384	31.8942
14	4.9223	3.6215	1.6868	2.2252	12.4559	5.4508	3.6737	1.0451	0.8738	0.6701	0.5043	-	-	7.2205	19.4384	31.8942
15	4.9223	3.6215	1.6868	2.2252	12.4559	5.4508	3.6737	1.0451	0.8738	0.6701	0.5043	-	-	7.2205	19.4384	31.8942
16	4.9223	3.6215	2.2239	2.2662	13.0339	5.4508	3.6737	1.0451	0.8738	0.6701	0.5138	-	-	7.2205	19.4479	32.4818
17	4.9223	3.6215	2.2239	2.2662	13.0339	5.4508	3.6737	1.0451	0.8738	0.6701	0.5138	-	-	7.2205	19.4479	32.4818
18	4.9223	3.6215	2.2239	2.2662	13.0339	5.4508	3.6737	1.0451	0.8738	0.6701	0.5138	-	-	7.2205	19.4479	32.4818
19	4.9223	3.6215	2.2239	2.2662	13.0339	5.4508	3.6737	1.0451	0.8738	0.6701	0.5138	-	-	7.2205	19.4479	32.4818
20	4.9223	3.6215	2.2239	2.2662	13.0339	5.4508	3.6737	1.0451	0.8738	0.6701	0.5138	-	-	7.2205	19.4479	32.4818
21	4.9223	3.6215	2.2239	2.2662	13.0339	5.4508	3.6737	1.0451	0.8738	0.6701	0.5138	-	-	7.2205	19.4479	32.4818
22	4.9223	3.6215	2.2239	2.2662	13.0339	5.4508	3.6737	1.0451	0.8738	0.6701	0.5138	-	-	7.2205	19.4479	32.4818
23	4.9223	3.6215	-	2.0964	10.6403	5.4508	3.6737	1.0451	0.8738	0.6701	0.4744	-	-	7.2205	19.4085	30.0488
24	4.9223	3.6215	-	2.0964	10.6403	5.4508	3.6737	1.0451	0.8738	0.6701	0.4744	-	-	7.2205	19.4085	30.0488
25	4.9223	3.6215	-	2.0964	10.6403	5.4508	3.6737	1.0451	0.8738	0.6701	0.4744	-	-	7.2205	19.4085	30.0488
26	4.9223	3.6215	-	2.0964	10.6403	5.4508	3.6737	1.0451	0.8738	0.6701	0.4744	-	-	7.2205	19.4085	30.0488
27	4.9223	3.6215	-	2.0964	10.6403	5.4508	3.6737	1.0451	0.8738	0.6701	0.4744	-	-	7.2205	19.4085	30.0488
28	4.9223	3.6215	-	2.0964	10.6403	5.4508	3.6737	1.0451	0.8738	0.6701	0.4744	-	-	7.2205	19.4085	30.0488
29	4.9223	3.6215	-	2.0964	10.6403	5.4508	3.6737	1.0451	0.8738	0.6701	0.4744	-	-	7.2205	19.4085	30.0488
30	4.9223	3.6215	-	2.0964	10.6403	5.4508	3.6737	1.0451	0.8738	0.6701	0.4744	-	-	7.2205	19.4085	30.0488

1-12	5.4399	3.9688	1.9638	2.9529	14.3253	6.0060	5.1102	1.1263	0.9872	0.6530	0.5446	8.4599	6.5345	8.0757	37.4965	51.8218
13-30	4.9223	3.6215	1.5033	2.2112	12.2583	5.4508	3.6737	1.0451	0.8738	0.6701	0.5010	-	-	7.2205	19.4351	31.6935
1-30	5.2964	3.8725	1.8361	2.7473	13.7523	5.8521	4.7120	1.1031	0.9557	0.6577	0.5325	6.1148	4.7231	7.8387	32.4897	46.2420





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Annexure A-2 Annual Profile for Coal Price of 3.8 MTPA Mine Capacity in (USD/ton)																		
Year	Fuel	Variabl	Variable O&M -	Asset	Royalt	Total	Fixed	Fixed O	Insura	Power	Power	Cost of	Principal	Interest	ROE	ROED	Total	Total
1	6.82	1.93	2.96	3.04	0.00	14.75	7.99	7.87	1.50	1.51	0.57	0.59	9.68	14.71	7.73	4.29	56.43	71.18
2	5.95	1.68	2.57	3.04	5.14	18.38	6.99	7.61	1.50	1.51	0.57	0.64	10.64	13.75	7.73	4.29	55.23	73.61
3	5.81	1.64	2.51	1.17	4.96	16.09	6.84	7.56	1.50	1.50	0.57	0.61	11.70	12.69	7.73	4.29	54.99	71.07
4	5.81	1.64	2.51	1.17	4.96	16.08	6.84	7.55	1.50	1.49	0.57	0.61	12.87	11.53	7.73	4.29	54.97	71.05
5	5.81	1.64	2.51	1.17	4.96	16.08	6.84	7.55	1.50	1.49	0.57	0.61	14.14	10.25	7.73	4.29	54.97	71.05
6	5.81	1.64	2.51	1.97	4.91	16.84	6.84	6.18	1.50	1.49	0.57	0.62	15.55	8.84	7.73	4.29	53.60	70.44
7	5.81	1.64	2.51	1.97	4.91	16.84	6.84	6.18	1.50	1.49	0.57	0.62	17.10	7.29	7.73	4.29	53.60	70.44
8	5.81	1.64	2.51	1.97	4.91	16.84	6.84	6.18	1.50	1.49	0.57	0.62	18.80	5.59	7.73	4.29	53.60	70.44
9	5.66	1.59	2.44	1.97	4.89	16.55	6.84	6.18	1.50	1.49	0.57	0.61	20.67	3.72	7.73	4.29	53.60	70.15
10	5.66	1.59	2.44	1.97	4.89	16.55	6.84	6.18	1.50	1.49	0.57	0.61	22.72	1.67	7.73	4.29	53.60	70.15
11	5.66	1.59	2.44	1.97	3.00	14.66	6.84	5.37	1.50	1.49	0.57	0.58	0.00	0.00	7.73	4.29	28.37	43.03
12	5.66	1.59	2.44	1.97	3.00	14.66	6.84	5.37	1.50	1.49	0.57	0.58	0.00	0.00	7.73	4.29	28.37	43.03
13	5.66	1.59	2.44	1.97	3.00	14.66	6.84	5.37	1.50	1.49	0.57	0.58	0.00	0.00	7.73	4.29	28.37	43.03
14	5.66	1.59	2.44	1.97	3.00	14.66	6.84	5.37	1.50	1.49	0.57	0.58	0.00	0.00	7.73	4.29	28.37	43.03
15	5.66	1.59	2.44	1.97	3.00	14.66	6.84	5.37	1.50	1.49	0.57	0.58	0.00	0.00	7.73	4.29	28.37	43.03
16	5.66	1.59	2.44	2.56	3.05	15.30	6.84	5.37	1.50	1.49	0.57	0.59	0.00	0.00	7.73	4.29	28.38	43.68
17	5.66	1.59	2.44	2.56	3.05	15.30	6.84	5.37	1.50	1.49	0.57	0.59	0.00	0.00	7.73	4.29	28.38	43.68
18	5.66	1.59	2.44	2.56	3.05	15.30	6.84	5.37	1.50	1.49	0.57	0.59	0.00	0.00	7.73	4.29	28.38	43.68
19	5.66	1.59	2.44	2.56	3.05	15.30	6.84	5.37	1.50	1.49	0.57	0.59	0.00	0.00	7.73	4.29	28.38	43.68
20	5.66	1.59	2.44	2.56	3.05	15.30	6.84	5.37	1.50	1.49	0.57	0.59	0.00	0.00	7.73	4.29	28.38	43.68
21	5.66	1.59	2.44	2.56	3.05	15.30	6.84	5.37	1.50	1.49	0.57	0.59	0.00	0.00	7.73	4.29	28.38	43.68
22	5.66	1.59	2.44	2.56	3.05	15.30	6.84	5.37	1.50	1.49	0.57	0.59	0.00	0.00	7.73	4.29	28.38	43.68
23	5.66	1.59	2.44	0.00	2.85	12.54	6.84	5.37	1.50	1.49	0.57	0.55	0.00	0.00	7.73	4.29	28.33	40.88
24	5.66	1.59	2.44	0.00	2.85	12.54	6.84	5.37	1.50	1.49	0.57	0.55	0.00	0.00	7.73	4.29	28.33	40.88
25	5.66	1.59	2.44	0.00	2.85	12.54	6.84	5.37	1.50	1.49	0.57	0.55	0.00	0.00	7.73	4.29	28.33	40.88
26	5.66	1.59	2.44	0.00	2.85	12.54	6.84	5.37	1.50	1.49	0.57	0.55	0.00	0.00	7.73	4.29	28.33	40.88
27	5.66	1.59	2.44	0.00	2.85	12.54	6.84	5.37	1.50	1.49	0.57	0.55	0.00	0.00	7.73	4.29	28.33	40.88
28	5.66	1.59	2.44	0.00	2.85	12.54	6.84	5.37	1.50	1.49	0.57	0.55	0.00	0.00	7.73	4.29	28.33	40.88
29	5.66	1.59	2.44	0.00	2.85	12.54	6.84	5.37	1.50	1.49	0.57	0.55	0.00	0.00	7.73	4.29	28.33	40.88
30	5.66	1.59	2.44	0.00	2.85	12.54	6.84	5.37	1.50	1.49	0.57	0.55	0.00	0.00	7.73	4.29	28.33	40.88
1-10	5.9580	1.6787	2.5781	2.0032	4.2289	16.4469	7.0282	7.0799	1.4952	1.4984	0.5704	0.6131	14.2903	10.1022	7.726	4.2941	54.6982	71.1451
11-30	5.6562	1.5921	2.4447	1.7834	2.9879	14.4644	6.8368	5.3673	1.4952	1.4947	0.5693	0.5788	0.00	0.00	7.726	4.2941	28.3628	42.8272
1-30	5.85	1.65	2.53	1.93	3.80	15.76	6.96	6.48	1.50	1.50	0.57	0.60	9.31	6.58	7.73	4.29	45.53	61.2851





Thar Coal & Energy Board Government of Sindh

Annexure A-3
Annual Profile for Coal Price of 6.5 MTPA Mine Capacity in (USD/ton)

Year	Fuel Cost	Variable O&M	Asset Cost	Royalty	Total Prod	Fixed O&M	Fixed O&M	Insurance	Grid Power (80%)	Diesel Power	Cost of Working	Principal Debt	Interest Payment	Equity Returns	Total Capacity	Total
1	5.6506	4.1097	1.7797	3.5933	15.1332	6.0908	5.2428	1.0451	0.8785	0.6712	0.5486	6.6952	7.9775	7.2205	36.3702	51.5034
2	5.6107	4.0797	1.7797	3.5759	15.0460	6.0446	5.1331	1.0451	0.8754	0.6701	0.5470	7.3611	7.3116	7.2205	36.2084	51.2544
3	5.0568	3.7209	1.7797	3.4510	14.0083	5.4523	4.9944	1.0451	0.8738	0.6701	0.5267	8.0932	6.5795	7.2205	35.4557	49.4640
4	5.0568	3.7209	1.7797	3.4183	13.9757	5.4523	4.5596	1.0451	0.8738	0.6701	0.5262	8.8982	5.7745	7.2205	35.0203	48.9960
5	5.0568	3.7209	1.7797	3.3881	13.9455	5.4523	4.1577	1.0451	0.8738	0.6701	0.5257	9.7831	4.8895	7.2205	34.6180	48.5635
6	5.0568	3.7209	1.6868	3.3811	13.8456	5.4523	4.1577	1.0451	0.8738	0.6701	0.5240	10.7561	3.9165	7.2205	34.6163	48.4619
7	4.9893	3.6712	1.6868	3.3721	13.7194	5.4523	4.1577	1.0451	0.8738	0.6701	0.5216	11.8259	2.8468	7.2205	34.6139	48.3333
8	4.9218	3.6215	1.6868	3.3631	13.5933	5.4523	4.1577	1.0451	0.8738	0.6701	0.5191	13.0021	1.6706	7.2205	34.6114	48.2047
9	4.9218	3.6215	1.6868	2.7922	13.0224	5.4523	3.6851	1.0451	0.8738	0.6701	0.5097	6.9921	0.5505	7.2205	26.9993	40.0217
10	4.9218	3.6215	1.6868	2.2568	12.4869	5.4523	3.6851	1.0451	0.8738	0.6701	0.5009	0.3843	0.0282	7.2205	19.8604	32.3474
11	4.9218	3.6215	1.6868	2.2250	12.4551	5.4523	3.6737	1.0451	0.8738	0.6701	0.5004	-	-	7.2205	19.4360	31.8911
12	4.9218	3.6215	1.6868	2.2250	12.4551	5.4523	3.6737	1.0451	0.8738	0.6701	0.5004	-	-	7.2205	19.4360	31.8911
13	4.9218	3.6215	1.6868	2.2250	12.4551	5.4523	3.6737	1.0451	0.8738	0.6701	0.5004	-	-	7.2205	19.4360	31.8911
14	4.9218	3.6215	1.6868	2.2250	12.4551	5.4523	3.6737	1.0451	0.8738	0.6701	0.5004	-	-	7.2205	19.4360	31.8911
15	4.9218	3.6215	1.6868	2.2250	12.4551	5.4523	3.6737	1.0451	0.8738	0.6701	0.5004	-	-	7.2205	19.4360	31.8911
16	4.9218	3.6215	2.2239	2.2660	13.0331	5.4523	3.6737	1.0451	0.8738	0.6701	0.5099	-	-	7.2205	19.4455	32.4787
17	4.9218	3.6215	2.2239	2.2660	13.0331	5.4523	3.6737	1.0451	0.8738	0.6701	0.5099	-	-	7.2205	19.4455	32.4787
18	4.9218	3.6215	2.2239	2.2660	13.0331	5.4523	3.6737	1.0451	0.8738	0.6701	0.5099	-	-	7.2205	19.4455	32.4787
19	4.9218	3.6215	2.2239	2.2660	13.0331	5.4523	3.6737	1.0451	0.8738	0.6701	0.5099	-	-	7.2205	19.4455	32.4787
20	4.9218	3.6215	2.2239	2.2660	13.0331	5.4523	3.6737	1.0451	0.8738	0.6701	0.5099	-	-	7.2205	19.4455	32.4787
21	4.9218	3.6215	2.2239	2.2660	13.0331	5.4523	3.6737	1.0451	0.8738	0.6701	0.5099	-	-	7.2205	19.4455	32.4787
22	4.9218	3.6215	2.2239	2.2660	13.0331	5.4523	3.6737	1.0451	0.8738	0.6701	0.5099	-	-	7.2205	19.4455	32.4787
23	4.9218	3.6215	-	2.0962	10.6395	5.4523	3.6737	1.0451	0.8738	0.6701	0.4706	-	-	7.2205	19.4062	30.0457
24	4.9218	3.6215	-	2.0962	10.6395	5.4523	3.6737	1.0451	0.8738	0.6701	0.4706	-	-	7.2205	19.4062	30.0457
25	4.9218	3.6215	-	2.0962	10.6395	5.4523	3.6737	1.0451	0.8738	0.6701	0.4706	-	-	7.2205	19.4062	30.0457
26	4.9218	3.6215	-	2.0962	10.6395	5.4523	3.6737	1.0451	0.8738	0.6701	0.4706	-	-	7.2205	19.4062	30.0457
27	4.9218	3.6215	-	2.0962	10.6395	5.4523	3.6737	1.0451	0.8738	0.6701	0.4706	-	-	7.2205	19.4062	30.0457
28	4.9218	3.6215	-	2.0962	10.6395	5.4523	3.6737	1.0451	0.8738	0.6701	0.4706	-	-	7.2205	19.4062	30.0457
29	2.4609	1.8108	-	1.0481	5.3198	2.7262	1.8369	0.5226	0.4369	0.3351	0.2353	-	-	3.6103	9.7031	15.0229
1-10	5.1855	3.8019	1.7441	3.3388	14.0702	5.6264	4.5341	1.0451	0.8747	0.6703	0.5285	8.4175	4.8683	7.2205	33.7855	47.8557
11-28.5	4.9206	3.6207	1.5832	2.2166	12.3411	5.4510	3.6729	1.0449	0.8736	0.6699	0.4985	-	-	7.2188	19.4296	31.7707
1-28.5	5.0949	3.7399	1.6891	2.9549	13.4788	5.5664	4.2396	1.0450	0.8744	0.6702	0.5182	5.5384	3.2031	7.2199	28.8752	42.3540

