

NPC-CIMPOR Launches Leading Edge Sustainable Fuel Trial

In line with recently gazetted government policy on the use of waste as an alternative fuel source, the NPC Cimpor cement plant at Simuma is conducting trials that are expected to make a very positive contribution to non-renewable resource conservation. The procedure, known as co-processing, will enable NPC Cimpor to use less non-renewable coal, its traditional primary fuel source.

In the plant trials, car tyres are used to generate the heat energy, replacing a percentage of coal normally used. This effort mirrors similar cement industry initiatives globally. In the oxygen abundant kiln environment where the coal and tyres are co-processed at temperatures up to 1500 °C, the tyres efficiently convert to heat energy without the black smoke and smell associated with typical outdoor tyre burning.

A recent Government Gazette reveals the state's official interest in the project. "In many instances the disposal of waste to landfill is not the best environmental option in terms of the waste management hierarchy. Waste treatment...including the co-processing of waste as AFRs (Alternative Fuels and Raw Materials) in cement production, often provides a more environmentally sustainable solution." (Gazette No. 32439, July 2009, 'National Policy in Thermal Treatment of General and Hazardous Waste')

The gazette goes on to position South Africa's energy from waste initiatives in an international context. "Monitoring of facilities that co-process selected general and hazardous waste as AFR around the world has shown that emissions from properly designed and operated cement plants are not substantially different from those burning conventional fuel. In addition, current emission standards...for co-processing that are set in line with best environmental practice are very stringent with extremely low emission limits, and are effective to ensure the protection of human health and the environment."

"In the European Union (EU), which comprises both developed and developing nations, the move from landfilling towards more integrated waste management solutions that reduce GHG methane (greenhouse gas) generation from landfills and utilise the value in waste, is encouraged through legislation. The EU landfill directive sets targets for the diversion of organic waste from landfill." (Gazette No. 32439, July 2009, 'National Policy in Thermal Treatment of General and Hazardous Waste')

NPC Cimpor Simuma Plant Manager Giovanni Lodetti is very upbeat about the sustainable fuel testing and NPC Cimpor's commitment to sustainable operations in general. "We're an environmentally friendly company. We already have ISO 9000 and ISO 14000 in place. You cannot renew coal. It's a limited resource and where possible, we want to look towards alternate, sustainable fuels for cement manufacture. The waste tyres that are co-processed in our kiln won't end up in landfills where they will have a negative environmental impact. Instead the energy they contain will enable us to use less non-renewable coal in our cement manufacture".

NPC Cimpor Group Sustainability Manager Cliffy Naidoo adds, "We have an independent air quality specialist to assess the emissions from the kiln during plant trials. We have also complied with legislative requirements and have an independent environmental consultant compiling the environmental impact assessment. In 2007 we submitted a scoping report that was accepted by the Department of Agriculture and Environmental Affairs enabling us to go ahead with the study and gather more information which will go into our final environmental impact report."



Photo caption: (from left) NPC Cimpor Group Sustainability Manager Cliffy Naidoo, NPC Cimpor Simuma Production Manager Carl Myers and NPC Cimpor Simuma Plant Manager Giovanni Lodetti at the NPC Cimpor Simuma Cement plant where a voluntary alternative fuel trial is underway.