

Tiny change makes diesel greener



Greenhouse Friendly™ projects help householders do their bit

Adding trace amounts of the chemical ferrous picrate to diesel fuel can increase energy efficiency and reduce emissions. The technology's efficiency has been validated by many highly respected, independent authorities, including Southwest Research Institute (Texas), the University of Western Australia, UCLA and Brigham Young University.

Cost Effective Maintenance (CEM) is a supplier of greenhouse gas reduction technologies, and works with large diesel users such as the mining industry to reduce their energy and greenhouse emissions footprint.

CEM and the Australian manufacturer of the ferrous picrate technology (FTC), Fuel Technology Pty Ltd, have tested the technology on the large trucks used in the mining industry. The trucks used in the test haul material over a set route that is repeated without change, so that their fuel use data are stable and repeatable. Using the adapted SAE

Type II Truck Test protocol, CEM and Fuel Technology showed efficiency gains of 5 to 9 per cent due to adding ferrous picrate, with 95 per cent confidence.

BHP Billiton's Mount Keith Operations in Western Australia is one mine to have validated and implemented the ferrous picrate technology. Business Improvement Manager, Tim Riley concluded that the SAE Type II Truck Test protocol adapted by CEM and Fuel Technology was by far the most acceptable method for measuring energy efficiency changes in mine mobile plant.

The graph below shows the cuts in CO₂ emissions per unit of production during the first 12 months of ferrous picrate use in a Queensland mining fleet.

Other work under way by CEM includes using a lubricant assistant to improve hydraulic response and performance in equipment such as excavators, shovels and loaders, and using a fuel lubricant to reduce frictional horsepower losses. The company describes energy efficiency gains demonstrated to date as 'very encouraging'.

Member businesses can have their carbon neutral products and services certified Greenhouse Friendly™, and also invest in projects that reduce emissions.

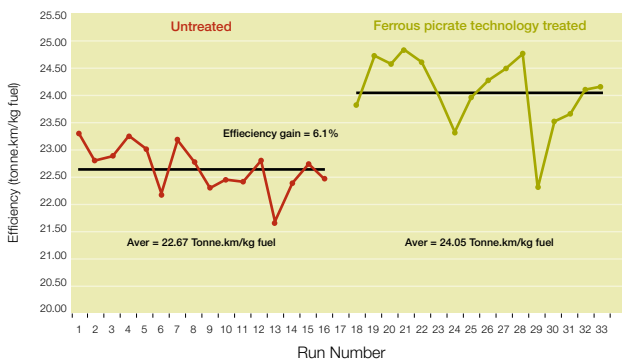
Lighting and hot water are two of the main drains on household energy use. Australian companies Low Energy Supplies and Services (LESS), EnergyAustralia, Fieldforce Services and Origin Energy have all achieved Greenhouse Friendly™ approval for projects that reduce household energy use in these areas, through compact fluorescent lighting or water efficient, low flow showerheads.

The projects deliver greenhouse abatement by reducing emissions, either:

- by replacing incandescent lighting with energy efficient compact fluorescent lights that provide the same level of lighting; or
- by installing low flow showerheads that use less hot water thus reducing energy used to heat water.

In return for free compact fluorescent lights or low flow showerheads, household recipients assign ownership of the greenhouse abatement from the products to the project proponents. Once the quantity of carbon abatement is independently verified and then approved by the Greenhouse Friendly™ the project

Caterpillar 793 rear dump truck



reduced greenhouse gas emissions per unit of

