The Pakistan Credit Rating Agency Limited

Rating Report

Huaneng Shandong Ruyi (Pakistan) Energy (Pvt.) Limited

Report Contents

Rating History

Dissemination Date	Long Term Rating	Short Term Rating	Outlook	Action	Rating Watch
21-Jul-2023	AA+	A1+	Stable	Maintain	-
22-Jul-2022	AA+	A1+	Stable	Initial	-

Rating Rationale and Key Rating Drivers

China Huaneng Group Company Limited - a state-owned Chinese Company, is the ultimate parent of Huaneng Shandong Ruyi (Pakistan) Energy (Private) Limited ("HSR" or "the Company"), which is Independent Power Producer (IPP) operating a 1,320MW coal based power plant located at Qadirabad, District Sahiwal. HSR is part of the China Pakistan Economic Corridor (CPEC). The financial strength and experience in the energy chain of the sponsoring group is considered positive to the ratings. The rating took comfort from strong business profile, timely commissioning of the plant, achieved on 28th October, 2017 within the approved tariff limit and low demand risk on account of power purchase agreement (PPA) for a period of 30 years (guaranteed 50% off take) with CPPA-G. Meanwhile, the Implementation Agreement provides sovereign guarantee, given adherence to agreed performance benchmarks (Availability: 85%, Efficiency: 39.75%). Operational Risk is concerned with the plants availability and efficiency as per the benchmarks agreed in the Energy Purchase Agreement (EPA). Shandong Huatai Electric Operations & Maintenance (Private) Limited is appointed as the O&M operator for the plant. The plant operates on imported coal which is sourced through China Huaneng Group Fuel Company Ltd under the Coal Supply Contract. However, in recent development, the Company has started operating the entire plant on Afghan coal which meets the specifications of the plant. The coal is being procured through local traders on spot basis. During CY22 the plant generated net electrical output of 4,855GWh (CY21: 7,720GWh) while maintaining its agreed benchmarks. The decline in generation reflects the priority of the power purchaser to source electricity from cheaper sources. As per NTDC merit order list for July 2023, HSR is ranked at 30th with a specific cost of PKR 28.87050 KWh. Subsequently, the company reported Net Income of PKR~20,970mln for the year end Dec 2022. The company meets its working capital requirements through internally generated cash and short-term borrowings. The company has successfully repaid approximately 30% of its project debt (USD 1,411mln) obtained from Chinese lenders with the consortium led by Industrial and Commercial Bank of China (ICBC). The Company's reliance on short working capital financing has increased significantly owing to delays in payments from CPPAG. Circular debt issues along with mounting receivables due from CPPAG of PKR 111,254mln against capacity and energy payments remains an issue for the Company.

The Company's effective management of working capital financing to prevent any hindrance in plant operations is critical. Furthermore, adherence to financial parameters along with timely repayment of project debt remains crucial to sustain the assigned ratings.

Disclosure

Name of Rated Entity	Huaneng Shandong Ruyi (Pakistan) Energy (Pvt.) Limited
Type of Relationship	Solicited
Purpose of the Rating	Entity Rating
Applicable Criteria	Methodology | Correlation Between Long-term & Short-term Rating Scales(Jun-22),Methodology | Rating Modifiers(Jun-22),Methodology | Independent Power Producer Rating(Jun-22)
Related Research	Sector Study | Power(Jan-23)
Rating Analysts	Hashim Yazdani | hashim.yazdani@pacra.com | +92-42-35869504

Profile

Plant The Company operates a coal-fired power station having a gross capacity of 1,320 MW (2x660) and a net capacity of 1,243.52 MW at Qadirabad, District Sahiwal, Punjab.

Tariff As agreed with NEPRA the levelized tariff for 30 years is US¢ 7.8457per KWh.

Return On Project The IRR of the project as agreed with NEPRA is 27.2% for imported coal and 29.5% for local coal.

Ownership

Ownership Structure The company is a wholly owned subsidiary of Huaneng Shandong Ruyi (Hong Kong) Energy Limited (the holding company), a company incorporated in Hong Kong, in which Huaneng Shandong Power Generation Company Limited and Jining Chengtou Holding Group Company Limited have equal shareholding. The ultimate parent of the Company is China Huaneng Group Company Limited.

Stability Stability is drawn from Chinese state owned corporation having global presence in the power sector.

Business Acumen China Huaneng Group Company Limited is mainly engaged in the development, investment, construction, operation and management of power sources; production and sale of power and heat; development, investment, construction, production, and sale of businesses and products related to finance, coal, transportation, renewable energy, and environmental protection.

Financial Strength With registered capital of RMB 34.9bln, China Hunaneng Group Company Limited is a state owned company established with the approval of State Council of China.

Governance

Board Structure The BoD comprise of five members. Two members represent Huaneng Group while two represent Jining Investment Holding Group Co. Ltd.

Members' Profile Mr. Li Xin is the Chairman of Board. Board members have a good mix of sound professional experience in Power and Energy sector and banking sector.

Board Effectiveness Diversified experience of board members helps in providing useful insight into the Power and finance industry, guiding the management in developing effective operational and financial policies.

Financial Transparency The company maintains proper financials for each period. Ernst and Young (EY) Chartered Accountants are the external auditors of the company.

Management

Organizational Structure IPPs are generally featured by a flat organizational structure, mainly comprising finance and technical staff, while the engineering, construction and operations of the plant are outsourced.

Management Team The management team is led by Mr. Li Xin, appointed as CEO. Mr. Xin is associated with the company for 5 years. The entire operational set-up of the company falls under the purview of CEO, with each department head directly reporting to him. The management team is well experienced and qualified.

Effectiveness The management of the company is mostly engaged in the finance related activities. The operations and maintenance of the plant have been outsourced to contractors. There are no formal management committees in place which can monitor performance and assure adherence to policies and procedures.

Control Environment The company maintains an adequate MIS which helps management to keep track of all operations and liaison with O&M operator. Moreover, the company has inhouse internal audit department to monitor the risk arises from the operations.

Operational Risk

Power Purchase Agreement The company has entered into PPA with CPPAG for a period of 30 years starting from the COD i.e. 28th October, 2017.

Operation And Maintenance The company has entered into an Operations and Maintenance contract with Shandong Huatai Electric Operations & Maintenance (Private) Limited (Contractor A) and Shandong Luyi International Electric Power Company Limited (Contractor B).

Resource Risk The company has entered into a Coal Supply Contract with China Huaneng Group Fuel Co Ltd for the supply of international coal. As per the contract, the supplier will provide 2.53mln tons of coal (final quantity is determined by the actual amount of cargo delivered) during the period.

Insurance Cover The company has obtained an insurance coverage for the Plant, Equipment and Machinery under their contract with EFU General Insurance. The Insurance covers the damage to the property insured caused by faulty design, defects in casting and material, faulty operation, overloading, overvoltage, electrical faults, atmospheric discharge or any other electric phenomena.

Performance Risk

Industry Dynamics The total installed capacity of the country as at End-FY22 stood at ~43,775MW with contributions from Hydro (24%), Thermal (61%), Nuclear (8%) and Renewables (7%). There has been a decline in electricity demand from RFO based plants because of their high per unit generation cost. The electricity demand is catered through cheaper sources including Renewables, Hydel, Gas and Thar Coal based projects. The remaining demand is met through costly alternatives including RFO and RLNG based plants.

Generation During CY22, the plant generated net electrical output of 4,855GWh (CY21: 7,70GWh). The generation is dependent on the on load demanded by NTDC, plant schedule/unscheduled outages and the availability of fuel.

Performance Benchmark On average the plant maintained the availability and efficiency benchmarks of 85% and 39.75% during the period ended Dec 2022.

Financial Risk

Financing Structure Analysis Debt Financing constitutes 80% of the project cost i.e. approx. USD 1,784mln . The project debt of USD 1,411mln was funded by the Chinese lenders with the consortium leading by Commercial Bank of China Ltd. (ICBC) and other includes Agriculture Bank of China Ltd., China Construction Bank., and Bank of China Ltd. Priced at 3MLIBOR plus 4.5% spread p.a. The principal amount is repayable in thirty-four unequal quarterly installments ending on 01 April 2030 in accordance with the amortization schedule provided by the consortium of banks. The remaining 20% is injected by the sponsors.

Liquidity Profile HSR, in its off-take agreement with CPPA-G, will receive capacity payments given the plant meets contract availability along with energy payments as per the total electricity supplied. The outstanding receivables from CPPAG have increased to PKR 111,254mln (CY21: PKR 100,361mln). Due to the surge in outstanding receivables from CPPAG, the Company's Gross Working Capital Days have risen to 273 days (CY22: 235 days, CY21: 212 days). Circular debt has caused the delays in payments from the government to the IPP's. In order to bridge the gap, IPP's have availed working capital financing to procure fuel including coal.

Working Capital Financing HSR has requirement of 90 days reserve of inventory out of which 45 days reserves shall be at site and 45 days inventory shall be in transit. Currently, coal requirement of company is 10,000TPD. The delays in payments from CPPAG has created liquidity concerns for IPPs. To bridge the working capital gap, as of June 2023, the Company has availed 100% short term borrowing lines of PKR 49,466mln to fund its working capital needs.

Cash Flow Analysis During CY22, free cash flows from operations (FCFO) stood at PKR 56,274mln (CY21: PKR 48,641mln). As a result of improving FCFO, the Company's coverages (FCFO/Finance Cost) stood at 3.5x (CY22: 4.9x). The decline in coverages is a result of high finance cost during the period as a result of more reliance on short term borrowings and rise in interest rates.

Capitalization The project was started with the allowed project cost of USD 1,771mln (PKR 185,144mln) with 80:20 debt to equity ratio. Total project equity of ~USD 360mln (PKR 37,564mln) has been injected by equity sponsors. Currently debt to equity ratio stood at 65.9% (CY21: 65.9%).

The Pakistan Credit Rating Agency Limited

Financial Summary
PKR mln

Huaneng Shandong Ruyi (Pakistan) Energy Private Limited	Dec-22	Dec-21	Dec-20	Dec-19
Power	12M	12M	12M	12M
A BALANCE SHEET				
1 Non-Current Assets	276,627	237,085	226,346	226,629
2 Investments	-	-	-	-
3 Related Party Exposure	-	-	-	-
4 Current Assets	216,809	141,934	98,594	88,770
a Inventories	*63,473*	*15,248*	*6,539*	*6,677*
b Trade Receivables	*111,254*	*100,361*	*67,007*	*45,779*
5 Total Assets	493,436	379,019	324,940	315,399
6 Current Liabilities	95,767	43,014	25,226	22,756
a Trade Payables	*76,540*	*30,644*	*14,656*	*12,741*
7 Borrowings	262,186	221,493	210,820	227,978
8 Related Party Exposure	-	-	-	-
9 Non-Current Liabilities	-	-	-	-
10 Net Assets	135,483	114,512	88,894	64,665
11 Shareholders' Equity	135,483	114,512	88,894	64,665
B INCOME STATEMENT				
1 Sales	194,171	147,089	108,441	113,866
a Cost of Good Sold	*(146,416)*	*(105,801)*	*(66,923)*	*(73,695)*
2 Gross Profit	47,755	41,288	41,518	40,171
a Operating Expenses	(1,800)	(1,701)	(1,594)	(1,736)
3 Operating Profit	45,955	39,587	39,924	38,435
a Non Operating Income or (Expense)	*(7,184)*	*(2,255)*	*(830)*	*(3,244)*
4 Profit or (Loss) before Interest and Tax	38,771	37,333	39,094	35,191
a Total Finance Cost	*(17,576)*	*(11,598)*	*(14,606)*	*(18,556)*
b Taxation	*(225)*	*(116)*	*(260)*	-
6 Net Income Or (Loss)	20,970	25,619	24,229	16,635
C CASH FLOW STATEMENT				
a Free Cash Flows from Operations (FCFO)	*56,274*	*48,641*	*49,112*	*46,209*
b Net Cash from Operating Activities before Working Capital (	*42,905*	*38,744*	*35,183*	*33,663*
c Changes in Working Capital	*(16,558)*	*(26,005)*	*(17,765)*	*(1,159)*
1 Net Cash provided by Operating Activities	26,347	12,739	17,418	32,504
2 Net Cash (Used in) or Available From Investing Activities	-	(1)	(1)	(174)
3 Net Cash (Used in) or Available From Financing Activities	(15,531)	(12,425)	(28,446)	(10,436)
4 Net Cash generated or (Used) during the period	10,816	313	(11,029)	21,894
D RATIO ANALYSIS				
1 Performance				
a Sales Growth (for the period)	32.0%	35.6%	-4.8%	8.8%
b Gross Profit Margin	24.6%	28.1%	38.3%	35.3%
c Net Profit Margin	10.8%	17.4%	22.3%	14.6%
d Cash Conversion Efficiency (FCFO adjusted for Working Ca	20.5%	15.4%	28.9%	39.6%
*e Return on Equity [Net Profit Margin * Asset Turnover * (To*	17.5%	24.1%	27.7%	27.6%
2 Working Capital Management				
a Gross Working Capital (Average Days)	273	235	212	162
b Net Working Capital (Average Days)	172	178	166	126
c Current Ratio (Current Assets / Current Liabilities)	2.3	3.3	3.9	3.9
3 Coverages				
a EBITDA / Finance Cost	3.5	4.9	3.9	2.9
b FCFO / Finance Cost+CMLTB+Excess STB	1.3	1.6	1.6	1.4
c Debt Payback (Total Borrowings+Excess STB) / (FCFO-Fin	5.5	4.9	5.1	6.4
4 Capital Structure				
a Total Borrowings / (Total Borrowings+Shareholders' Equity	65.9%	65.9%	70.3%	77.9%
b Interest or Markup Payable (Days)	105.7	78.7	61.2	76.2
c Entity Average Borrowing Rate	6.4%	4.6%	5.7%	7.4%

Credit Rating

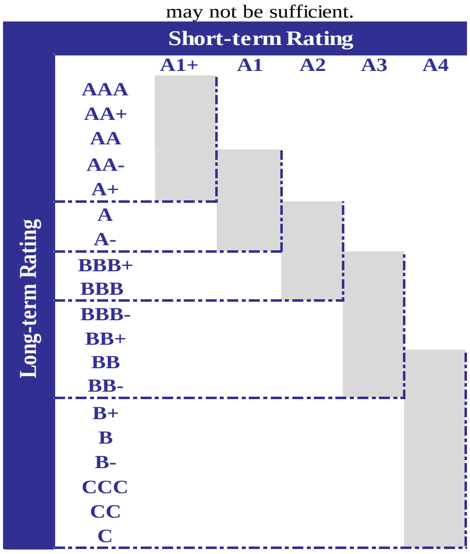
Credit rating reflects forward-looking opinion on credit worthiness of underlying entity or instrument; more specifically it covers relative ability to honor financial obligations. The primary factor being captured on the rating scale is relative likelihood of default.

Long-term Rating

Scale	Definition
AAA	**Highest credit quality.** Lowest expectation of credit risk. Indicate exceptionally strong capacity for timely payment of financial commitments
AA+ AA AA-	**Very high credit quality.** Very low expectation of credit risk. Indicate very strong capacity for timely payment of financial commitments. This capacity is not significantly vulnerable to foreseeable events.
A+ A A-	**High credit quality.** Low expectation of credit risk. The capacity for timely payment of financial commitments is considered strong. This capacity may, nevertheless, be vulnerable to changes in circumstances or in economic conditions.
BBB+ BBB BBB-	**Good credit quality.** Currently a low expectation of credit risk. The capacity for timely payment of financial commitments is considered adequate, but adverse changes in circumstances and in economic conditions are more likely to impair this capacity.
BB+ BB BB-	**Moderate risk.** Possibility of credit risk developing. There is a possibility of credit risk developing, particularly as a result of adverse economic or business changes over time; however, business or financial alternatives may be available to allow financial commitments to be met.
B+ B B-	**High credit risk.** A limited margin of safety remains against credit risk. Financial commitments are currently being met; however, capacity for continued payment is contingent upon a sustained, favorable business and economic environment.
CCC CC C	**Very high credit risk.** Substantial credit risk "CCC" Default is a real possibility. Capacity for meeting financial commitments is solely reliant upon sustained, favorable business or economic developments. "CC" Rating indicates that default of some kind appears probable. "C" Ratings signal imminent default.
D	Obligations are currently in default.

Short-term Rating

Scale	Definition
A1+	The highest capacity for timely repayment.
A1	A strong capacity for timely repayment.
A2	A satisfactory capacity for timely repayment. This may be susceptible to adverse changes in business, economic, or financial conditions.
A3	An adequate capacity for timely repayment. Such capacity is susceptible to adverse changes in business, economic, or financial
A4	The capacity for timely repayment is more susceptible to adverse changes in business, economic, or financial conditions. Liquidity may not be sufficient.



**The correlation shown is indicative and, in certain cases, may not hold.*

Outlook (Stable, Positive, Negative, Developing) Indicates the potential and direction of a rating over the intermediate term in response to trends in economic and/or fundamental business/financial conditions. It is not necessarily a precursor to a rating change. 'Stable' outlook means a rating is not likely to change. 'Positive' means it may be raised. 'Negative' means it may be lowered. Where the trends have conflicting elements, the outlook may be described as 'Developing'.

Rating Watch Alerts to the possibility of a rating change subsequent to, or, in anticipation of some material identifiable event with indeterminable rating implications. But it does not mean that a rating change is inevitable. A watch should be resolved within foreseeable future, but may continue if underlying circumstances are not settled. Rating watch may accompany rating outlook of the respective opinion.

Suspension It is not possible to update an opinion due to lack of requisite information. Opinion should be resumed in foreseeable future. However, if this does not happen within six (6) months, the rating should be considered withdrawn.

Withdrawn A rating is withdrawn on a) termination of rating mandate, b) the debt instrument is redeemed, c) the rating remains suspended for six months, d) the entity/issuer defaults., or/and e) PACRA finds it impractical to surveill the opinion due to lack of requisite information.

Harmonization A change in rating due to revision in applicable methodology or underlying scale.

Surveillance. Surveillance on a publicly disseminated rating opinion is carried out on an ongoing basis till it is formally suspended or withdrawn. A comprehensive surveillance of rating opinion is carried out at least once every six months. However, a rating opinion may be reviewed in the intervening period if it is necessitated by any material happening.

Note. This scale is applicable to the following methodology(s):

a) Broker Entity Rating
b) Corporate Rating
c) Debt Instrument Rating
d) Financial Institution Rating
e) Holding Company Rating
f) Independent Power Producer Rating
g) Microfinance Institution Rating
h) Non-Banking Finance Companies Rating

Regulatory and Supplementary Disclosure

(Credit Rating Companies Regulations,2016)

Rating Team Statements

(1) Rating is just an opinion about the creditworthiness of the entity and does not constitute recommendation to buy, hold or sell any security of the entity rated or to buy, hold or sell the security rated, as the case may be | Chapter III; 14-3-(x)

2) **Conflict of Interest**

i. The Rating Team or any of their family members have no interest in this rating | Chapter III; 12-2-(j)
ii. PACRA, the analysts involved in the rating process and members of its rating committee, and their family members, do not have any conflict of interest relating to the rating done by them | Chapter III; 12-2-(e) & (k)
iii. The analyst is not a substantial shareholder of the customer being rated by PACRA [Annexure F; d-(ii)] Explanation: for the purpose of above clause, the term “family members” shall include only those family members who are dependent on the analyst and members of the rating committee

Restrictions

(3) No director, officer or employee of PACRA communicates the information, acquired by him for use for rating purposes, to any other person except where required under law to do so. | Chapter III; 10-(5)
(4) PACRA does not disclose or discuss with outside parties or make improper use of the non-public information which has come to its knowledge during business relationship with the customer | Chapter III; 10-7-(d)
(5) PACRA does not make proposals or recommendations regarding the activities of rated entities that could impact a credit rating of entity subject to rating | Chapter III; 10-7-(k)

Conduct of Business

(6) PACRA fulfills its obligations in a fair, efficient, transparent and ethical manner and renders high standards of services in performing its functions and obligations; | Chapter III; 11-A-(a)
(7) PACRA uses due care in preparation of this Rating Report. Our information has been obtained from sources we consider to be reliable but its accuracy or completeness is not guaranteed. PACRA does not, in every instance, independently verifies or validates information received in the rating process or in preparing this Rating Report | Clause 11-(A)(p).
(8) PACRA prohibits its employees and analysts from soliciting money, gifts or favors from anyone with whom PACRA conducts business | Chapter III; 11-A-(q)
(9) PACRA ensures before commencement of the rating process that an analyst or employee has not had a recent employment or other significant business or personal relationship with the rated entity that may cause or may be perceived as causing a conflict of interest; | Chapter III; 11-A-(r)
(10) PACRA maintains principal of integrity in seeking rating business | Chapter III; 11-A-(u)
(11) PACRA promptly investigates, in the event of a misconduct or a breach of the policies, procedures and controls, and takes appropriate steps to rectify any weaknesses to prevent any recurrence along with suitable punitive action against the responsible employee(s) | Chapter III; 11-B-(m)

Independence & Conflict of interest

(12) PACRA receives compensation from the entity being rated or any third party for the rating services it offers. The receipt of this compensation has no influence on PACRA´s opinions or other analytical processes. In all instances, PACRA is committed to preserving the objectivity, integrity and independence of its ratings. Our relationship is governed by two distinct mandates i) rating mandate - signed with the entity being rated or issuer of the debt instrument, and fee mandate - signed with the payer, which can be different from the entity
(13) PACRA does not provide consultancy/advisory services or other services to any of its customers or to any of its customers’ associated companies and associated undertakings that is being rated or has been rated by it during the preceding three years unless it has adequate mechanism in place ensuring that provision of such services does not lead to a conflict of interest situation with its rating activities; | Chapter III; 12-2-(d)
(14) PACRA discloses that no shareholder directly or indirectly holding 10% or more of the share capital of PACRA also holds directly or indirectly 10% or more of the share capital of the entity which is subject to rating or the entity which issued the instrument subject to rating by PACRA; | Reference Chapter III; 12-2-(f)
(15) PACRA ensures that the rating assigned to an entity or instrument is not be affected by the existence of a business relationship between PACRA and the entity or any other party, or the non-existence of such a relationship | Chapter III; 12-2-(i)
(16) PACRA ensures that the analysts or any of their family members shall not buy or sell or engage in any transaction in any security which falls in the analyst’s area of primary analytical responsibility. This clause shall, however, not be applicable on investment in securities through collective investment schemes. | Chapter III; 12-2-(l)
(17) PACRA has established policies and procedure governing investments and trading in securities by its employees and for monitoring the same to prevent insider trading, market manipulation or any other market abuse | Chapter III; 11-B-(g)

Monitoring and review

(18) PACRA monitors all the outstanding ratings continuously and any potential change therein due to any event associated with the issuer, the security arrangement, the industry etc., is disseminated to the market, immediately and in effective manner, after appropriate consultation with the entity/issuer; | Chapter III | 18-(a)
(19) PACRA reviews all the outstanding ratings on semi-annual basis or as and when required by any creditor or upon the occurrence of such an event which requires to do so; | Chapter III | 18-(b)
(20) PACRA initiates immediate review of the outstanding rating upon becoming aware of any information that may reasonably be expected to result in downgrading of the rating; | Chapter III | 18-(c)
(21) PACRA engages with the issuer and the debt securities trustee, to remain updated on all information pertaining to the rating of the entity/instrument; | Chapter III | 18-(d)

Probability of Default

(22) PACRA´s Rating Scale reflects the expectation of credit risk. The highest rating has the lowest relative likelihood of default (i.e, probability). PACRA´s transition studies capture the historical performance behavior of a specific rating notch. Transition behavior of the assigned rating can be obtained from PACRA´s Transition Study available at our website. (www.pacra.com). However, actual transition of rating may not follow the pattern observed in the past | Chapter III | 14-(f-VII)

Proprietary Information