

# BiofuelCircle Market Insights

August 2024

# From the Editor's Desk: more expensive than coal?

Two thresholds were crossed last month. Sellers sought more than ₹2.00 per Kcal-kg. Briquettes turned more expensive than equivalent coal.

Deal prices pulled away from Buyer expectations, but still not closer to Sellers' Offers. The Bid vs Offer spread also widened in July. And the share of Standard briquettes continued to halve month on month, increasingly displaced by Superior and Premium grades. Lots of things happened in the space of just a month!

Where are prices headed? Or rather, what is driving the increase? Is this trend sustainable? Read on for our analysis.

# Past Trends: Briquette Prices



This chart shows the pan-India trend on the BiofuelCircle platform, for weighted average delivered prices of Biomass Briquettes, converted to Rs per Kcal-kg over the past months, along with the availability & demand from our subscribers. Weighted average is calculated using quantity sought/ offered/ deals done, averaged over a month.

Buy/Bid prices (orange line) are expectations of Buyers (delivered basis). Sell/ Offer prices (yellow line) are based on responses and sells published by Sellers (again delivered basis). And finally, the Deal prices (purple line) are for deals concluded after platform-based negotiations between Buyers & Sellers. Demand (blue bars) is the total Buy quantity the month, and Supply (green bars) is the total quantity Offered by Sellers for that month.

The prices of Briquettes showed a familiar trend seen in every monsoon. In Jul 2024, the weighted average price of deals done was ₹1.89 per Kcal-kg, 8% higher than the Jun 2024 average of ₹1.75. This is an accelerating trend month on month, since April.

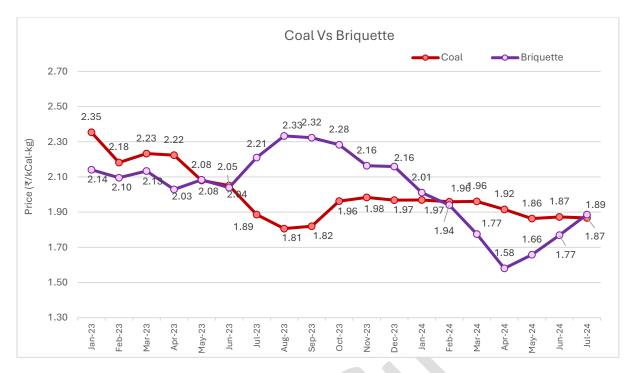
But hidden in this trend is the shift in deal mix: from April to July, the share of Standard briquettes (GCV< 3400, Ash >12%) has gone down progressively. In April, Standard briquettes formed 93% of all deals done on the platform. This went down to 82% in May, to less than half at 48% in June, and down further by half to 24% in Jul 2024. Correspondingly the share of Superior (GCV  $\sim$  3400 to 3800, Ash  $\sim$  8 to 12%) briquettes increased from a negligible 1% in April, to 22% in June, to almost a third (31%) of all briquettes sold on the platform in the last month. The same trend was seen for Premium (GCV  $\sim$  3400 to 3800, Ash  $\sim$  8 to 12%) briquettes: up from 7% share in April to 30% in June, and close to half at 45% in Jul 2024.

A look at the change in prices from June to July completes the story: Premium briquettes in Jul 2024 sold at almost the same level as Jun (₹2.00 per Kcal-kg in July vs ₹1.99 month before). Even Standard briquettes sold at nearly the same price, ₹1.59 per Kcal-kg in July as compared to June at ₹1.58. Superior briquettes did move up by a healthy ₹0.16per Kcal-kg over June, to ₹1.96 per Kcal-kg. So, the price increase in July over June is more due to change in deal mix, dominated by Premium and Superior briquettes

For the first time since Jan 2024, Sellers' expectation of price climbed above the ₹2 level to ₹2.12 per Kcal-kg, with the trend showing an acceleration from summer 2024. Demand and Supply for briquettes on the platform in July were nearly matched, with Supply marginally higher. While July Demand was higher than in June, Supply was steady and in line with the historical average seen around the same time last year. After a long time, average deal prices have diverged away from prices expected by Buyers', but the range is still closer to levels sought by Buyer than those sought by Sellers. Buyers on the other hand, are unwilling to raise price expectations at the same rate.

#### Price Comparison

The chart below compares the weighted average delivered prices of Biomass Briquettes to those of imported coal (GCV 3400 GAR). We call the difference between these prices as the 'spread.' Coal prices in this chart (maroon line) are sourced from market publications, for Indonesian origin coal (3400 GAR), imported at Kandla and delivered on average 300 km inland. Briquette prices (purple line) are based on deals done on the platform. Both are converted to GCV basis, for meaningful comparison.



In Jul 2024, the average price of biomass briquettes at ₹1.89 per kCal-kg, just about crossed the price of equivalent imported coal. This is only the second instance this year, since Jan 2024, but the reversal of spread is a significant event.

Prices of imported coal were unchanged in July, at ₹1.87 per kCal-kg, in the tight price band that we have seen since October last year.

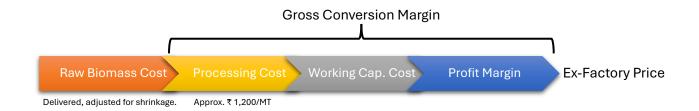
The spread between prices of coal and briquettes has flipped to a tiny positive ₹0.02 per kCal-kg, now in favour of coal. In in energy terms, briquettes are almost the same price (or very marginally higher) as comparable coal (3,400 Kcal/kg).

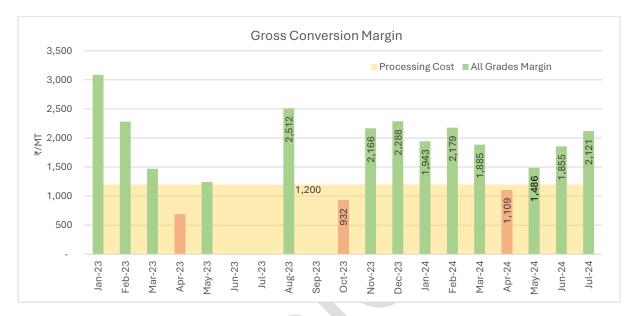
Global prices for coal moved in two directions in July: prices of high calorific value coal were higher, while lower calorific value coal was cheaper. Demand for imported coal in India keeps falling. Due to the monsoon, country-wide aggregate demand for power in Jul 2024 was lower than June and was largely met by hydel power stations. On top of that, requirements of thermal power plants were largely met by domestic coal, with a record production of 74 million MT in July, more than 6% higher than the same month last year. Demand for imported coal for is not expected to pick up until after the monsoons, when power plants start stocking again.

## Past Trends: Gross Conversion Margin

This chart shows the pan-India trend on the BiofuelCircle platform, of the difference between weighted average exfactory price of Briquettes and weighted average delivered prices of Raw Biomass, converted to Rs per Kcal-kg over the past months. Weighted average is calculated using quantity sought/ offered/ deals done, averaged over a month. This chart excludes commodities such as paddy straw, which are directly used for conversion to biogas or bioethanol.

To assess the inherent value of briquettes, we have compared the delivered price of raw biomass, with the ex-factory price of briquettes. Raw biomass prices have also been adjusted for expected shrinkage across various inputs. The difference represents the GCM (Gross Conversion Margin), which includes the processor's cost of conversion, inventory holding cost, and a profit margin. We have tried to benchmark this against an average processing cost of ₹ 1,200/MT (approx. ₹0.34 per kCal-kg) as represented by the shaded region in the graph below. On top of this will be the cost of working capital, which varies from processor to processor.





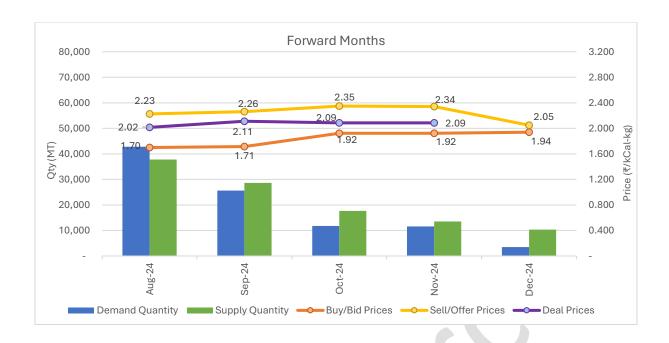
The Gross Conversion Margin (average of all grades) crossed the ₹2,000 mark in Jul 2024, to ₹2,121 per MT close to the highest level seen this year in February. Why is this important? It brings most Briquette manufacturers into a comfortable margin territory.

This rise was largely on the back of increased prices of Superior briquettes, which are showing a CGM upwards of ₹2,500 per MT in July: a number at the higher end of margins. On the other hand, GCM for Standard briquettes remained at the same level as June, and below our benchmark of ₹1,200 (which we consider as average processing cost for a typical briquette manufacturer). Note that this includes the cost of carry, and actual realisation for a briquette manufacturer will be lower.

After accounting for moisture loss, the weighted average price of Standard briquette feedstock, was similar or at times higher than the price of feedstock for Superior briquettes. The platform also saw some of the Standard briquette feedstock (such as Cotton stalk) diverted from processors to consumers, who used it directly as boiler fuel. We expect to see a further shrinking of availability of Standard briquettes in the coming months, and their share in the platform mix will fall further for the rest of the monsoon.

## Forward Months: Briquette Prices

The prices (for Buys/ Bids, Sells/ Offers & Deals), as well as demand & supply quantities in the chart below are for delivery of biomass briquettes in the months to come.



Deals for all forward months happened consistently above the ₹2.00 per Kcal- kg mark, indicating an uncertainty premium being built into the price. Stronger position of Sellers is pulling up the deal prices for forward months, even closer to their expectations as compared to the current month. Deals for near month (Aug) and month after (Sep) closed on average 20% over Buyers' Bid prices.

Supply lags Demand in the near month of August, and there is supply available for September and beyond. But Buyers seem to be staying away from longer term deals for now. For Sep to Nov 2024 delivery, deals happened around the ₹2.10 level (weighted average basis), mostly for Premium briquettes, and some Superior briquettes. Buyers are using a combination of long-term purchases to secure part of their requirements, and tactical short-term purchases for current & next month delivery.

A continued trend seen from last month: there is a major overlap in the range of prices Buyers are willing to pay for Superior and Premium briquettes for delivery into Aug & Sep 2024. Superior briquettes ranged between ₹1.50 to ₹2.25 per Kcal-kg, while deals for Premium briquettes happened between ₹1.50 to ₹2.40 per Kcal- kg. For the last two months, the price of Superior briquettes for forward month delivery seems to be rising faster than that of Premium briquettes. While Buyers attempt to hang on to the ₹1.70 per Kcal-kg mark, Sellers are seeking almost ₹0.50 higher.

India experienced higher than normal rainfall in Jul 2024, about 9% higher overall. But Northwest, Northeast & Central India are expected to receive below normal to normal rainfall in the coming months. Nevertheless, the July rains are a good sign for agricultural activity, which can be interpreted to provide good biomass feedstock after the harvest. We will be watching the forecast and activity over the second half of the monsoon (beyond Sep 2024), and barring any surprises, no supply disruptions are currently expected.

### In Conclusion

Briquette prices, in energy terms, have just about cross the price of equivalent coal. This has happened before, typical of monsoons, but with coal prices expected to remain subdued, Buyers are scaling back demand. Some Buyers have also resorted to directly burning biomass feedstock.

While the prices have increased, a large reason for the change is the composition of the market: more deals of higher priced grades driving up the average price.

GCM for Briquettes is now at levels considered comfortable, and any rise further would bring into question a fair price for briquettes. We expect the average GCM to get capped in the ₹2,400 – 2,500 range, largely based on Superior and Premium briquettes. Standard briquettes are also expected to fall further out of the deal mix due to diminishing availability of corresponding feedstock.

For the moment, in the forward months market, it looks like Sellers are in the driving seat. But Buyers are holding out for spot and near-term delivery. An interesting month lies ahead.

If you are consumer of briquettes or pellets, <u>your BiofuelCircle representative</u> can help formulate a purchase strategy to balance availability with price. Or log in to the platform to get a quotation.

If you are a Briquette/ Pellet manufacturer, BiofuelCircle's Biomass Banks can help in sourcing of feedstock. Get in touch with your BiofuelCircle representative to know more.

