"AFR pricing must compensate the production loss of cement plant"

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Cement plants can play a vital role in 'Swachh Bharat' mission through municipal solid waste (MSW) co-processing and converting it to refuse-derived fuel (RDF), thinks **V Kannan, Counsellor, CII – Godrej Green Business Centre**.

What challenges do you face in the use of alternative fuels and raw materials (AFR)? Also, what were the challenges faced in terms of cost – investment and operational?

AFR—due to its varying physical and chemical properties—will cause production fluctuations, and requires a lot of testing and analysis before utilising in a cement kiln. AFR co-processing requires a substantial investment from the users in terms of safety, storage, handling and final disposal of the AFR.

AFR should be priced in such a way that it should compensate the production loss of the cement plant. This will create a 'win-win' situation for both – waste generator and user, and provide a long-term sustainable waste management option.

How do you define the extent of AFR use in the cement industry? By this yardstick, where do you stand as a company and what are your targets for 2020?

The Indian cement industry has substantially increased its AFR usage from <0.6 per cent in 2010 to 4 per cent in 2016. However, as per the estimates, the industry has the potential to achieve 25 per cent thermal substitution rate (TSR) by 2025.

What goals can India achieve by 2025, and how do you compare it with global initiatives?

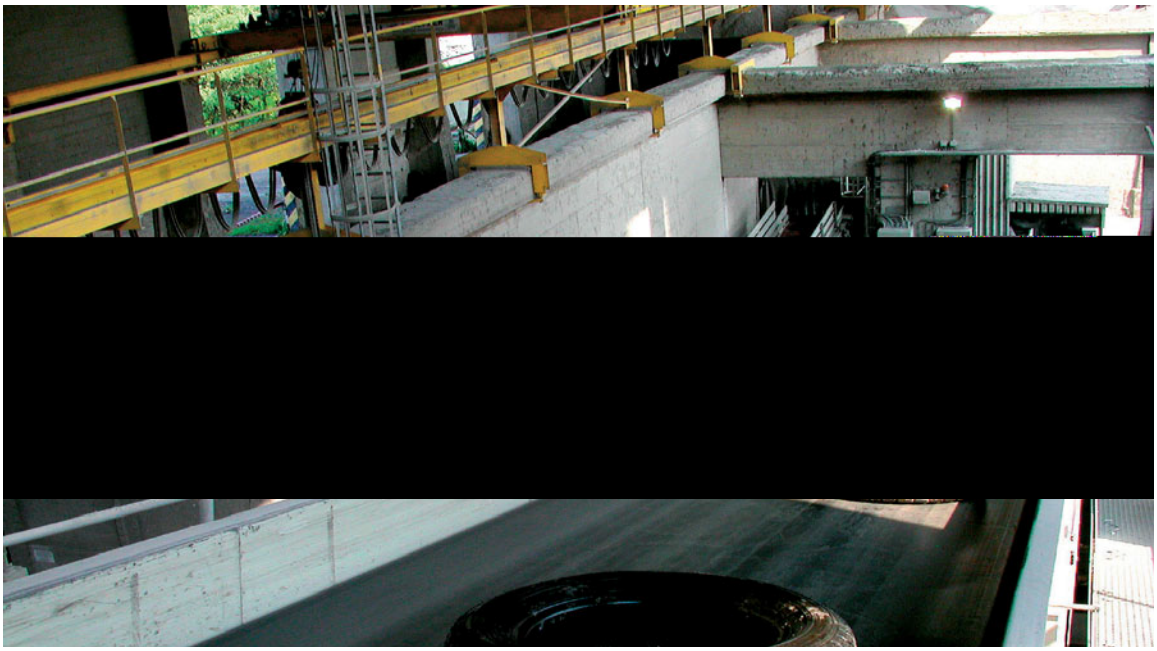
Industrial and hazardous waste have been widely used in the country as AFR, but the usage of RDF from MSW has to be increased. Urban local bodies (ULBs) should look into working with cement plants at the cluster level to manage MSW in a safe and environment-friendly way. Cement plants can play a vital role in 'Swachh Bharat' mission through MSW co-processing and converting it to RDF.

As per the estimates, Indian cement industry has potential to achieve 25 per cent TSR by 2025. The global average alternative fuel use in the cement industry is currently 4.3 per cent of total thermal energy consumption. In some countries, the average use is as high as 30 to 40 per cent.

Do you think that India can adopt the principle of "polluter pays first", especially when it comes to waste generation?

Utilising AFR as a fuel will cause fluctuations in the process and affect the production of cement, depending on the quality and nature of the AFR. Waste generated by the industry has to be disposed in a proper and safe manner. A cement kiln will do this with additional advantage of no residual leftover.

Considering the production loss incurred by cement plants and need for huge investments towards handling, storage and disposal of waste, the "polluter pays first" concept is essential to sustain this model for a long term. This will also indirectly influence the generator to reduce waste.



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What are the hazardous materials that can be burnt as AFR in a cement kiln?

Already many trials are conducted for hazardous waste management in Indian cement plants. The Central Pollution Control Board (CPCB) guidelines provides the complete detail for co-processing different waste streams in cement plants.

In developed countries, there are various legislations that helps to reach high levels of TSR like 60 to 80 per cent. What is the Indian scenario?

Legislations cannot mandate AFR usage, it can only facilitate co-processing in the country. Co-processing should be looked upon as a preferred option for waste management due to energy recovery, safety and sustainable model.

With new waste management rules, India is also on the right path towards reaching greater heights in AFR co-processing. The ease of rules and new guidelines on pre-processing and co-processing of waste will definitely support the co-processing movement in the country.

What is the present policy framework in India for utilisation of waste? Are there any amendments needed?

The recent policy changes (2016) in the country clearly suggests that co-processing is a preferred option for managing the waste over landfilling and incineration. The approval process for co-processing of hazardous waste to recover energy has been streamlined and put on emission norm basis rather than on trial basis.

The utilisation of waste in cement kilns through co-processing provides a win–win option of waste management in the country. Cement kiln co-processing is environmental friendly and aids complete destruction of waste because of the following factors:

1. High residence time in kiln (20 min)
2. High temperature (1,400 degree Celsius)
3. Oxygen rich atmosphere
4. No residual left over, the residual ash has to be managed in other methods

The time taken to get the approval from the respective authorities for use of AFR is too long. How will the implementation of online monitoring systems help?

Online approvals will definitely ease the process and reduce the time taken for approvals. With Government promoting "Digital India", this is no more a long journey to reach. It will help the cement industry as well as waste generator in quickly disposing the waste and move towards better and cleaner India.

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