

Hotel Street, Cnr Meiring Road, 1st floor innovation Centre The Innovation Hub 0087 Tel: 012 844 0752 Fax: 012 844 0034

07 July 2010

The use of fuel catalyst in the country has made a reputable mark with the recent success of BP using a fuel catalyst in powering the Diesel generators used during the FIFA world cup. This has proven to the fuel and energy industry in this country that the use of fuel catalyst for energy efficiency and carbon emission reduction cannot be compromised. This is also happening at the time in history where world class fuel catalyst independent from fuel manufacturures are making an unbiased entry in energy efficiency solutions. Fuel Performance Catalyst (FPC[®]) manufactured by FTPL (Australlia) and Distributed in the SADC region by Greenthermo energy (Pty) Ltd is one of the leading fuel catalyst by any world class standard and compares far more in quality than the new entrants that we have seen backing up the success of the 2010 world cup.

The South African Bureau of Standards (SABS) undertook extensive testing on our Fuel Performance Catalyst (FPC[®]) and approved it. This is an important endorsement to the effect that FPC is literally not an additive, but categorically a compliant fuel combustion catalyst, in that it performs burn-rate enhancement within the specifications pursuant with SANS 342:2006 for diesel combustion.

Secondly the Department of Science and Technology has embraced FPC to the effect that it is currently being incubated through the Departments' Technology station in Chemicals and Fuel for further accreditation by the Department

Thirdly, amidst a myriad of users abroad, FPC has also recently been tested and approved by a blue-chip organization of high repute in South Africa due to discernible fuel efficiency gains. It has been embraced by BHP which is high profile mining company with large energy intensity. BHP has been the first company in South Africa to trial the FPC-2 combustion catalyst. Aluminum South Africa (ASA), which is a subsidiary of BHP Billiton based in Richards Bay, embarked on a trial lasting 3 months in mid-2008, and using one test truck, as a 'replication' exercise based on the positive findings and benefits reported by three of their subsidiary mines in Australia, namely:

- Mount Keith Operations (MKO)
- Nickel West
- Worsely Alumina
- Boddington Bauxite Mine



Hotel Street, Cnr Meiring Road, 1st floor innovation Centre The Innovation Hub 0087 Tel: 012 844 0752 Fax: 012 844 0034

The first trial yielded fuel efficiency gain of 9.8% which is consistent with the results widely reported by independent laboratories and research authorities internationally, namely: 4-10% fuel savings).

Thereafter ASA decided to perform another trial using a larger sample size (4 trucks), as well as longer time period (6 months), and placing more emphasis on the monitoring and results quality. The results from this second trial further corroborated the findings of their subsidiary sites mentioned above, in that the <u>minimum</u> efficiency gain observed was 5.5%, while the maximum gain was estimated at 15%.

Based on this confirmatory trial, ASA immediately approved the dosing of FPC-2 on their own fleet, and this roll-out process is still underway, impacted by various administrative and resource issues on their part. Notwithstanding the above, we expect the first bulk order of FPC-2 from ASA to be in place before the end of Jul'10. For further insight and particulars at ASA, contact persons are as follows:-

Name	Role	<u>e-mail</u>
Clinton Palmer	Technical Investigations	clinton.palmer@bhpbilliton.com
Kameer Beharry	Project Specialist (implementation)	kameer.beharry@bhpbilliton.com
Moses Mathuse	Contractor Management	moses.mathuse@bhpbilliton.com
Busi Ndlovu	Vendor Administrator	busi.ndlovu@bhpbilliton.com