Truant PPAs weaken show of SHAKTI

But coal linkage under the scheme has lifted utilisation, slashed fuel cost for power plants

Opinion l October 2018

Key messages

- Ten power plants won coal linkages totalling 27.18 mtpa for 25 years in the first round of auctions under Scheme for Harnessing and Allocation of Koyala (Coal) Transparently in India (SHAKTI), with discounts of 1-4 paisa/kWh on existing tariffs
- Between April and August this year, fuel cost of these plants dropped ~37% as linkage supply rose ~49% on-year, while e-auction and import procurements fell ~70% and ~84% on-year, respectively
- The average generation cost for all the plants under SHAKTI declined ~38% to Rs 1.87 per kWh, compared with Rs 3.03 per kWh in April-August 2017
- For distribution companies, this means savings in power-purchase costs – the benefit would be higher for cost-plus power-purchase agreements
- Of the five stressed assets which have coal linkage under SHAKTI, one (Adani Tiroda) is out of stress already. Improvement in operational performance of other plants is expected to unlock better value for stakeholders and expedite the resolution process
- Faster implementation of SHAKTI-II is expected to partially assist the resolution of an estimated 2.6 GW of untied stressed-power capacity

A scheme to boost domestic coal supply, slash discoms' power purchase cost

The coal ministry in May 2017 introduced the Scheme for Harnessing and Allocating Koyala (coal) Transparently in India (SHAKTI) to ensure coal linkage to power producers based on an auction and/or tariff-based bidding.

Salient features of the scheme:

- Central and state government generation companies and their joint ventures will continue to get coal linkage as per the power ministry's recommendations, whereas independent power producers (IPPs) will have to participate in auctions to get coal linkage
- IPPs with power purchase agreements (PPAs) based on domestic coal are required to bid for a discount in existing tariff (paisa/unit), which would be adjusted from the gross amount at the time of billing
- Those without PPAs are required to bid for linkages over Coal India's notified price, and submit PPAs within two years
- For plants based on imported coal and having PPAs thereof, the ministries of coal and power will formulate a separate methodology to conduct linkage auctions

Around 9 GW private capacity got ~27 mtpa coal linkage under SHAKTI-I

The first round of auction under SHAKTI for IPPs having valid PPAs with discoms, either directly or through trading licensees, had received 31 applications initially.

These applications were then scrutinised by the Central Electricity Authority, which found only 14 to be eligible to participate in the bidding process.

Finally, 10 bidders – with cumulative installed generation capacity of ~9,044 MW – participated in the auction conducted by Coal India in September 2017 as per a pre-approved methodology. Bidders quoting the highest discount to its existing tariffs could choose their preferred source of coal supply from eight available sources.

In this way, 10 power plants, with discounts of 1-4 paisa per unit on the existing tariffs, won ~27.18 mtpa of coal linkage for 25 years.

Allocated linkage quantity by levelised discount on tariff in Round I

Source: Ministry of Coal

Among the major players, Adani Power Maharashtra Ltd (which owns and operates 3,300 MW of coal-based power plants at Tiroda, Maharashtra) won 5.85 mtpa and Adani Power Rajasthan Ltd (which owns and operates 1,320 MW of coal-based power plant at Kawai, Rajasthan) won 4.85 mtpa by offering discounts on existing tariffs of 1.9 paisa per unit and 2.4 paisa per unit, respectively. KSK Mahanadi Power Company Ltd's Akaltara thermal power plant offered average discount of 3.1 paisa per unit to secure 6.82 mtpa of linkage supply over the next five years, and Bajaj Hindustan's Lalitpur thermal power project got 5.64 mtpa of linkage supply at a tariff discount of 3.6 paisa per unit.

Project-wise coal linkage and levelised discount on existing tariff offered

Name of the company	Coal qty received (MTPA)	Qualifying plant	Plant capacity (MW)	Company	State	Levelised tariff as per PPA (Rs/unit)	Discount quoted (paisa/ unit)
ACB India Limited	0.2	Chakabura	60	Aryan Coal	Chhattisgarh	2.25	3
Adani Power Maharashtra Ltd	5.9	Tiroda	3,300	Adani	Maharashtra	3.28	2
Adani Power Rajasthan Ltd	4.1	Kawai	1,320	Adani	Rajasthan	3.24	2
Adhunik Power	0.9	Adhunik	540	Adhunik	Jharkhand	4.91	3
GMR Kamalanga Energy Ltd	1.5	Kamalanga	1,050	GMR	Odisha	3.34	3
GVK Power Goindwal Sahib Ltd	1.7	Goindwal	540	GVK	Punjab	4.07	2
Inland Power Ltd	0.1	Gola	126	Inland Power	Jharkhand	4.36	1
KSK Mahanadi Power Co. Ltd	6.8	Mahanadi	2,400	KSK	Chhattisgarh	5.04	3
Lalitpur Power Gen. Co. Ltd	5.6	Lalitpur	1,980	Bajaj Hindusthan	Uttar Pradesh	3.69	4
Sai Lilagar Power Gen. Ltd	0.4	Arasmeta	86	KSK	Chhattisgarh	n.a.	2
TOTAL	**27.2**		**11,402**				**3**

Source: Ministry of Coal, Central Electricity Regulatory Commission, State Electricity Regulatory Commissions

In December 2017, Coal India issued letters of intent (LoI) to players that won coal linkages. These LoIs were to be converted into definitive fuel supply agreements (FSAs), provided power plant owners amended their earlier PPAs with revised tariffs after the discounts offered while bidding.

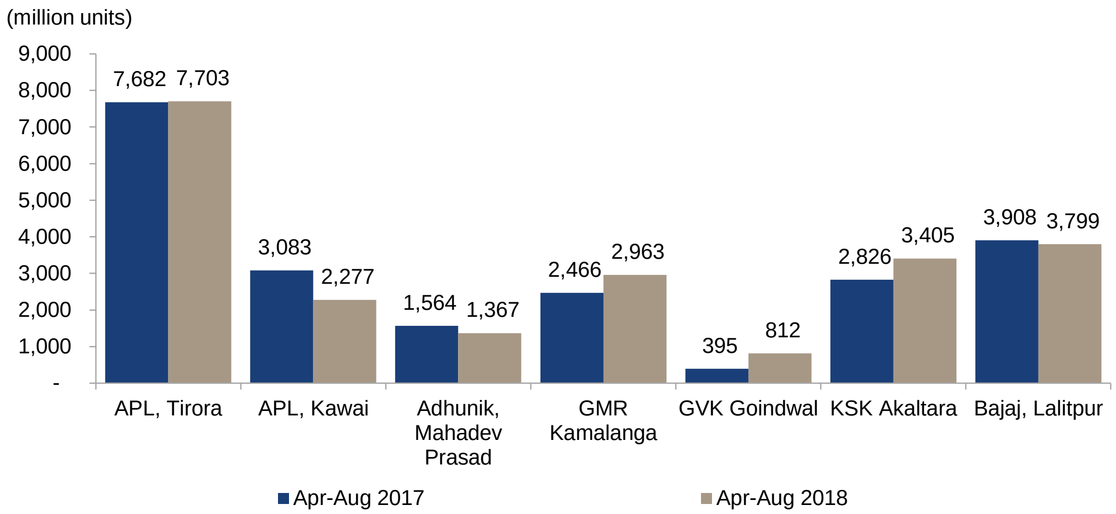
The players were given 90 days to get their PPAs amended and approved from respective regulatory commissions to be eligible for converting their LoIs into FSAs. All, barring a few whose final orders are yet to come, got their PPAs amended and signed FSAs with Coal India.

Following this, Coal India commenced linkage coal supply under the newly signed FSAs in April, providing much-needed succour to the power plants.

Several winning plants have seen improvement in generation

Power generation by several of the plants with linkage coal supply has improved significantly between April and August – that of GVK Power's Goindwal Sahib thermal power plant by ~106%, KSK Mahanadi's Akaltara power plant by ~21%, and GMR Energy's Kamalanga power plant by ~20% – compared with the corresponding period a year ago. Among others, Adani Power Tiroda also reported robust generation numbers.

Generation by power plants with coal linkage under SHAKTI



Source: Central Electricity Authority (CEA)

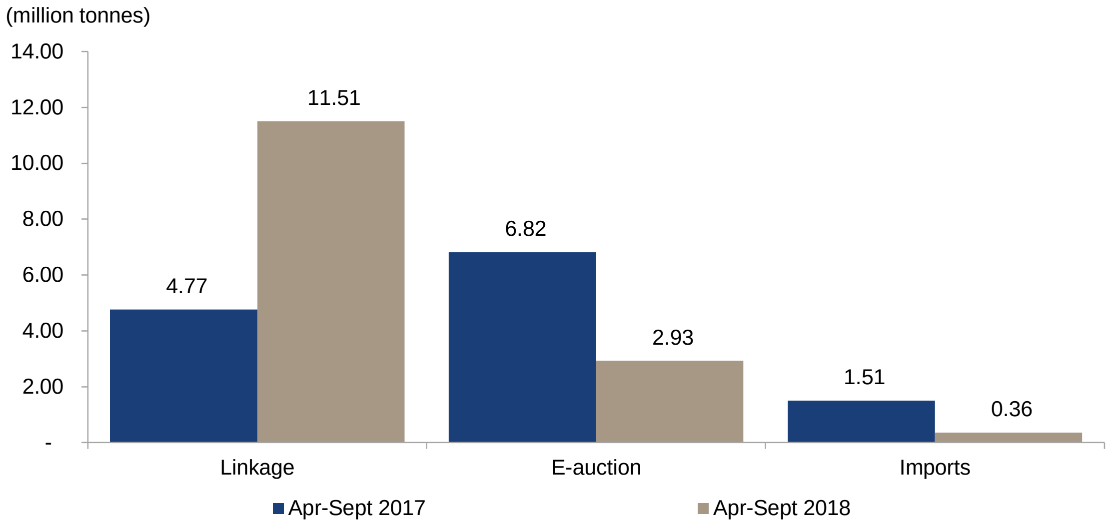
In April-Aug, as linkage supply more than doubled, e-auction procurement halved and imports plunged 84%

Before SHAKTI, power plants were dependent on either e-auction coal at exorbitant premiums above notified prices or imported coal from Indonesia, whose prices have shot up in recent months due to rising demand and constrained supply across the globe.

However, after implementation of the scheme and commencement of supply under newly signed FSAs, power plants have drastically reduced their dependence on costlier sources of coal, leading to savings in fuel costs.

To put it in perspective, the winning power plants saved an estimated ~Rs 2,458 crores between April and August, a whopping 37% lower on-year, as linkage supply rose ~49% on-year. At the other end, e-auction and import procurements declined ~70% and ~84% on-year, respectively for these plants.

Source-wise coal consumption by plants under SHAKTI



Source: CEA, CRISIL Research

Some of the power plants, identified as stressed assets, are performing better post-SHAKTI, with turnaround in sight

Reduction in generation cost is estimated to be one of the most crucial benefits of SHAKTI for power producers – more so for power plants identified as stressed assets, which have weak financials and troubled operational performance mainly due to lack of firm fuel supply arrangements and high generation costs.

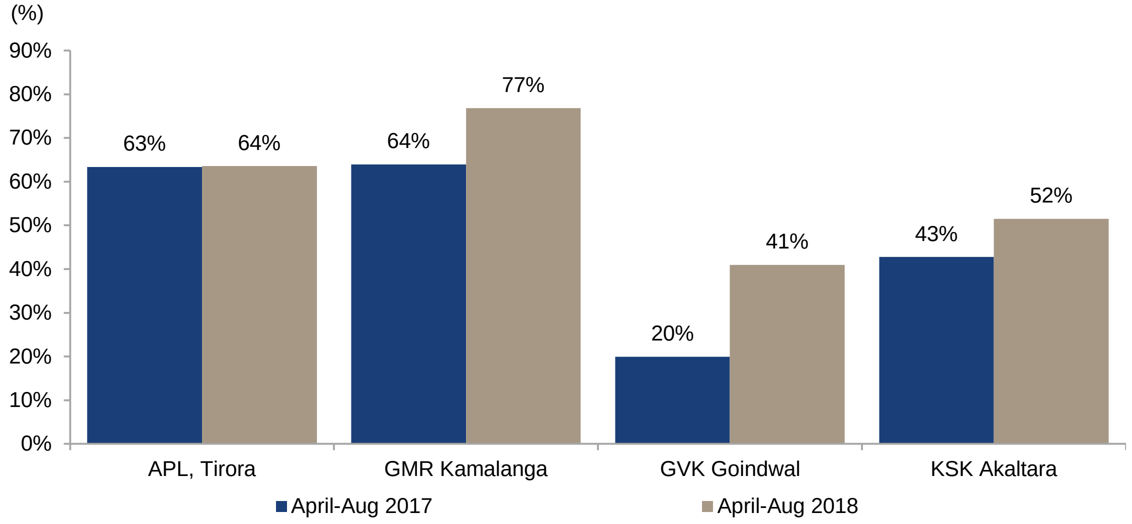
The importance of assured coal delivery at competitive prices to long-term viability of these power projects cannot be overstated.

For instance, Adani Power's Tiroda plant, which has long-term PPA with Maharashtra discom, was earlier identified as a stressed power plant due to lack of firm fuel supply and high cost of alternative fuel arrangement without sufficient pass-through. However, after getting linkage supply under the first round of SHAKTI, the plant has improved its operational performance.

Other plants in the stressed assets category – GMR Kamalanga, GVK Goindwal Sahib and KSK Mahanadi – have also seen improvement in operating performance.

With SHAKTI addressing some of the key issues, these plants are expected to revive on their own, or at least fetch good value for lenders, if liquidated. However, issues of merit order dispatch and logistics costs will continue to remain though fuel and PPA related issues are not there.

PLFs of power plants identified as stressed



Note: All figures are in percentage

Source: CEA

Discoms to save on power purchase costs

Between April and August, 2018, state discoms having PPAs with plants that secured linkage supply under SHAKTI were able to cumulatively save estimated ~Rs 56.9 crore due to a downward revision in PPA tariffs by these power plants. This translates to annualised savings of Rs 136 crores per year on their power purchase costs, indicating at least one target set under both Ujjwal Discom Assurance Yojana (UDAY) and SHAKTI – that of a reduction in the power cost for discoms and for end-consumers – is being taken care of.

Over the years, discoms across states have grappled with a double whammy of rising power purchase costs and lower revenue realisations, leading to ceaseless under-recoveries. The average power purchase cost for most discoms ranges between Rs 5.50 per kWh and Rs 7 per kWh, which inflates the average cost of supply and widens the gap between the average cost of supply and the average revenue realised.

SHAKTI a step in the right direction, but more needed

So far, the scheme has been positively impacting both generators and consumers. However, sustainability of the benefits and long-term success of the exercise depend on availability of domestic coal and its equitable distribution across power plants.

Coal India, the largest producer and supplier of domestic coal to the power sector, must augment production and offtake, amid rising power demand, which has depleted coal stocks at many power plants and created a shortage.

Coal India recently revised its ‘1 billion tonne’ annual production deadline to 2026 from 2020 earlier, implying it will produce lower than the earlier target. Between April and September, domestic coal production – by Coal India and Singareni Collieries Company Ltd – increased ~9.5% on-year. However, coal demand from both power and non-power sectors outpaced production, forcing many players from the non-power sector to resort to imports as there was a shortage in domestic supply and coal diversion to power plants.

The government should ensure that private IPPs get their share of coal linkage as per the FSAs signed, sans bias for central and state government units.

Improvement in the logistics network to enhance coal offtake from mining areas to consumption centres is another area that needs urgent attention from the government.

SHAKTI-II can help relieve some stress, but lack of PPA a concern

Coal India announced the second round of linkage auctions in December 2017, under SHAKTI clause iii (b) for power plants without valid PPAs as on May 17, 2017, on the lines of SHAKTI- I, which was for plants with valid PPAs. However, lack of clarity on eligibility of players having disputed PPAs to participate in the auction has kept the process in abeyance since January 2018.

As per the scheme document released by Coal India, eligible bidders can secure linkage for up to 90% of their un-tied capacity through the e-auction process. The auction methodology under SHAKTI-II would be similar to the bidding methodology for auction of linkages for non-regulated sector. Successful bidders would have to mandatorily submit valid PPAs based on secured linkage within two years of completion of the auction process.

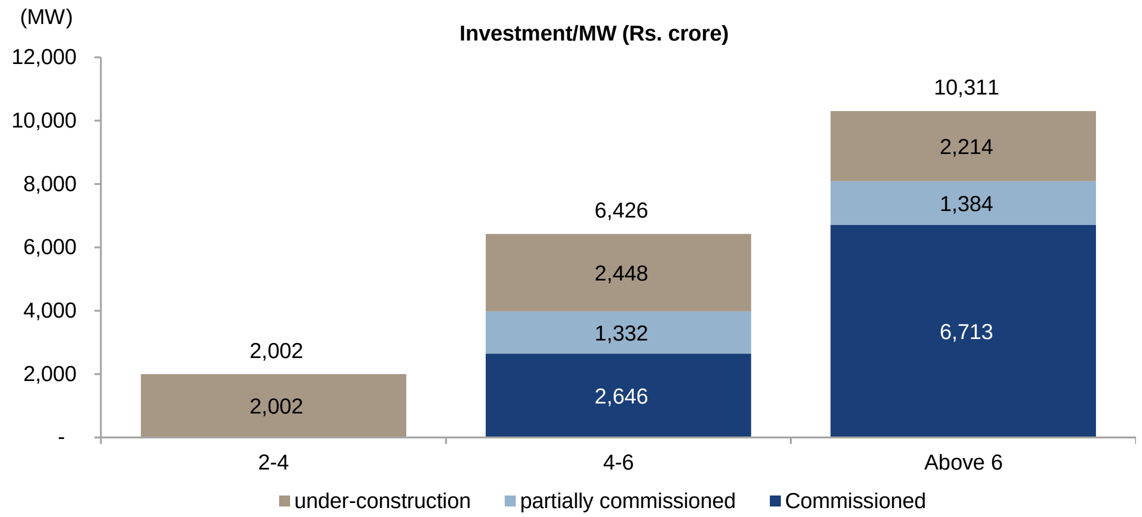
As per a report of The Lok Sabha's Standing Committee on Energy, 34 power plants with cumulative capacity of ~40 GW are identified as stressed assets due to reasons such as lack of adequate fuel supply, absence of PPAs, weak financials of promoters, and huge cost-overruns due to delays in construction resulting from issues with various regulatory clearances, rehabilitation and resettlement problems and local unrest.

Our assessment of the 34 power plants suggests ~19 GW of the 40 GW capacities do not have medium or long term PPAs, and hence, can participate in SHAKTI –II provided they meet other eligibility criteria set by Coal India for participation in the auction. However, successful bidders under SHAKTI-II may find it difficult to secure long-term PPAs, given the high fixed cost of many of these projects.

Large cost over-runs diminish resolution prospects for stressed capacity

Breaking down the capacity of ~19 GW, about 10.3 GW of untied capacity has incurred overall investment of more than Rs 6 crore per MW whereas the typical coal-based power plant costs ~Rs 4-5 crore per MW. This indicates huge cost overruns, leading to escalation in fixed costs, which makes these plants unattractive for medium/ long term power procurers such as discoms and even traders. Given the cost overruns and the issues around signing of PPAs, SHAKTI-II may be of little help to these assets.

Untied stressed generation capacity a towering concern



Source: Standing Committee on Energy, Lok Sabha

A further 6.4 GW of un-tied capacity (2.6 GW commissioned, the rest partially commissioned or under-construction) with overall investment of Rs 4-6 crore per MW have relatively better chances of resolution if they manage to secure fuel supply at competitive rates. However, lack of fresh PPAs from discoms, and ambiguity over logistics costs – which is a deciding factor in overall cost of generation – may impact the players' ability to bid in auction as they may still fail to sell power in the market due to high cost of generation on account higher landed cost of linkage coal and lower preference in merit order dispatch.

Of the 6.4 GW, only the 2.6 GW commissioned capacity has a good chance of resolution provided these plants secure linkage through SHAKTI-II and sign long-term PPAs, while 3.8 GW of under-construction/ partially commissioned capacity may find it difficult to get any support from SHAKTI-II as these are unlikely to commission due to financial problems faced by promoters.

The remaining ~2 GW of un-tied under-construction capacity may not commission at all, given the over-supply in the system and suspension of work at site due to lack of financing.

Consequently, we expect only ~2.6 GW out of the estimated ~19 GW of un-tied stressed capacities eligible to participate in auctions under SHAKTI-II to benefit from the scheme and get resolved. In case of the remaining capacities, lack of clarity over bidding parameters, scarcity of fresh PPAs in the market and escalation in project costs will adversely impact resolution.

Analytical contacts

Rahul Prithiani
Director, CRISIL Ltd.
rahul.prithiani@crisil.com

Mayur Patil
Associate Director, CRISIL Ltd.
mayur.patil@crisil.com

Media contacts

Saman Khan
Media Relations
CRISIL Limited
D: +91 22 3342 3895
M: +91 95940 60612
B: +91 22 3342 3000
saman.khan@crisil.com

Hiral Jani Vasani
Media Relations
CRISIL Limited
D: +91 22 3342 5916
M: +91 982003 9681
B: +91 22 3342 3000
hiral.vasani@crisil.com

Parmeshwari Bhumkar
Media Relations
CRISIL Limited
D: +91 22 3342 1812
M: +91 841184 3388
B: +91 22 3342 3000
parmeshwari.bhumkar@extcrisil.com

About CRISIL Limited

CRISIL is a leading, agile and innovative global analytics company driven by its mission of making markets function better.

It is India's foremost provider of ratings, data, research, analytics and solutions, with a strong track record of growth, culture of innovation and global footprint.

It has delivered independent opinions, actionable insights, and efficient solutions to over 100,000 customers.

It is majority owned by S&P Global Inc, a leading provider of transparent and independent ratings, benchmarks, analytics and data to the capital and commodity markets worldwide.

About CRISIL Research

CRISIL Research is India's largest independent integrated research house. We provide insights, opinion and analysis on the Indian economy, industry, capital markets and companies. We also conduct training programs to financial sector professionals on a wide array of technical issues. We are India's most credible provider of economy and industry research. Our industry research covers 86 sectors and is known for its rich insights and perspectives. Our analysis is supported by inputs from our large network sources, including industry experts, industry associations and trade channels. We play a key role in India's fixed income markets. We are the largest provider of valuation of fixed income securities to the mutual fund, insurance and banking industries in the country. We are also the sole provider of debt and hybrid indices to India's mutual fund and life insurance industries. We pioneered independent equity research in India, and are today the country's largest independent equity research house. Our defining trait is the ability to convert information and data into expert judgments and forecasts with complete objectivity. We leverage our deep understanding of the macro-economy and our extensive sector coverage to provide unique insights on micro-macro and cross-sectoral linkages. Our talent pool comprises economists, sector experts, company analysts and information management specialists.

CRISIL Privacy

Disclaimer

Argentina | China | Hong Kong | **India** | Poland | Singapore | UK | USA | UAE

CRISIL Limited: CRISIL House, Central Avenue, Hiranandani Business Park, Powai, Mumbai – 400076. India

Phone: + 91 22 3342 3000 | Fax: + 91 22 3342 3001 | www.crisil.com

/company/crisil @CRISILLimited /CRISILLimited /user/CRISILLimited Follow us on @lifeatcrisil

CRISIL
An S&P Global Company