



By Anne Prince
ACOR's CEO

Gas bottles end-of-life management – Australia may lead the world

The Australian Council of Recyclers' members have made repeated requests to the various state governments over the past 10 years, to take action on the issue of end-of-life gas cylinders. The risk of injury or fatality to staff, as well as fire, noise, damage to equipment, downtime and fines for breach of licence conditions due to explosions at metal recycling plants make gas bottles enemy number one for a metal-shredding operator. Finally, there is some light at the end of a very long, lonely and dark tunnel.

It is becoming increasingly more difficult to get gas bottles refilled, with fewer refilling operators and a marketplace moving rapidly towards cylinder exchange programs offered at many service stations, hardware stores and some camping outlets.

However, out-of-date or damaged cylinders are generally not accepted in exchange programs and an improved system is required. Empty gas bottles will always have enough residual propane, LPG or butane to be dangerous in a scrap-metal yard or landfill. These bottles need to be completely purged with an inert gas and the cylinder punctured so that it is no longer considered dangerous.

Current disposal paths are unsatisfactory and include:

- Disposal in recycling bins for processing at MRFs
- Disposal in garbage bins for landfilling or AWT facilities
- Disposal via council hard waste collection services;
- Delivery to landfill or transfer station where they are stockpiled for decommissioning at the cost of the operator
- Delivery to scrap-metal operators
- Illegal dumping

ACOR, Sustainability Victoria, the Victorian branch of LPG Australia and the Total Environment Centre have recognised that the above disposal routes are inadequate. A workshop was held in June 2007 to discuss the issue.

An LPG Cylinder Recycling Working Group was formed and coordinated a site tour for stakeholders to better understand existing issues and management systems. However, the magnitude of the problem was unknown. So the Working Group engaged Hyder Consulting to undertake a comprehensive independent analysis of the market size, material flows, costs and revenues and existing management systems for refillable LPG cylinders used in 'leisure' applications. Leisure applications include but are not limited to barbecues, patio heaters, camping and caravanning which covers cylinders < 4.5kg and 4.5-9kg.

The Victorian report was funded by the Working Group and the NSW report funded by NSW DECC.

Key findings from the research include:

- In 2007, approximately 950,000 leisure gas cylinders entered the Australian market
- An estimated 2.45 million gas cylinders are currently in use in NSW and 1.9 million in Victoria
- 60% of gas cylinders are exchanged and the remaining 40% are refilled
- An estimated 1,000,000 exchange or swap transactions occur in NSW and 850,000 in Victoria per annum
- In NSW 665,000 cylinders are refilled and 565,000 in Victoria per annum
- It is estimated that 190,000 cylinders are disposed of in Victoria and 245,000 in NSW annually

There are 149 cylinder test stations registered in NSW and 110 in Victoria. The cost for testing cylinders by the general



public is around \$20-\$30 per cylinder of which 5% fail and are decommissioned.

The majority of cylinders, 70-75%, entering the market are imported with only one Australian manufacturer in operation.

It is estimated that between 80 and 100 explosions occur at metal-shredding operators' facilities in NSW and Victoria per annum combined.

Concurrently with the Hyder research, the Victorian branch of LPG Australia researched overseas systems for managing LPG cylinders and was unable to find a better system anywhere. We are truly pioneering a way forward.

On the 18th June 2008, exactly 12 months to the day since the first workshop, 19 stakeholders met again to discuss the key research findings. There was consensus that action was needed, and that this group, with broad stakeholder representation, including the gas industry, decommissioners, recycling sector, government and community, would have the role of developing and implementing a voluntary approach to dealing with the end-of-life gas bottle legacy.

Two key outcomes from the workshop were the formation of working groups with specific tasks and an agreed timetable for action.

The third and final workshop is scheduled for November 2008 to finalise and adopt the National Action Plan and take it forward to the Federal government for implementation.

Both reports are available on the ACOR web site at www.acor.org.au.

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