



the **greening** of Australian trucking

A new voluntary scheme is hoping to introduce improved environmental and cost outcomes for those transport operations choosing to get involved.

A new pilot scheme, to be known as EcoStation, has been introduced in a partnership between the Victorian Transport Association and the Victorian Environmental Protection Agency. The initial plan is to run the scheme as a pilot between now and the end of May 2010 bringing together freight owners and transport operators with the objective of improving fuel consumption, reducing emissions and saving money. The EcoStation pilot program was launched in September 2009 in Melbourne at Freight Week with the aim of helping freight operators reduce their carbon footprint, and in doing so, reduce fuel costs and improve overall efficiency and productivity. Successful initiatives will be rewarded with a recognition of their environmental credentials. Not only will operators be saving money and running more efficient operations but they will also be able to demonstrate their environmental status using the EcoStation logo on their trucks and promotional literature.

A similar scheme, known as SmartWay, has been functioning successfully in the USA for several years. The VTA and the Victorian EPA have taken this successful model and are adapting it to Australian conditions. The basic principles of the scheme will be put in place over the first nine months of its existence before being launched to the foundation members in mid-2010. Long term, the plan is to open EcoStation up to any operators willing to participate as the system is bedded down. The first small group of freight operators are more involved in the initial pilot scheme and they will be spending this period examining the way the SmartWay partnership worked in the US and identifying key tools and

resources needed to support companies involved in the scheme. The first nine months will also be used to evaluate the environmental performance and recognition indicators that will be relevant in the Australian transport industry to measure environmental performance. The SmartWay program has existed in the USA since 2004 and currently has 1900 members with all of the top 100 freight operators involved in the scheme. It has been estimated SmartWay members save approximately 2300 million litres of fuel each year. This equates to a reduction in

between the membership, enabling them to make an informed decision when choosing fuel and cost saving strategies. US companies involved with SmartWay operate 585,000 trucks running more than 80 billion km per year. This represents roughly 20 percent of the estimated 3 million heavy-duty trucks registered in the U.S and 37 percent of the 224 billion km logged by heavy duty trucks each year on US Highways. At this point in the process all those participating in the foundation of EcoStation are meeting on a regular basis to get a handle on how the scheme



carbon emissions of 6.8 million tonnes as well as 40,000 tonnes less nitrogen oxides alongside a reduction in particulate emissions of 1000 tonnes, each year. SmartWay spends considerable time and effort evaluating fuel saving technologies to be introduced into trucking fleets. The results of any research into fuel saving techniques and technology is then shared

could work and to put in place some processes through which operators and technologies could be assessed. One of the foundation members is the Australian Road Transport Suppliers Association (ARTSA) which represents the suppliers of equipment like trucks and trailers to the road transport industry. Their advice is being sought to assess the effectiveness

of various specifications and technologies in reducing carbon emissions. Although this initial pilot is based in Victoria, if the concept becomes accepted in the transport industry it is expected to become a national initiative enabling operators throughout the country to benefit from the scheme.

"We're talking about a new way of delivering freight in an emission constrained future," says Philip Lovel, VTA CEO. "Not just because we want to be good environmental citizens, but because it will make good business sense."

The list of those involved as Foundation Partners in the initial EcoStation scheme reads like a who's who of the Victorian logistics and transport industry with Linfox, Woolworths, Visy, Glen Cameron Trucking and Toll IPEC just a few of those involved. There are representatives from line haul operators like Freestone's Transport alongside bulk specialists like Kalari as well as own account fleets like Boral Transport.

The large consignors and consignees are also represented with companies like Coles, Toyota, Schweppes, National Foods, Myer, Australian Paper, Mars Petcare and Sugar Australia. The scheme has also brought in one of the country's largest fleets, Australia Post as well as multimodal operator CRT and dairy product specialist Fonterra. Technical help and assistance with research looking for improved outcomes comes from the ARRB Group and ARTSA.

"At the moment we are working out what can actually be made to work in Australia," says ARTSA Environment and Efficiency College Co-chair Simon Humphries. "Given that it's a voluntary program, but it will probably become a significant program, it could end up being quite a good business move for those involved."

It is expected that when the scheme is up and running, participants in the scheme will be graded into two or three levels of environmental achievement. Those who have achieved the best environmental results throughout their company and can prove the effectiveness of their

emissions reduction schemes will get the highest EcoStation grading. As such, they will be able to advertise the fact they have achieved this benchmark and it is likely to be useful when tendering for large transport and distribution contracts. There will be a certain entry-level standard to which all members must comply and then, depending upon their initiatives and results, they can be assessed as to how effectively they have reduced their carbon footprint and met the EcoStation criteria.

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The focus of EcoStation is on just one part of the supply chain – the trucks. Other parts of the supply chain which do impact upon the environment, the way the distribution system works, location of depots and scheduling systems have been deemed too complex a subject to be included in something like EcoStation.

Operators involved in the scheme will be able to meet the criteria by improving the equipment they are using. They may simply move over to more modern trucks with lower emission ratings and more efficient engines. It is also possible to specify particular vehicles with improved aerodynamic equipment fitted and other fuel saving devices. Driver training is also likely to be a requirement as this has proved to be a very effective method of reducing fuel consumption globally in road transport.

Within the scheme, recognition will be given to efforts already made by participants in the past to reduce fuel consumption and their carbon footprint. Schemes such as the Green Fox initiative started by Linfox several years ago is likely to lead to the organisation being assessed quite highly from the outset of the scheme. The kinds of efficiency improvements the company has already achieved will set a benchmark other members can look towards as an example.

Research and assessment in this development phase is likely to come up with a series of benchmarks for the environmental performance of different vehicles in different applications in order to give operators an idea of the kinds of reductions possible and where they stand in relation to others working in the same area.

The kind of application and the fleet involved has an effect on fuel efficiency and the sorts of savings they can aim for. For instance, a fleet involved in urban distribution will find introducing aerodynamic aids to have minimal impact as the average speed of the trucks is relatively low. They would have to look elsewhere to achieve the environmental efficiencies required.

New technologies are being introduced around the world to reduce fuel consumption on urban delivery vehicles. Already, here in Australia, we have a number of hybrid models, either available or coming on stream in the near future, which can demonstrate a significant reduction in a fleet's carbon emission footprint. The savings achievable by investing in this kind of technology have to be balanced against the substantial price premium on these state-of-the-art products.

So-called, stop/start technologies are also coming on stream. In such a system a combined alternator/starter motor is fitted at the flywheel of the engine and cuts the engine as soon as it has been stationary for a few seconds at road junctions. Idling time is considerably reduced in the kind of stop/start operations normal in our large cities



and as soon as the driver needs to get underway again, the engine will restart as the clutch is released.

When working on the urban distribution cycle, driver training can be extremely effective in reducing engine idle time as well as encouraging drivers to go a little easier with the right foot and accelerate in a more gentle manner. It is also important to avoid sharp braking, developing controlled deceleration techniques instead. Improved efficiencies of up to 25 per cent have been reported simply by training drivers to improve their habits and become conscious of fuel consumption.

When looking at the line haul fleet whose equipment will spend most of its working life at 100 km/h, the priorities will be completely different. Here, aerodynamic and driveline efficiencies are possible and can prove to be quite effective. Low rolling resistance tyres may be one of the options considered by line haul operators as well as tyre pressure monitoring systems to reduce fuel consumption.

Alternative fuels offer another option to operators to improve their environmental outcomes. Using LNG, for example, offers an immediate 25 per cent reduction in greenhouse gases to the operator but



comes at a cost, in terms of a considerably higher capital expenditure at the outset. These are the sorts of calculations operators will need to work through in order to decide on their strategy to make the kinds of improvements required to achieve the EcoStation status they may be aiming for.

The plan for the VTA and EPA is to have the basic program in place for the foundation members by the middle of 2010. The basic program is likely to set carbon emission goals for those involved and recognise prior achievements in the environmental field.

Being able to quantify an operation's carbon footprint will be one of the basic requirements for those involved. Many will have already been down this track as the larger companies have had to prepare for the introduction of the government's planned carbon emissions scheme. It is hoped participating in the scheme will work on a number of fronts to

improve both environmental performance and productivity. Participants will also be able to demonstrate their responsible and professional approach to the planet's future by advertising their participation and grading within EcoStation on their trucks.

Take-up of the SmartWay scheme in the US has been comprehensive as companies get on board to ensure they are seen as environmentally aware as well as achieving some real cost savings by running more efficient vehicles with a well trained workforce.

If the EcoStation program receives a similar level of support here we can expect the scheme to be rolled out nationally in the coming years as participants demonstrate its advantages. Progress on this front could be vital for the road transport industry and its image, demonstrating a real commitment to the future and genuine reduced environmental impacts.