

Sustainability Report 2012





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April 2012

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A Message from the CEO

Qenos continues to take major steps in achieving sustainability. Efforts in increasing operational efficiency, reducing reliance on high value water resources, becoming more energy efficient and minimising greenhouse gas emissions are all contributing to our goal of a sustainable polymers business.

Qenos also believes that it has an important role in contributing to meeting Australia's greenhouse gas reduction targets. Over recent years, a focus on sustainability has delivered outstanding outcomes.

Since 2005 we have reduced our mains water requirements by 50 per cent. We have worked closely with the Government and water authorities to support actions to reduce our use of drinking water. The City West Water recycled water plant at Altona which started supply to Qenos in June 2011, will enable Qenos to save up to 2.0 billion litres of drinking water each year.

In March 2011, Qenos and AGL Energy Limited co-announced a \$45 million investment to construct a state of the art cogeneration facility at Altona. The cogeneration unit currently under construction will meet substantially all of Qenos Altona's electricity demand and will significantly reduce greenhouse gas emissions.

The Qenos Steam to Polymers project commissioned in March 2011 has reduced greenhouse gas emissions by 15,000 tonnes per annum. The project transfers excess steam produced at Qenos Olefins for use at the Polymer sites allowing the Resins site boilers to be decommissioned.

Contracts extending the period of long term feedstock arrangements for the next fifteen years were formalized in September 2011. In addition to the benefits the increased volume of feedstock will provide in servicing our domestic customers, it also underpins the \$195m investment in the expansion of the plants at Altona.

These achievements are the result of years of effort and determination to find a better way to work. Qenos has invested significantly in research and development of new polymers. We have worked with the experts, the

plastics sector, the community and both Federal and State Governments. At Qenos we understand that the world is at the beginning of a resource efficiency drive. We aspire to be part of the solution.

The work that we do at Qenos and our investment in Australia has many flow-on benefits to Australia's workforce, industry knowledge and skill base, competitiveness, and economy. Qenos adds value to Australia's natural resources and contributes more than \$1 billion to the Australian economy annually. Qenos is a cornerstone of the \$30 billion plastics and chemicals sector. By way of comparison, the strategic value in terms of contribution to Victorian Gross State Product is equivalent to that of the motor vehicle industry.

The leadership we show in areas such as health and safety contribute to continual improvement in safety across the industry in Australia. We are also taking our safety expertise to China through an exchange program with 22 of our shareholder manufacturing plants.

In November 2011 we celebrated 50 years in Altona. We have also reached the 50 year milestone at one of our Botany facilities and are due to celebrate another major milestone in 2012. We have come a long way over the decades and today we are an integral and productive part of the communities in which we operate.

This is the second Sustainability Report produced by Qenos. We will continue to produce this report every two years to inform stakeholders about our performance in the critical sustainability areas of health and safety, people, water and energy, waste and emissions, finance and economic growth, business practices and community. We look forward to continuing our efforts to achieve a sustainable future.



Jonathan Clancy
Chief Executive Officer



At Qenos we understand that the world is at the beginning of a resource efficiency drive. We aspire to be part of the solution.



Qenos will produce its sustainability report every two years to communicate to all of our stakeholders – our customers, community, government, suppliers – about progress in sustainability.

Updates on key performance trends will be provided on our website at www.qenos.com each year.

Qenos Highlights

Some significant achievements over the past two years include the following:

Safety

- Qenos achieved 260 Recordable Injury free days on January 1st 2012 eclipsing the previous record of 168 days.
- Qenos is working with ChemChina to facilitate a Safety, Health and Environment knowledge exchange program across 22 manufacturing plants throughout China.

Expansion

- Qenos announced and commenced work on \$195 million investment to expand and upgrade the Altona manufacturing facilities, increasing the domestic High Density Polyethylene production capacity by 20 per cent. This will enhance Qenos's international cost competitiveness by improving scale and efficiency.

Water

- In April 2011, the Minister for Water, the Hon Peter Walsh MP, commissioned the City West Water recycled water plant in Altona which will enable Qenos to save 1.6-2.0 billion litres of drinking water each year.

Energy

- In March 2011, Qenos and AGL Energy Limited co-announced a \$45 million investment to construct a state of the art cogeneration facility at Altona. Civil works for this project commenced during the 3Q of 2011. The cogeneration unit will meet substantially all of Qenos Altona's electricity demands and will significantly reduce greenhouse gas emissions.
- The Qenos Steam to Polymers project was safely and successfully executed in March 2011. This project maximises use of excess steam at Qenos Olefins by transferring it to the Qenos Polymer sites also reducing greenhouse gas emissions.

Innovation

- In May 2011, Victorian Manufacturing, Exports and Trade Minister Richard Dalla-Riva officially launched new production facilities that double current pipe resin manufacturing capabilities at Altona and support the commercialisation of new world class pipe resin Centrene® PE100.



CHEM CHINA

中国化工集团公司



Qenos adds significant value to natural resources, creating high value products.

Qenos

A Bluestar Company



As an Australian leader in the manufacture, distribution and trading of polymers, Qenos is a vital link in the nation's manufacturing chain. Our manufacturing operations in Altona and Botany employ around 730 people and focus on supplying Australia's growing polymer market. The world class quality of Qenos products reflects the skills and expertise of our people, our efforts in technology development, and our focus on sustainability, efficiency and innovation.

Qenos adds significant value to natural resources, creating high value products. We bring on the ground technical expertise to assist our customers to produce their best. We work hard to build strong relationships with all of our stakeholders – our customers, employees, shareholders, suppliers, unions, regulators, government and local communities – relationships that are critical to future growth and prosperity. We make products that contribute to efforts to conserve Australia's resources and energy.

Qenos is a subsidiary of China National Bluestar (Group) Co. Ltd, a joint venture between China National Chemical Corporation and The Blackstone Group. Our international links allow us to source specialty products from around the world and give us access to global business opportunities.

Qenos continues its role as a leader and innovator and is focused on delivering sustainable solutions.



Qenos Products



Qenos adds significant value to Australia's rich oil and gas reserves, converting natural resources into high value petrochemicals and plastics that are used for a wide range of applications in diverse sectors. These include building and construction, packaging, industry, water conservation, telecommunications, mining and energy.

The polymers and chemicals that Qenos produce, are used in products that we turn to every day – juice and milk bottles, food wrapping and product packaging, mobile garbage bins, industrial pipes and films, water tanks and bulk containers.

In making these products, Qenos contributes more than \$1 billion to the Australian economy annually, as well as building a strong local industry that supports a highly skilled workforce.



The polymers and chemicals that Qenos produce, are used in products that we turn to every day.



Qenos products also support resource and energy efficiency, for example:

Water Conservation

An estimated 395,000 polyethylene tanks are produced annually, with the potential to capture 28 million litres of rainwater per year, making a significant contribution to water conservation in Australia.

Industrial Pipe

Polyethylene pipes enable water savings by eliminating evaporation loss, improve transport efficiency through reduced weight and offer longer operational life – representing a significantly reduced environmental footprint when compared to traditional iron and concrete pipes.

Food Integrity

The wide use of polyethylene in films and bottles has enhanced the integrity of food products in transport, on the shelf and in the home. Qenos continues to improve and develop new products that will enable our customers to achieve their product integrity goals using less polyethylene materials.

Packaging

Over many years Qenos has worked with our customers to enable our polyethylene product to be supplied in refillable shipping containers (18 tonnes) instead of palletised 25 kg bags. This has reduced the packaging materials required and transport costs, and has alleviated environmental, safety and waste concerns.

In addition to our locally manufactured products, Qenos provides a wide selection of imported polymers, elastomers and other specialty products.

All of these products provide opportunities for Australians to become more resource efficient. Polyethylene is increasingly used in products that contribute to efficiency in industry, agriculture and domestic settings. The fundamental attribute of polyethylene is its ability to make a fit for use product that has a lower environmental footprint and, across the supply chain, provides a lower total cost compared to alternatives.



Awards



Victorian Manufacturing Hall of Fame

Qenos was inducted into the Victorian Manufacturing Hall of Fame in May 2011.

Celebrating manufacturing excellence in Victoria, the Victorian Manufacturing Hall of Fame Awards showcase locally based manufacturers whose innovative and sophisticated solutions to manufacturing challenges are world class.

This award is positive external recognition of its efforts in safety leadership, major projects and investment, energy savings, new products and innovation.

"I am particularly proud of the Qenos management team and employees and all of our stakeholders who collectively have enabled Qenos to be inducted into the Manufacturing Hall of Fame and their continued efforts to support Qenos's transition from a great company to a great business." - Jonathan Clancy CEO



Climate Alliance Limited

At the National Conference in September 2011, Qenos was recognised with the Board of the Year Leadership Award.

Climate Alliance Limited engages with business leaders and communicates the opportunities and risks of climate change, with a focus on the opportunities resulting from climate change, through practical, real-life examples of best practice in Australia and elsewhere.

In reviewing current projects to replace potable water with recycled and implementation of a co-generation plant for electricity and steam, the CAL selection panel stated, *"The Qenos Board has supported resource efficiency priorities and has consistently demonstrated a willingness to invest in viable technologies with excellent commercial and environmental returns."*

This award highlights the positive working partnerships Qenos has with resource providers like City West Water and AGL and the complementary strengths of each company.

Together we are delivering environmentally sustainable projects that have a lasting benefit for the businesses, employees and the broader community.



Qenos was nominated as a Savewater Award finalist in 2011 for its submission on the Altona Recycled Water project. Details of this major water saving initiative can be found on page 14.



Qenos People

Qenos maintains effective practices and procedures for the recruitment, development and motivation of employees as well as systems to enhance their wellbeing. Through the development of people and their expertise, Qenos is building a local workforce that is experienced and skilled and contributes to Australia's knowledge base.

Workforce Development

Qenos recruits a diverse group of employees, from new graduates to people with extensive industry experience. We partner with universities to offer a vacation employment program for engineering, chemistry and commerce students, who can then join the pool of candidates considered for graduate recruitment. Qenos cadetships and apprenticeships provide development opportunities for future chemical industry workers and contribute to the talent available for recruitment.

New employees are introduced to the vital role Qenos plays in the supply chain through rotational inductions that build knowledge in all areas of the business, including safety, products, customers and suppliers. Job-specific training and a mentoring program help new employees become part of the workplace.

As a Registered Training Organisation, Qenos delivers a high standard of in-house, competency-based training for technical skills and, where necessary, engages external training providers. Employee personal development is

managed through a competency-based system to assist employees achieve their career aspirations and to maintain the skills required to operate our business into the future.

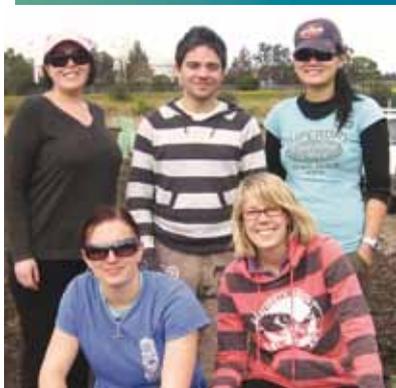
Qenos utilises the Lominger Competency framework which focuses on measuring competitive-edge competencies. This framework provides an additional resource to assist in identifying and developing employee talents and competencies. Competencies are also developed through work assignments, engagement in technical networks, leadership development (including structured quarterly leadership forums) and opportunities to participate in sponsored community outreach programs.

The Qenos website introduces some of our talented people and the roles they undertake at Qenos. It also explains our employee development systems, recruitment processes, guiding policies and organisational values.



Qenos is building a local workforce that is experienced and skilled and contributes to Australia's knowledge base.

Effective practices and procedures are in place for the recruitment, development and motivation of employees as well as systems to enhance their wellbeing.



Employee wellbeing

The health and wellbeing of our employees is a key priority at Qenos. Our comprehensive Safety Health and Environment Management system protects employees from potential exposure to occupational harm. Employment policies include flexible working arrangements, such as part-time work and special leave provisions, to assist employees to manage personal needs.

Employees and immediate family have confidential access to a free assistance program and all Qenos employees have access to policies and procedures via our intranet system.

On Fathers Day 2010 a dedicated group of Qenos Graduates partnered with The Friends of Lower Kororoit Creek, a local environmental group, to plant trees near Barnes Road, not far from the Altona plant. Nearly 18 months later, the group visited the site to check on the trees they planted. The results speak for themselves.





Security is heightened when large projects or maintenance activities occur at Qenos facilities.

Security



Maintaining security of the Qenos facilities is a normal part of our business. Security procedures are documented and integrated within the Safety Health and Environment Management System, which includes Emergency Response.

Security is maintained by the presence of security personnel and by independent annual audits to verify that our security system is effective.

These procedures protect the company's assets, maintain control of access to the Qenos facilities and deter common criminal activity.

Security is heightened when large projects or maintenance activities occur at Qenos facilities. Extra resources are deployed to cater for an additional 300 to 400 hundred people to be on site at any one time. These measures maintain site security to the normal standards while allowing efficient access to the work site. Commencing construction of the Cogeneration plant and the Altona Revamp project in 2011, has required the security system to cater for access for 60 extra personnel each day and a significant increase in vehicle access to the Olefins facility.



凯诺斯原料供应签字仪式 QENOS FEEDSTOCK SIGNING CEREMONY



"This substantial investment in the Australian plastics industry will position Qenos for future growth and development. It means that Qenos has a long term future which is great news for our employees and the broader community."

Jonathan Clancy
CEO

Securing our Feedstock

In September 2011, Qenos announced the signing of long term contracts with ExxonMobil Australia and BHP Billiton for the provision of feedstock (ethane and LPG) for its Altona facilities.

The 15 year supply arrangements will enable the creation of significant value by utilising Bass Strait oil and gas resources to produce polyethylene.

These feedstock contracts underpin the \$195 million investment to expand and modernise the Qenos facilities at Altona and improving the ongoing sustainability of its polyethylene manufacturing operation. The project will increase Altona's manufacturing capacity by 20 per cent ensuring it remains competitive in the global market.

For Qenos's valued customers, this significant investment will provide benefits through enhanced reliability of supply, coupled with its ability to increase capacity in line with the growth of the Australian polyethylene market, providing a sound base for future growth.

The signing ceremony held in Beijing, China was attended by representatives of each company as well as the Premier of Victoria, The Hon. Ted Baillieu MP, members of SASAC, China's State owned Assets Supervision and Administration Commission, and other Australian and Chinese dignitaries.



Health and Safety

Qenos continues to work hard to develop and implement health and safety systems and initiatives.

In 2010, Qenos was ranked #1 in safety by PACIA in the category of Australian plastics and chemistry industry.

Qenos also took its expertise overseas, working with ChemChina to facilitate a Safety, Health and Environment knowledge exchange program across 22 manufacturing plants throughout China.

On 1st January 2012, Qenos achieved 260 recordable injury free days eclipsing the previous record of 168 days. An enhanced program of SHE inspections and audits by all of the Qenos workforce, including senior management, was put in place late in 2010 to address an increasing injury rate at that time. The 2011 program has included a \$5000 charity donation for each accumulation of 50 injury free days achieved.

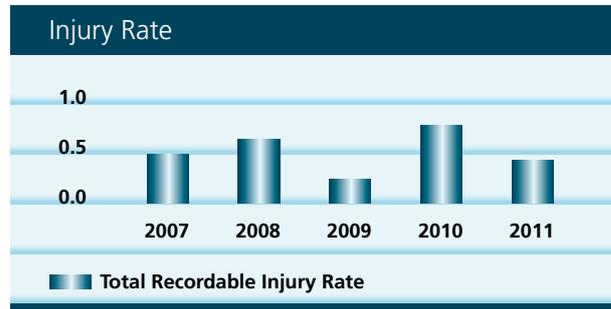
Beneficiaries to date have been

- Queensland Premier's Disaster Flood Appeal
- The Salvation Army Christmas Appeal
- Children's Cancer Institute
- Alzheimers Australia

Qenos uses an integrated Safety Health and Environment Management System (SHEOS) to manage all aspects of safety, health and environment.

As an operator of Major Hazard Facilities, Qenos has a comprehensive risk management process that involves our workforce in identifying and assessing workplace risks. Our program of risk controls uses a hierarchy to eliminate risks from the workplace, to the extent reasonably practical, and to have a safe system of work for residual risk.

All members of our workforce participate in a safety induction and job-specific safety training to ensure they have the skills to safely complete their work.



Performance goals are set for all aspects of health and safety and key performance indicators are used to steward performance. A systematic safety committee structure and briefing process keeps our workforce abreast of safety issues and provides an avenue for employees to raise concerns about health and safety.

Annual Safety Health and Environment Excellence Awards recognise teams who achieve outstanding safety performance and promote a safe workplace culture. Qenos has on site medical centres and a program to monitor employee health on an ongoing basis.

Qenos uses Occupational Safety and Health Administration (OSHA) guidelines for injury classification. The chart above shows a very low injury rate of less than one recordable injury per 200,000 work hours. We are striving to lower it further.

During the first half of 2010 our injury rate increased. In response to this disappointing result, Qenos conducted awareness programs and activities to refocus safety awareness amongst our leadership and workforce. Special activities included a safety week campaign, charity donations for reaching injury-free day targets, extra field visits and safety talks by senior leaders.

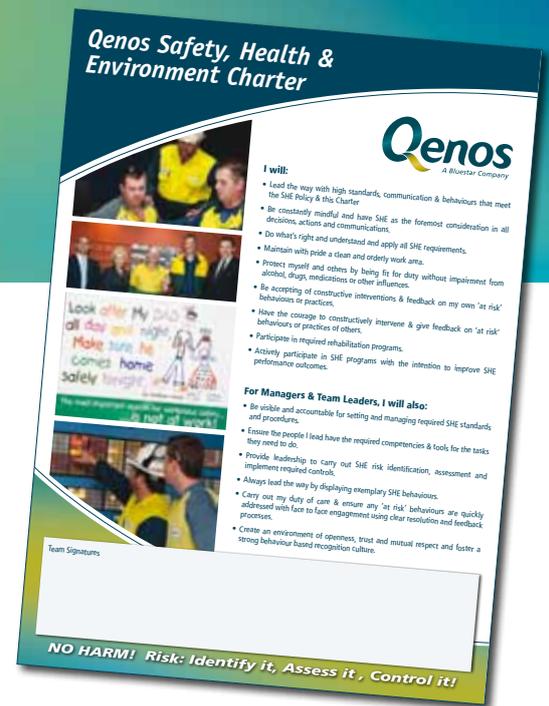
Safety, Health and Environmental Excellence Award Program

Qenos runs an annual Safety, Health and Environmental Excellence Award Program to recognise excellence in Safety Health & Environment initiatives within Qenos operations.

In 2010, fourteen projects at Altona and seven projects at Botany were entered into the awards.

In 2011, there were fifteen projects at Altona and eight at Botany.

The presentations featured represent the depth of innovation and passion of Qenos employees who participate in the SH&E awards.



Reactor Isolation Valve Relocation

The Qenos Resins plant entry won the 2010 Altona Award.

Plant staff highlighted the poor access to the reactor jacket cooling water isolation valves which required operators to climb ladders in very limited and restrictive areas. The team developed a solution that resulted in relocating the isolation valves to allow operators to work at chest height in a much more open and accessible – and safer – area.

Reducing Volatile Organic Carbon Emissions

At Botany the Alkathene's Reduction of VOC Emissions team took out the 2010 Safety, Health and Environment Award. The project was implemented at Alkathene as this site is responsible for 50 per cent of the Botany VOC emissions. The project identified modifications needed to bring the plant up to the emissions standards achieved at more modern facilities.

The Qenos Safety, Health and Environment Charter

All levels of the Qenos workforce have been involved in revising our Safety, Health and Environment Charter. This charter reflects our belief that all injuries, occupational illnesses and environmental incidents are preventable. It also reflects our acknowledgment that everyone is responsible for health and safety at work.

The Qenos workforce are invited to sign the Charter each year and each team's signed Charter is displayed on a team notice board as a visible commitment to a safe work place.





Olefins Altona Treatment Plant Recycled Water Project

Qenos Altona ethylene production facilities employ steam cracking technology which requires a water source to produce steam and provide process cooling via evaporative cooling towers. The only source of water previously available was the domestic drinking water supply.

In 2007, Qenos worked with our water supplier City West Water (CWW) to develop a project concept that would replace 1600-2000 ML of domestic drinking water with class A recycled water from the nearby Altona Sewerage treatment plant.

The Olefins plant was designed and built to run on potable quality water and the change to class A recycled water was not suitable to be directly substituted for all the principal users of water at Qenos.

The process chosen by CWW to supply class A recycled water, was Reverse Osmosis technology, which delivered a water supply with lower salt levels than potable water with no residual hardness.

The project scope also provided for installation of a four kilometre Qenos Centrene® PE100 pipe to run from the CWW Altona treatment plant to the main process water storage tank on the Olefins site.

The site was prepared to be compliant with recycled water regulations using existing

infrastructure. A protocol was developed to install and paint signs at all of the outlets for recycled water in the plant (in excess of 300) without the need for expansive repainting of the existing infrastructure for water distribution.

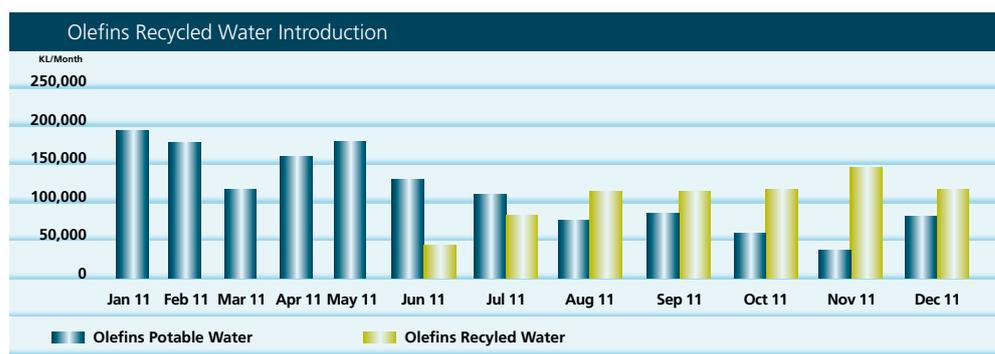
The recycled water supply was commissioned in May 2011, and in June 2011 replaced 24 per cent of the Olefins site water needs against a plan of 25 per cent. The amount of recycled water used was then increased by 25 per cent each month after confirming that the water chemistry in the cooling water and steam systems was in control.

In September 2011 the plant demonstrated that it was able to operate on 100 per cent recycled water. All available recycled water has been processed since that time and will reduce Olefins potable water consumption by 75-90 per cent (1600-2000 ML/Year).

This has essentially eliminated the reliance on domestic drinking water in the manufacturing process and leaves more drinking water available for other Victorian customers.

This project received the Qenos 2011 SH&E Environment and Sustainability Award at Altona.

Water Use Trends





Qenos has a comprehensive risk management process that involves our workforce in identifying and assessing workplace risks.



Boiler Safety Valve Access Improvements

Previously, the Olefins steam drum safety valves had poor access for maintenance.

Due to the tight working conditions and inaccessible bolts, there was a considerable risk of strain injury. There was also the risk of falling off the steam drum as the positioning of the flanges prevented the use of scaffolding.

The valves had been installed in this configuration since the original boiler construction in the early 1960s.

Identified by the Maintenance Group as a high risk procedure, they endeavoured to make the job safe and sought the support of the Engineering Department to help implement a solution to a long term problem.

A proposal to lift the position of the safety valves by inserting a spool between the existing flanges and the safety valves; and stagger the position of each flange so that access was not impinged, was implemented at the next boiler shutdown.

This simple, effective and low cost solution has eliminated previous risks of strain or falling by allowing scaffolding to be implemented providing safer access for safety valve maintenance on all three Babcock & Wilcox boilers.

This project received the Qenos 2011 SH&E Safety Award at Altona.





Our ultimate aim is to conduct business with no injuries, to minimise environmental impact on the community, and to be efficient in everything we do.

Alkathene Low Pressure Hopper Redesign

The low pressure hoppers on the Qenos Alkathene site would habitually coat with polymer causing product quality issues. This required the hoppers to be removed for cleaning every 12 to 24 months.

The only way to clean the polymer from the hopper was to use ultrahigh pressure water blasting at 30,000 psi. This involved a HPWW technician entering the confined space vessel and cutting through the polymer with a hand held lance. On average it could take up to three weeks of continual water blasting.

This raised a number of concerns:

- Fatigue – the HPWW technician would work ten hours per day blasting continually for up to 12 days
- Noise – the noise pollution from HPWW blasting inside an overturned hollow vessel was significant not only for the technician but also causing the relocation of plant personnel to alternative offices even when noise bunds were in place
- Storm water pollution – the vessel had to be cleaned in a bunded area with all stormwater drains in the affected area bunded with 'socks' installed to prevent any storm water contamination.

The Low Pressure Hopper Redesign project team at Alkathene looked at fixing the problem at its source ie, preventing the hopper from getting coated in polymer.

A new design of trumpet cylinder was developed to reduce turbulence in the hopper and prevent the polymer from surging up the vessel walls creating such a coating.

Following installation of the new cylinder, the first trial hopper has been removed and the results have been exceptional:

- The new trumpet has run for more than five years and when removed (not for quality but for inspection) there was less than five percent of the expected polymer build up;
- The new HPWW blasting requirement to remove this is now half a day, as opposed to twelve days, therefore significantly reducing exposure to a high risk task, using high risk equipment in a high risk environment. This equipment is common across three reaction streams so all benefits will be tripled;
- Financial costs have been reduced by a staggering 90 per cent over the six year period
- Man hours have been reduced by more than 98 per cent over six years

To establish a fair evaluation, all aspects have been considered over a six year duration as this is the mandatory pressure inspection frequency (for which it is mandatory that the vessel be removed and cleaned).

HPWW is one of the most tightly controlled activities at Qenos because of its inherent risks. It is the subject of a comprehensive critical procedure that must be rigorously followed.

When looking at the risk pyramid, elimination is the best outcome in risk management.

As a result this project was a worthy winner of the Qenos 2011 SH&E Excellence Award at Botany.



Qenos continually looks to improve resource efficiency in our production processes and in the application of our finished products.

Resource Efficiency

Qenos is serious about making a contribution to Australia's targets for reduced greenhouse gas emissions. Actions such as reducing reliance on mains water and developing a cogeneration facility will progress our journey towards greater resource efficiency and a reduced carbon footprint.

Qenos's Mains water consumption has reduced by 30 per cent since the previous sustainability report in 2010. The other resource efficiency indicators for 2010/2011 are generally comparable to the previous report on an absolute and efficiency basis.

Mains Water Use

Qenos's achievements in water use have been outstanding and reflect an ongoing commitment to, and understanding of, the resource improvements that can be achieved by major industry. Qenos understands that water is not an endless resource and that everyone must contribute to its conservation. As an industry leader, Qenos has been proactive in setting and meeting targets. At Altona, we are moving toward our target of 65 percent of water sourced from alternative sources to mains drinking water.

Qenos facilities use substantial quantities of water in the manufacturing process. The two main uses are for cooling water (approximately 50 percent of water use) and steam generation (approximately 40 percent of water use). Our strategy is to reduce mains water use in three ways:

1. Using water efficiently.
2. On site recycling of water.
3. Substitution of mains water with alternative water supplies.

Mains water consumption has reduced by 30 percent since the first sustainability report two years ago. Qenos increased the use of alternative recycled water supplies to 1690 million litres in 2011. Water efficiency for overall polyethylene product has achieved a seven percent improvement over the corresponding period. This was achieved by the increased substitution of mains water with treated groundwater.

At our Botany Operations we use water from the Orica Ground Water Treatment Plant to displace mains water feed to a number of cooling towers and the demineralised water plant for the Site Utilities boilers. In normal operation, the Olefines and Alkatuff plants use this recycled water to displace approximately 40-50 percent of the mains water make-up to its three cooling towers; the Site Utilities Plant displaces approximately 90 percent of the mains water feed to its two demineralised water plants which

provide all the water for steam generation on the site.

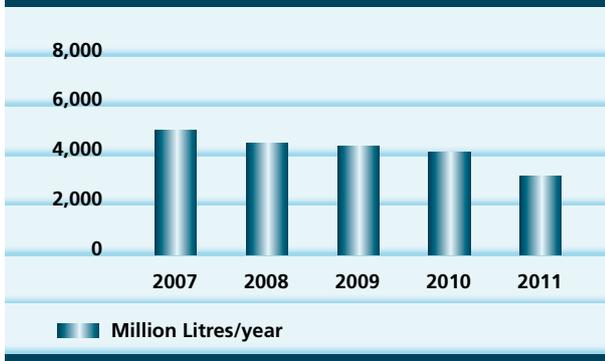
At our Altona plant, the installation of facilities to deliver recycled water for City West Water's Altona Treatment Plant were commissioned in May 2011. At the end of that year, 45 percent of Qenos water supply was from recycled sources and is expected to increase to 65 percent in 2012.

A project to recycle waste water from our Olefins site in the Plastics site cooling tower has only been able to run for 30 percent of the time, but has still recycled 50 million litres since it was commissioned in 2009. A solution to technical issues in relation to pH measurement is being worked to improve the performance of this activity.

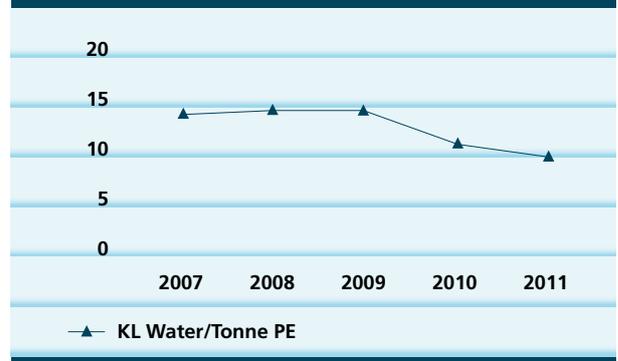
The Altona Resins site successfully commissioned a project to filter and reuse a process water stream and successfully treated and reused 225 million litres since 2009.



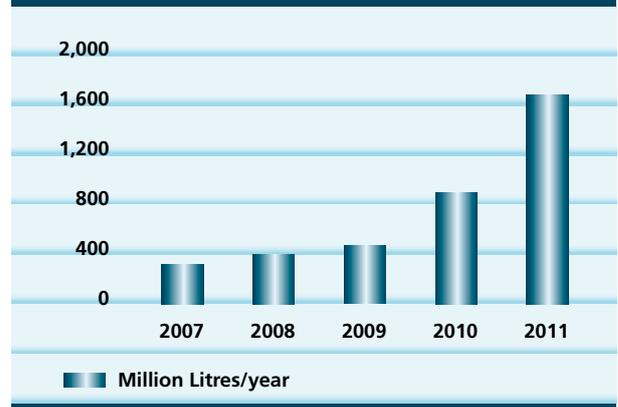
Potable Water Consumption



Potable Water Efficiency



Recycled Water Utilisation

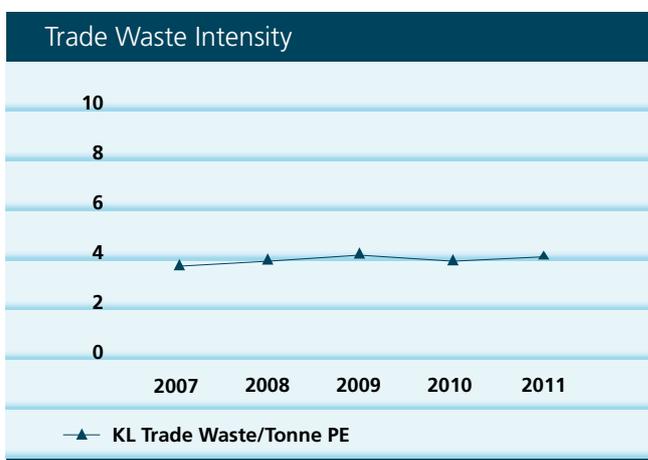


Trade Waste

Qenos facilities generate trade waste from sources including boilers, cooling towers, demineralisation plant purges and contaminated water from the process plants.

The trade waste production remained stable over the 2010 and 2011 reporting period, with an eight percent volume increase and a five percent efficiency improvement due to a higher production year.

The recycling project at the Altona Resins facility commissioned during 2010, has recycled 225 million litres over the reporting period while the Altona Olefins Sour water reuse has recycled 50 million litres of water saving the discharge of 275 million litres of trade waste to sewer since 2009.

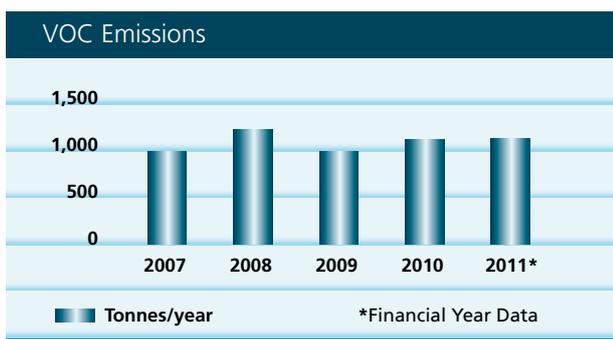
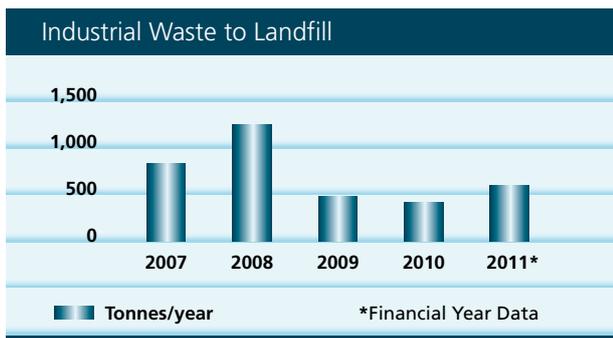




Wastes and Emissions

Qenos has made outstanding progress in reducing waste and emissions from our manufacturing facilities, creating a product and income stream at the same time.

Qenos uses the waste hierarchy system to guide reductions and continually monitors and measures wastes and emissions.



Industrial waste to landfill has been stable over the last three years. The segregation of recyclable waste continued without any issues through the period.

During 2010 a system was introduced to collect disposable dry cell batteries for correct disposal at the Altona facilities. The collection system will be introduced at our Botany facilities in the near future.

Qenos is proud to be a signatory to the Australian Packaging Covenant, a unique initiative between government, industry and community groups. The APC aims to minimise the environmental impacts of packaging by focusing on sustainable design, recovery and recycling, and product stewardship.

Qenos is currently implementing the Qenos Action Plan which covers the period 1 July 2010 to 30 June 2015.

Qenos's program to reduce Volatile Organic Carbon (VOC) emissions from our manufacturing facilities minimises emissions from all sources including licensed vents. Significant reductions have been made since the program began in the 1990s, while the annualised trend has been stable over the last five years consolidating these reductions.

A project was put in place to reduce VOC emissions at the Botany Alkathene facility, which is responsible for 50 percent of the Botany VOC emissions. So far the project has refurbished a vent recovery compressor to maximise recovery of purge gasses, updated control logic to eliminate venting from shutdown equipment, carried out an engineering study of potential emission points and extended the LDAR program to cover the Alkathene facility. The project won the Qenos Botany SHE excellence award for 2010.



Energy Efficiency and Greenhouse Gas Emissions

Qenos continues to make significant progress in projects that aim to improve energy efficiency and reduce greenhouse gas emissions.

Qenos uses steam cracking technology to manufacture ethylene and has two polymerisation plants in both NSW and Victoria to process ethylene into polyethylene. Onsite boilers and gas fired furnaces are used in the manufacturing process and the fuel used in these furnaces and boilers accounts for over 90 percent of Qenos's energy consumption and onsite greenhouse gas emissions.

Electricity purchased from the grid is six to eight per cent of Qenos's energy use, while greenhouse gas emissions associated with the generation of the purchased electricity account for 30 percent of that attributable to Qenos operation.

Qenos's energy consumption and greenhouse gas emissions have been stable over the last two years.

The Energy Efficiency Opportunities Assessments have been completed and have identified a number of opportunities that are being implemented.



These included increased bulk product load size at Botany Alkatuff facility.

The truck filling spout has been modified to allow more polyethylene to be loaded into each truck. This reduced the number of truck movements by 50 per year, reducing traffic and saving 10,000 litres of diesel per year to supply product to our customers

A similar project is being tested at the Altona Plastics facility that has the potential to reduce truck movements by 200 per year.

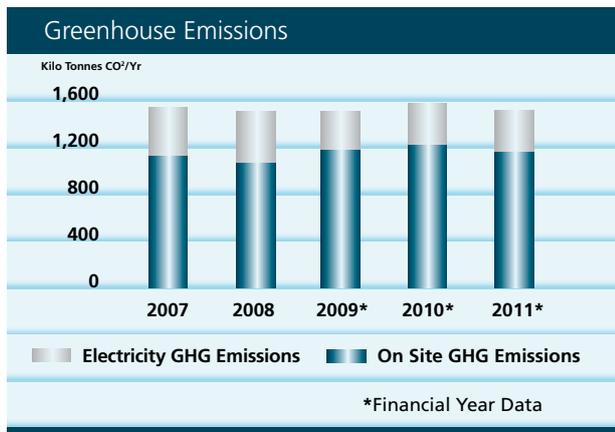
A project to regear the recycle gas compressors at the Plastics facility has resulted in a reduction in greenhouse gas emissions by 4000 tonnes of CO² per year and an energy saving of 12000 GJ per year.

Development of cogeneration proposals for Qenos facilities progressed in 2010. A contract was signed in early 2011 for the construction by AGL of a cogeneration plant at the Qenos Altona facilities. Civil works commenced in 2011 and construction will be completed in 2012. Once commissioned, the project will deliver savings of 100,000 tonnes of CO² per annum. The facility will supply Qenos's Altona electricity needs and produce enough steam to replace a site boiler which is at the end of its economic life.



"The project is a further demonstration of the power of cooperation between industry, government, employees and the community to provide a secure long term energy source...this is an investment in real sustainability".

Jonathan Clancy CEO

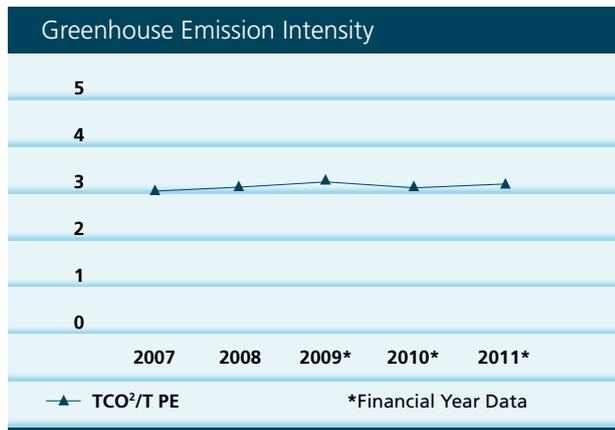


Cogeneration at Altona

The \$45 million cogeneration unit to be installed at Altona will result in a reduction of approximately 100,000 tonnes of greenhouse gas emissions per year.

The cogeneration unit will meet substantially all of Qenos's Altona electricity demand and will be capable of producing over a third of its steam requirements. This investment will strengthen Qenos's position as a competitive and sustainable long-term local producer of polyethylene.

AGL Energy Limited will manage construction of the project from September 2011 and operations are expected to begin in late 2012.





Compressor Efficiency Upgrade

A project to improve the capacity and efficiency of a propylene refrigeration compressor has reduced steam demand on the Qenos Olefins site saving water and energy, and significantly reducing CO² emissions.

The compressor on the Altona plant is driven by steam turbine TC551. When under full power this used a disproportionate amount of high pressure steam which resulted in venting low pressure exhaust steam to atmosphere.

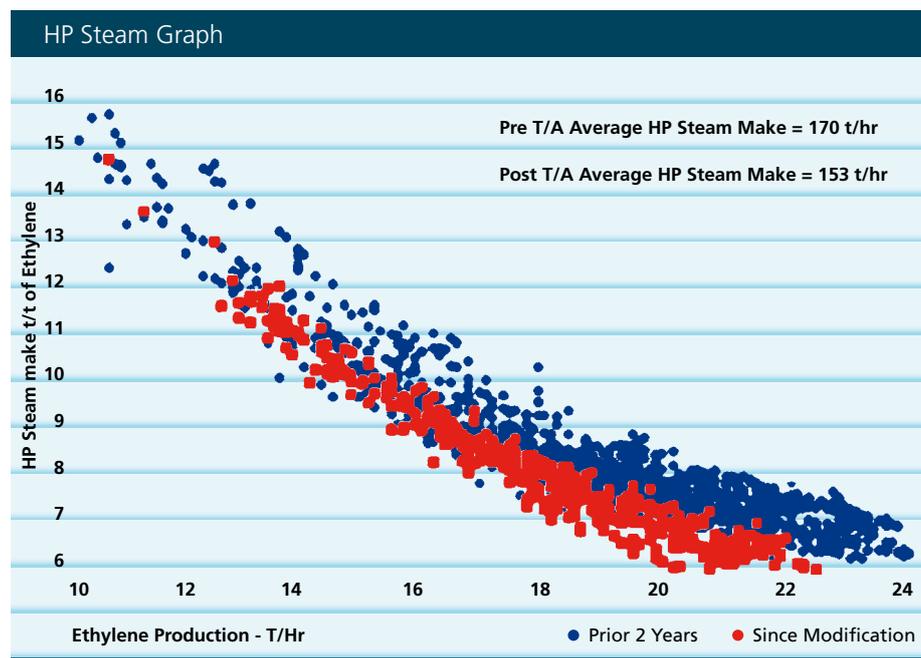
Qenos engineers knew that the efficiency of the compressor declined at high loads. In consultation with the original machine manufacturer, Siemens of Germany, they concluded that the compressor was suffering 'impeller eye stall'. Fixing this problem would both improve plant capacity and reduce power demand.

This required re-engineering the internal workings of C551 and replacing them during a plant shutdown. The innovative work was undertaken at the 2011 SCAL 2 Turnaround when the new internal parts were installed at a cost of A\$1.1million.

The result of the change is that site steam demand has been reduced by about 10 percent for constant ethylene production. Product rundown to storage capacity has also been increased by around 15 percent.

The environmental impacts of this engineering change are significant reductions and savings in the annual rates of:

Natural gas burning	:	9,000 tonnes
Carbon emissions (CO ²)	:	24,000 tonnes
Water consumption litres	:	130million
Energy Cost	:	\$2million





Innovation

Qenos's research and development facility at Altona is the most comprehensive polyethylene laboratory in the southern hemisphere. It provides the platform for Qenos to transform global trends and technologies into innovative new products tailored for the Australian market. Qenos has become a recognised benchmark in Australia for the production of world class polyethylene grades.

- Innovation at Qenos is aimed at:
- anticipating and meeting customer needs
 - leading developments in polymers and chemicals

At Qenos we aim to give our customers access to the latest polymers. We work closely with our customers to understand their current and future needs and to help them exploit technical opportunities.

By establishing partnerships with leading global technology providers, Qenos has access to the latest polyethylene trends and developments. Through these global partnerships, we are working to introduce world-first platform technology at our Altona and Botany facilities, which will provide unique products for our customers.



Qenos is creating products that enable customers to be globally competitive, to access new markets and to embrace innovation.

Centrene® – Creating New Opportunities

In 2011, Qenos expanded its Centrene® PE range, adding Centrene® HDF145B. This new polyethylene grade delivers a tough, flexible and cost-effective pipe option suited to challenging applications, such as large scale mining, water transport, desalination intakes and outfalls, and other applications requiring large diameter, thick walled pipes.

Centrene® HDF145B opens up opportunities for applications in new markets and enables customers to increase throughput, improve efficiency, reduce waste and improve sustainability.

This world class product is the result of Qenos technical experts working in partnership with customers, technology providers and industry to develop new products and get them to market.

Alkamax® mLLDPE

Qenos and its technology partners have developed a novel and exciting technology for the manufacture of a high performance grade of plastic, known as Alkamax® mLLDPE (metallocene linear low density polyethylene). This material is typically used in applications such as heavy duty sacks and for food packaging. Alkamax® mLLDPE offers significantly improved toughness in comparison to conventional polyethylenes and excellent clarity. Domestic manufacturers of film are able to take advantage of the improved mechanical performance of Alkamax® mLLDPE by improving performance of existing products or by reducing film thickness, thus reducing raw material usage and lessening packaging waste to landfill. Qenos's state of the art Technology Centre and product development experts were instrumental in the design and development of Alkamax® mLLDPE to specifically cater for the Australian domestic market. The Qenos Technology Centre has specialised equipment, including commercial scale film extrusion facilities and end application simulation capability to fully appraise the newly developed Alkamax® mLLDPE. Qenos commenced commercial production of Alkamax® mLLDPE in 2011. It is a great example of the application of high technology and material science to add value to Australia's natural resources and support local manufacturers of film products.





Qenos is proud to be part of the communities in which it operates.

Community

Communication and Consultation

Qenos communicates with the community through formal networks as well as informally through community access.

We are committed to the industry Community Right to Know Code and encourage local communities to contact the company at any time with safety, health and environmental enquiries.

Qenos is a member of the Altona Complex Neighbourhood Consultative Group (ACNCG) and The Botany Industrial Park Pty Ltd (BIP) Community Consultation Committee. These committees meet regularly and provide a forum for the community and member companies to discuss health, safety and environmental issues. During 2010/2011, Qenos attended all scheduled community consultative meetings, with six in Botany and fourteen at Altona.

The ACNCG at Altona issued four editions of the Consultative Chronicle in 2010/2011 and the Botany Industrial Park (BIP), representing Qenos, Orica and Huntsman, distributed the annual BIP brochure each year. These communications speak directly to local communities, organisations, businesses and schools, providing information on operations as well as efforts and achievements in environment and safety.

Senior personnel also attend public forums and events to keep involved with local communities and ensure that Qenos listens and responds to community concerns and is aware of how the community perceives us.

Providing Information and Access

To encourage a connection with local communities, Qenos has a comprehensive website and provides 24-hour community hotlines at Altona and Botany.

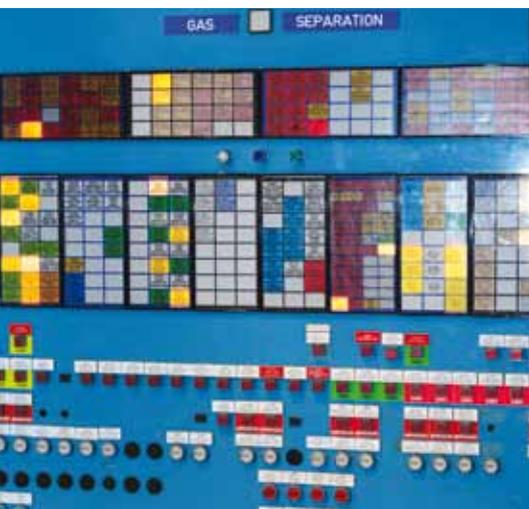
Our updated website not only looks good, it provides an avenue for the community to contact Qenos and access information as well as a valuable resource for education and information.

During 2011 a new section of the website 'Community Updates' was introduced to update the public about progress of the SCAL-2 turnaround and to provide information about flaring at Altona following a number of noise complaints.

Each year the Qenos website receives close to 3,000 enquiries from a diverse range of people including students, graduates, prospective employees, customers, exporters and the general public.

Environmental Telephone Hotlines are in operation. At Altona the Environmental Action line (1800 161 050) is available for the community with the Botany Community Hotline (1800 025 138) in operation at Botany.

In Altona, a School Network Telephone System has been installed to enable local schools and kindergartens, the Hobson's Bay Council and the Altona North Migrant Resource Centre to be notified promptly if there is an incident that may present some risk to the community. Schools, kindergartens, councils or resource centres can also use the phone system to seek information about the Qenos complex.



Responding to Incidents and Complaints

The level of impact in the community based on complaints and Reportable Environmental events has been relatively stable over the past few years. In 2011 there were 19 community complaints and seven environmentally reportable incidents. Both indicators were within the performance trend line of the last five years and Qenos aims to achieve improved performance each year. This aim will continue into the years ahead.

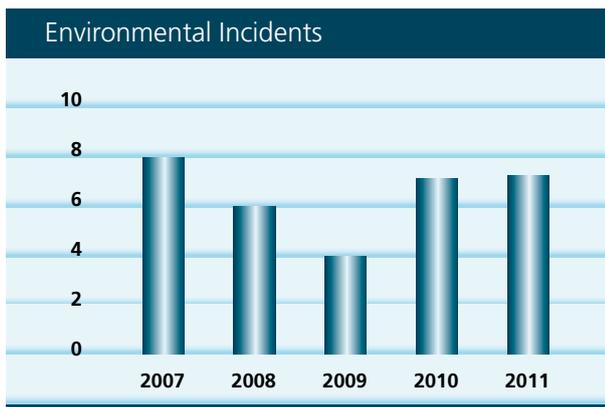
All environmental events are thoroughly investigated within the Qenos Incident Database. The investigations identify root causes and corrective actions are implemented to avoid a recurrence of the events. The results of these investigations are discussed at community consultative meetings by management, the community and regulators. Investigation reports were prepared for all events and forwarded to the relevant environmental regulator and community consultative committee.

The 19 community complaints in 2011 included:

- Three complaints for a smoking flare in March – occurred after a loss of steam supply at the Altona Olefins site resulted in the loss of smoke suppression steam
- Six noise complaints associated with the Altona Plastics flare between June and September – an energy efficiency project that provided a new steam supply to the Plastics elevated flare resulted in an increased steam flow to the flare along with increased noise. Adjustments to the steam flow and the rate of flaring have been made and noise monitoring indicates that the flare is now operating quieter than it was prior to the change of steam supply. This will be monitored during 2012 to ensure that the improvement is consolidated
- Six noise complaints for flaring at the Altona Olefins site in July following a compressor shutdown – a new flare tip design had recently been installed that has an improved smokeless capacity, lower operating and maintenance costs and an expectation of equivalent or better noise performance to the previous tip. The new tip did have a higher smokeless capacity but was brighter and had a significant low frequency jet engine ‘rumble’ that was much more noticeable than the original tip. The original tip was refurbished and put back into service. Technical discussions are being held with the new flare tip manufacturer to attempt to resolve performance issues
- Two single noise complaints for flaring associated with unplanned equipment shut downs at the Olefins site in February
- Two noise complaints in July at the Botany Alkathene facility following a rupture disc discharge.

The seven reportable environmental events in 2010 comprised:

- One trade waste licence excursion at Altona
- Two spills/releases of dangerous goods
- An EPA Victorian licence excursion for flare smoke associated with the steam failure in March
- A reportable event for more than three complaints for the flare noise in July
- Two releases to Springvale drain, one an overflow of effluent and the other for cooling water.





Corporate Social Responsibility

Community investment is an integral part of Qenos's commitment to social corporate responsibility and we appreciate the opportunity to connect with, assist and benefit from our involvement with local communities.



Supporting Community Participation

Qenos welcomes opportunities to showcase our people, plants and products by inviting people into our plants as well as participating in events in the community.

In line with our Community Right to Know affiliation, Qenos conducted informative site tours for various industry groups, school and university students, local, state and overseas visitors. We also participated in the Werribee Job Expo and offered on site customer workshops.

Qenos encourages employees to volunteer their time to assist local community groups and organisations. The Qenos Graduate Network contributed to the Sacred Heart Mission in St Kilda by coordinating an employee donation of more than 150 generous Christmas hampers to Melbourne families. The Botany Graduate Network collected for The Salvation Army Red Shield Appeal which provides parenting and family support services. Qenos employees participated in events including Run for the Kids in Melbourne, the City to Surf in Sydney, Footy Colours Day, Yarra Bay Fun Run, Stromlo Australian 24 hour Solo Mountain Bike Championships, Ride to Work Day and the Great Victorian Bike Ride – Qenos has proudly sponsored the Bayside Secondary College team in the Ride for many years. Qenos also sponsors an employee car in the Variety Club Bash to raise funds for special needs children.

Other employees contributed to local schools via the Scientists in Schools program or by providing vocational guidance or literacy assistance to young students. A group of employees also provided mentoring experience at the Galvin Park Secondary





The capability of the people at Qenos contributes to the success of our business.



College Straighttalking sessions to provide students with advice on their career pathways.

Qenos supports local educational programs to assist young people reach their full potential and nurture the development of future generations. We have formed a new community partnership with the Western Bulldogs Football Club's FRESH Program. The program is a community education service for young people who have experienced difficulties with mainstream education. It offers them the opportunity to complete senior secondary equivalent qualifications in a flexible and supportive environment.

We are also proud of our continued association with Whitelion and Western Chances, and have signed on to the Victoria University Achievement Scholarship program. Several young people from these organisations and other local schools have undertaken work experience at Qenos which has provided them with the confidence to pursue other employment opportunities.

Qenos contributes to the daily life of local communities through sponsorship of clubs including Altona Football Club, the Maroubra Saints, the Altona Gators basketball club, Randwick and Koorringal Golf Clubs, as well as soccer, swimming and lifesaving clubs. We have assisted the MAD Foundation, Western Health and the major Children's Hospitals in both Victoria and New South Wales.

We are proud of our involvement with the Matraville Christmas Carols and assisted the City of Randwick Chinese New Year celebrations.

Our long association with local artists has continued for more than 25 years through sponsorship of the Qenos Art Show and the Rotary Club of Altona Art exhibitions.

On a green note, some young Qenos employees joined the Friends of Lower Kororoit Creek corridor tree planting at Grieve Parade in Altona to plant 'Swift Parrot' friendly eucalypts. We support the Laverton Garden Club and several

Schools that have participated in our Work Experience Program:

SECONDARY SCHOOL	STATE	STUDENTS
Bayside P - 12 College	VIC	2
Christian Brothers College	VIC	1
Copperfield College	VIC	1
Galvin Park S.C	VIC	1
Gisborne College	VIC	1
MacKillop College	VIC	2
Marian College	VIC	1
Maribyrnong S.C	VIC	1
Marist College	NSW	2
Mount Saint Josephs	VIC	1
Northside Christian College	VIC	1
Point Cook Senior S.C	VIC	4
Thomas Carr College	VIC	2
Kambala School for Girls	NSW	1
Emmanuel College	VIC	1
		22

kindergartens by donating some of our customers' end products, such as polyethylene worm farms and mulching bins. Another project involved our graduates assisting at the Louis Joel Community Centre clean up where much needed garden mulch was spread and their outdoor decking receiving new paint.

In kind donations of surplus furniture and office equipment continue to be made to local organisations, including the SES and other sporting clubs.

Bluestar Summer Camp

For the second year, Qenos participated in the Bluestar Summer Camp which takes children of Qenos employees on a trip to Beijing. Aimed at children aged between 9-14 years, the objective of the 20 day camp is to strengthen the development of independence in the children, cultivate teamwork, and promote an understanding of different cultures.

While in Beijing the children participate in an opening ceremony for the camp, visit places such as the Great Wall of China and the Forbidden City, museums, galleries and some of the sporting venues used during the 2008 Olympic Games. Other highlights include recreational sports (last year included snow skiing for five days), shopping, cooking classes, Chinese calligraphy lessons and a final concert where all camp participants perform. Another highlight of the camp is the chance to share a homestay with the families of China Bluestar employees. The children experience authentic homelife which includes grocery shopping, homestyle cooking and a chance to practice Chinese conversation.

Through this camp, the children of Bluestar employees from around the World – including China, France, Italy, the UK, Brazil, USA and Norway – form strong friendships.



"Bluestar has given me and another 100 kids from around the world a great, once in a lifetime, China experience. During the camp I have learnt more than anyone could imagine. I got to experience firsthand what I have been learning about China in school for years..."
Aidan, Altona

"The camp was a life-changing experience. I think I grew more independent, more responsible and more confident in myself..."
Emma, Botany



What is Sustainability?

*We didn't inherit
the earth from our
forefathers, we have
borrowed it from our
children.*
(North American Indian Proverb)

*An attempt to provide the
best outcomes for human and
natural environments both now
and into the indefinite future.*
(UN sponsored Brundtland Commission 1983)

*The creation and incorporation of
environmental and societal values upfront in
the business process to create better financial
returns and a better world for the future.*
(Sustainable Business Growth - Paul Tebo)

*Meet the needs of people today
without compromising the ability
of future generations to meet their
own needs.*
(UN sponsored Brundtland Commission 1983)

These statements and others were investigated at Sustainability Day presentations held at Qenos in December 2010. Led by the Qenos Senior Environmental Advisor, Qenos employees attended sessions to hear about some of the different programs being sponsored throughout the organisation in relation to sustainability.

Details of the water saving programs in place were explored including the use of groundwater and recycled water throughout our manufacturing facilities. Energy savings incorporating the future cogeneration plant; an energy efficient office lighting project; furnace optimisation and convection cleans; as well as other topics including waste segregation and battery disposal were discussed.

Alternative energy, further reduction of odours and emissions and our product footprints were also subjects for discussion on how Qenos might aim to create a cleaner environment.

At Altona, Ian Penrose Riverkeeper and spokesperson for the Yarra Riverkeeper Association, which Qenos sponsors, attended a session to talk about his organisation and the work they do to maintain and educate others to help sustain Melbourne's Yarra River. His passionate and informative presentation provided a real understanding of the value the Yarra River provides to Melbournians.



Qenos Sustainability Framework

Financial

At Qenos, we are creating a sustainable business that delivers reliable returns to our shareholders. Leveraging our world class knowledge, strong stakeholder relationships and core competencies we strive to be a leading business in the manufacture, distribution and trading of polymer and advanced chemicals.

Health and Safety

At Qenos, we believe that all injuries, occupational illnesses and environmental incidents are preventable.

We are committed to, and everyone who works at Qenos must show responsibility for operations, products and practices that protect the safety and health of our employees, contractors, customers and the community, as well as protecting the environment.

Water

Qenos minimises the consumption of potable water in our manufacturing processes through efficient production processes, on site water re-use and using alternative water supplies.

Energy Efficiency

Qenos plays a key part in the solution to climate change through a significant improvement in energy efficiency with associated abatement of greenhouse gas emissions in our manufacturing process.

Qenos focuses on efficient production processes that deliver products with a lower carbon footprint, use of competitive alternatives over the whole product life cycle, and implementation of cost effective energy efficiency and CO² abatement opportunities along the Qenos supply chain.

Wastes and Emissions

Qenos minimises waste production through efficient production processes and products that maximise product yield. We will continue to find alternative uses for waste including energy recovery along the Qenos production chain.

Materials Processes and Products

Qenos is committed to producing high quality polyethylene that provides our customers with the capacity to produce recyclable products of high integrity with minimum material usage.

Working in partnership with our customers and community, Qenos maintains its commitment and focus within its operations and externally to improved sustainability through conservation of water, improvement of energy efficiency with associated abatement of greenhouse gas emissions and waste generation, and actively supporting recycling across the Qenos product life cycle.

Security

Qenos strives to provide personal security (safety) for all employees, alliance partners, contractors and visitors. Safety induction, access authorisation, protective equipment and safe infrastructure are provided.

Qenos controls access to plants, specific buildings and areas via a series of systems. This is to safeguard our workforce, our assets, licensed technology, information and where possible, on site assets of our workforce. These systems govern personal and vehicle access, rules for authorisation, safety induction, hosting visitors, key control and other security procedures.

Community and Stakeholders

Qenos actively initiates engagement with local community, regulators, workforce, representative groups and other stakeholders. Communications to all stakeholders by Qenos is with respect, openness, honesty and courtesy.

Workforce

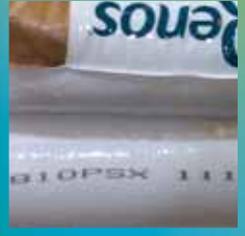
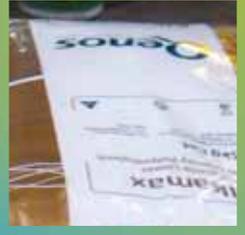
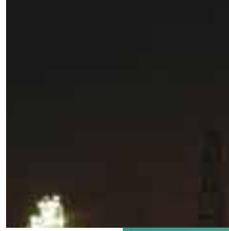
Qenos engages and develops its workforce to achieve personal goals and contribute to business performance in a sustainable industry.

Innovation

Innovation is the keystone to the future of Qenos and the polymer industry. Our product development process is aligned to our customers' needs, cognisant of all key stakeholder requirements and provides products that benefit our communities.

Accountable

Qenos measures and monitors business sustainability and provides regular reports that are available to all stakeholders.



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