

Environment

Altron operates in sectors that were traditionally regarded as having a low impact on climate change. Recent research has shown, however, that the digital technology industry, for example, is responsible for 2% of global CO₂ emissions, the same share as the airline industry. Recent evidence has also shown that businesses across all sectors are exposed to the risks and opportunities of climate change.

Locally and internationally, increasing costs of energy are creating a strong business case for energy savings. The need for sustainable energy supply and energy efficiency provides Altron with a unique opportunity to market products, services and the corporate brand in a carbon constrained economy.

Altron has complied in all material aspects to all relevant environmental legislation and there are no fines, convictions or material clean-ups necessary or outstanding.

Material issues identified

Altron is committed to understanding its impact on the environment, the associated risks its operations pose to the environment and the related economic opportunities that may be exploited. The first step is to understand the material issues facing the company with regard to the environment. Guidance in identifying these has come historically from a number of sources, including:

- ▶ the legal and regulatory frameworks existing in South Africa and other areas of jurisdiction over the company's operations;
- ▶ the ISO 14001 standard for environmental management systems;
- ▶ the GRI's G3 indicators;
- ▶ the JSE's SRI Index; and
- ▶ independently commissioned reports, such as MS Alexander and Associates' compliance report for Altron group operations.

While the frameworks above would indicate a multitude of issues, the company has

conveniently grouped them into five focus areas:

- ▶ Climate change.
- ▶ The need to comply with environmental legislation, offshore standards, regulatory environment and protocols.
- ▶ Pollution and emissions.
- ▶ Energy usage and reduction of peak demand.
- ▶ Environmental impact of products and services.

Systems to manage our environmental impact

At the level of each of Altron's operations, key environmental aspects of each operation have been identified and their impacts have been evaluated. All significant aspects and impacts are identified and logged in the 'aspect register' kept available for this purpose at each relevant operational site. The information is then converted into a structured database for evaluation and reporting.

Measurable objectives and targets are established annually at management level, and set out in the Environmental Management System (EMS) documented at each relevant site, as per ISO 14001. The EMS documents including full procedures, records and work instructions, provide a record for the annual audit of our environmental performance. For the purposes of internal reporting and management review, regular environmental internal audit/risk assessments are conducted and a management review meeting is held monthly. While most of Altron's wholly owned subsidiaries do report on quantitative data for key environmental impacts, there is as yet no central database where this data and performance against targets is collected and collated. The Altron group is currently extending its information management system, Everest, to facilitate group management of our environmental impact.

No environmental auditing/screening of suppliers/contractors is done by the

Issues within this section

- ▶ Climate change
- ▶ Compliance with legislation
- ▶ Pollution and emissions
- ▶ Energy use and efficiency
- ▶ Environmental impact of products and services



What is climate change?

Climate change can be defined as the destabilisation of the earth's climate system caused by an increase in the concentration of atmospheric greenhouse gases (GHGs). The earth's atmosphere contains GHGs, which trap a certain amount of short-wave radiation from the sun and re-radiate it back to earth. In essence, these gases act like a blanket, and keep the earth at a stable temperature. However, it is now widely believed that human activities have caused an increase in these GHGs, and consequently an increase in global warming.

company at this time. However, the two main suppliers (Fry's Metals and Chemical Initiatives) of raw materials to Powertech Batteries are both ISO 14001 accredited. Other suppliers, although not ISO 14001 accredited, are required to provide a written commitment to the relevant operations that they will conduct their business in an environmentally friendly manner.

The various Altron group environmental policies are displayed on internal notice boards and are available on the relevant operations' websites. Training has been provided for all key personnel who are involved with the implementation and maintenance of the EMS. Selected employees have been trained as environmental auditors and all employees and contractors receive induction training, which includes elements of the environment.

Material issue**Climate change**

Recognising the gravity of the issue of climate change, Altron commissioned PricewaterhouseCoopers to assist the company in drafting a climate change position paper to guide the Altron group's response to the issue.

This paper was tabled at the Altron risk management committee meeting on 30 April 2008. The climate change position paper sets out how Altron is responding to the challenge of climate change. This includes a commitment to reducing energy consumption and GHG emissions and efforts to finding alternatives to the current reliance on fossil fuels in the company's products and services. A summary of this paper follows:

Identifying risks associated with climate change

The Carbon Disclosure Project (CDP), an international initiative backed by institutional

investors, calls for disclosure of investment-related information concerning the risks and opportunities due to climate change, and Altron is among the list of companies around the world targeted by this project. Company-specific risks and opportunities are:

- ▶ **Physical risks** – increased occurrences of storms and floods or the devaluation of land as a result of climate change is expected to have a direct physical impact on the company.
- ▶ **Regulatory risks** – companies are experiencing a sharp increase in both traditional legislation, such as permits and energy-efficiency requirements for products and processes; and market-based regulation, such as carbon taxes, emissions-trading schemes and fuel tariffs. These risks have particular implications for large capital outlays on projects with long life times.
- ▶ **Reputational risks** – the perception that a company may be failing to address climate-change risks can cause a drop in consumer confidence and brand value.
- ▶ **Litigation risks** – although currently not a major risk, increasing stakeholder pressure increases the risk of litigation.
- ▶ **Economic opportunities** – Altron can benefit directly not only from the sale of products and services in the energy efficiency arena (assisted by the rising cost in energy), but also from the various carbon markets that have been created worldwide, including the World Bank's carbon credit trading guarantee and the United Nations Framework Convention on Climate Change's (UNFCCC) Clean Delivery Mechanism that awards tradable credits for certified emission reductions (CERs) related to projects specifically undertaken in developing nations that reduce carbon-related emissions.



Jack Hochfield

Environment *continued*

Current status

Although Altron would not be regarded as a significant contributor to climate change in terms of direct GHGs, the company acknowledges that its normal business activities consume significant amounts of energy, thereby contributing to increasing levels of atmospheric GHGs.

There are significant sources of greenhouse gas emissions, such as in the specific manufacturing lines in the Altron group, that represent both a risk and an opportunity in terms of climate change. Furthermore, as a leading supplier of products and services to the power industry, Powertech is ideally positioned to leverage off the growing demand for low-carbon, energy-efficient, products.

POWERTECH

Sulphur hexafluoride (SF₆) identified in the production process at Powertech Batteries, as well as in Powertech Transformers, has a global warming potential 23 900 times that of CO₂ and consequently is regarded as a major source of greenhouse gas for Powertech. But by eliminating leaks and removing/reusing SF₆ before maintenance and decommissioning, Powertech can avoid significant GHG emissions, the basis of a profitable Clean Development Mechanism (CDM) project.

Powertech Transformers is the most advanced Altron subsidiary in terms of responding to climate change and has reported on its GHG emissions, implemented energy saving targets, and has embedded energy efficiency in its products and services. They have recognised that climate change is both a risk and an opportunity and have responded to this by promoting energy-efficient products. Furthermore, Powertech Transformers is assessing the switch from coal to natural gas for its boiler burner to further

reduce emissions. This represents a real opportunity to generate further income as a CDM project.

Certain Powertech companies are well positioned to address the needs of a future carbon-constrained economy. Divisions such as Rentech (solar panels) and Crabtree (home automation solutions) can market their products as energy efficient and low in carbon content, and increase revenue and sales.

ALTECH

Altech's major emissions arise from production (Altech UEC and Altech NamITech), service solutions in the form of electricity consumption at call centres and servers, and transport and logistics, which are currently dependent on fossil fuel. Altech is planning to carry out an investigation into the climate change risks, major GHG emission sources and opportunities for developing low-carbon, energy-efficient products within the Altech group in both the manufacturing and service lines of business.

BYTES

Bytes acknowledges that although it is not a manufacturing company, it is a high energy consumer through both electricity consumption (from servers, offices and call centres), and fossil fuels (from back-up energy generation, distribution networks and travel). While energy efficiency products are already being implemented, Bytes acknowledges that further opportunities exist to improve on its energy-efficiency, especially in the data centre environment.

Bytes has a strong association with Xerox, being the largest reseller of Xerox products in the UK and the exclusive agent in South Africa and southern Africa.

Commitment to the Global Compact

The Global Compact brings companies together with UN agencies, labour and civil society to advance social and environmental principles. As a signatory to the Global Compact, Altron commits to aligning its operations and strategies with 10 universally accepted principles in the areas of human rights, labour, the environment and anti-corruption.



Bytes is a high energy consumer of electricity from servers, offices and call centres.

While Xerox has already certified its GHG emissions, set reduction targets and contributed regularly to the CDP, it does not report on emissions associated with Bytes. Bytes itself does not quantify or report on its GHG emissions.

The way forward

Altron acknowledges the significance of climate change and the causes thereof through industry's production and consumption of fossil fuels, primarily to produce energy, but resulting in the emission of GHGs, leading to climate change.

Altron believes that climate change is significant both globally and locally and fully supports the intentions of international agreements such as the United Nations Framework Convention on Climate Change.

Altron acknowledges and believes that a strategy to address the issue of climate change cannot be seen in isolation and must be integrated with the sustainable development strategies of the Altron group as a whole. Altron acknowledges that in order to understand its impact on climate change effectively, and to assess the opportunities for carbon trading realistically, a baseline quantification of its GHG emissions (carbon footprint) should be developed. Altron will work towards ensuring that the carbon footprint is developed at its operating companies.

A long-term carbon management strategy will consequently be developed in response to and in association with the carbon footprint assessment of the Altron group.

The recommendations received include:

- ▶ determining the carbon footprint (GHG inventory) for the Altron group of companies;
- ▶ identifying and assessing carbon risks and opportunities;
- ▶ developing an Altron group climate change strategy;
- ▶ establishing feasible emission reduction targets and potential carbon-trading initiatives; and
- ▶ maintaining an internal GHG reporting system and subsequently improving external reporting of emissions on a continuous basis.

Altron's response to the issue of climate change will be reviewed at board level and an appropriate board member will be assigned responsibility to investigate and progress the continuation of this initiative.

Material issue

Compliance with environmental legislation, offshore standards, regulatory environment, protocols

Compliance with various environmental protocols and standards is in many instances not only a legal obligation, but is also a useful way for companies to benchmark their environmental performance against best practices and world trends. Altron group companies comply with environmental legislation where applicable and in many instances have been proactive about commissioning independent external environmental audits on operations that have a potentially high environmental impact. Such audits go a long way towards helping these Altron group companies to identify potential problem areas and take the necessary steps to rectify any issues.

Environment *continued*

Name	ISO 9001: 2000	ISO 14001	Other
AAD	Certified	Compliant but not accredited as it handles no hazardous substances	ROHS compliant (the European standard for removal of harmful substances)
Altech NamITech	Certified. Compliant with Europay MasterCard, Visa, as well as Verisign specs and standards	All scrap metals are being disposed of to third parties under controlled and compliant conditions	—
Altech Netstar	—	—	70% of components received lead-free
Altech UEC	Certified	System had been updated for ISO 14001 compliance. Audit is being awaited	ROHS compliant WEEE compliant
Aberdare Cables	Certified	Standford Road (Port Elizabeth) and Pietermaritzburg operations – ISO 14001 certified. Gauteng operation in process of implementing ISO 14001 – target date March 2009	BASEC/ISO 9001 compliant
Powertech Transformers	Certified	Certified	ISO 18001 certified
DPM Cape Town	Certified	Certified	ISO 18001 certified
DPM Booyens	Certified	—	—
Powertech Batteries	Certified	Certified	Ford Q1, VDA 6.1 and TS 16949s (motor vehicle industry standards)
Crabtree	Certified	Expected end of 2010	—
Battery Technologies	Certified	Expected end of 2010	SONCAP approved for exports to Nigeria
Bytes Systems Integration	Certified	—	—
Bytes Managed Services	Certified	—	—





POWERTECH

Powertech Transformers commissioned external audits by accredited bodies during the year and is both ISO 14001 and ISO 18001-certified. The company also has a third-party certified ISO 14001 EMS in place for Pretoria West. DPM's Cape Town operation is also third-party ISO 14001 certified and management regularly reviews any issues raised by the Altron internal audit function, external audit groups and customer audits. Due to space constraints and the condition of equipment, DPM's management does not believe it will be possible for the company's Booyen's operation to obtain ISO 14001 certification and thus proposes to relocate the operation to a new, more suitable site that will comply with the ISO standards.

During 2007, Calidus and Crabtree commissioned MS Alexander and Associates, an independent consulting firm, to conduct an environmental compliance report on both operations. These reports established:

- ▶ whether the companies have successfully identified any pertinent environmental risks;
- ▶ whether such risks are being successfully addressed;
- ▶ whether environmental management systems are in place; and
- ▶ The overall status and rating of the operations compared to both local and international standards.

The report covered the full ambit of environmental issues including noise pollution, ISO 14001, executive policy statement, legal permits, international agreements and protocols, hazardous substances, chemicals used/stored, emissions to the atmosphere, rehabilitation (remediation of property), waste, illumination, complaints or criminal charges, water, toxic waste and radio active substances, major hazardous installations (MHi), dust, fire spread, PCBs, clean-up costs, sustainability, and emergency planning.

Overall, both companies' rating was satisfactory, indicating that although some control weaknesses were identified which require minor improvements, such weaknesses, taken together or independently, do not significantly impair the overall system of internal control.

Key findings from the report include suggestions that Calidus obtain an ISO 14001 certification by the end of 2009, a recommendation which the company has plans to carry out. (Details of the findings pertaining to Crabtree are dealt with alongside under Pollution and Emissions.)

Powertech Batteries has identified lead exposure and contamination, acid exposure and electricity consumption as its most material environmental issues. Lead acid batteries contain sulphuric acid and aggressive and toxic substances which are harmful to the environment and to the health of people who are subject to high levels of exposure. In order to mitigate the risks relating to lead, Powertech Batteries ensures that environmental reports are regularly obtained from independent assessment consultants. Reporting on environmental issues is given the highest level of importance. Powertech Batteries' policy with regard to lead is to minimise the exposure of the same to the environment, its employees and incidental or casual contact. Its policy in regard to acid is to prevent low pH contamination of the environment and humans. Our policy in regard to electricity consumption is to reduce our costs to the fullest extent possible.

Battery Technologies is in the process of pursuing ISO 18001 accreditation and it is expected that Powertech Batteries Port Elizabeth will have achieved accreditation by the end of January 2009. Those sites that are not ISO 18001-certified and low-impact sites, are controlled by local management with oversight through frequent reports conducted by independent assessment authorities. These sites are, however, ISO 9001 accredited.

Energy solutions at Strike

Powertech Energy Solutions (PES), a division of Strike, provides standby power solutions in the form of diesel generators. It recently secured a R113 million contract to supply 45MW of energy to a large mining house.

Environment *continued*

ALTECH

To comply with European Community requirements, including RoHS and Waste Electrical and Electronic Equipment (WEEE) directives, Altech UEC had eliminated all lead and harmful substances used in its production processes.

Material issue

Pollution and emissions

Pollutions and emissions are identified through the environmental auditing processes that Altron has in place at operations that display a high exposure to these risks. Data on the most pertinent risks is collected annually in order to measure the trends in our performance over time. The current results, compared with previous years' performance, are tabulated in table E.16 of the 2007 environmental survey conducted for our submission to the JSE SRI Index (see Appendix C on page 89).

A summary of pollutions and emissions, as well as the company's response to them follows:

DPM's shot-blasting plant

In its tanks manufacturing division, DPM's shot-blasting plant is fitted with separating equipment to minimise emissions to the atmosphere while the emissions from zinc spraying fumes and dust are trapped using a water curtain. At the tank cleaning facility, acid is neutralised and discharged only once it meets the standards set out by the Department of Water Affairs. Any areas where oil filling of transformers takes place are adequately insulated to avoid oil penetration.

Polychlorinated biphenyls (PCBs) at DPM's Cape Town premises

During the certification audit for ISO 14001 accreditation, polychlorinated biphenyls (PCBs) were discovered in the ground soil system of its Cape Town premises. PCBs are oil-like chemicals and before their toxic nature was discovered, they were widely used as insulation in electrical

equipment and oils. The PCB leakages from DPM's transformer storage tanks into the soil occurred prior to the chemicals being banned. However, DPM has worked closely with the Department of Water Affairs to monitor and manage the situation. DPM has also sampled oil, well and groundwater samples at its other premises in order to determine if similar leakages may have occurred.

The comprehensiveness of this monitoring and management programme is evident in the fact that DPM was granted its ISO 14001 accreditation.

Heavy metal plume at DPM's Booyens plant

The Booyens plant underwent a similar study and although there was no evidence of any PCBs in the ground samples, heavy metals were detected. These are thought to be more related to mining activities than transformer operations but management has adopted a proposal to monitor the movement of the plume at the plant.

Transformer oil spillages

From time to time each plant has minor transformer oil spillages but these are of no major significance. Each such incidence is recorded and preventative measures taken.

Oil seepage plume at Powertech Calidus

The MS Alexander & Associates environmental compliance report carried out at Calidus highlighted the fact that there has been gradual seepage of oil on the ground workshop area, leading to a plume of about 3 metres in diameter. This is not a major spill but still requires clean-up, which Calidus is attending to. The report further suggested that Calidus educate all supervisors and managers on how to safely clean and contain spillages and plans are in place to train all employees about the impact of spillages, on the environment and on human lives. Calidus has also made budgetary plans to purchase additional spill kits.

Bytes partners with Absa to turn crisis into opportunity

Retail ATM, a division of Bytes Specialised Solutions, responsible for placement and management of Retail ATMs for Absa, transformed a significant business risk into a new stream of revenue. During an eight-month pilot, the company developed a power supply unit that is driven by specially designed batteries developed by Battery Technologies in the Powertech group. These batteries provide an uptime far exceeding normal battery packs and similar conventional UPS systems.



Jose Simoes, Business Development Manager (left), and Derick Deyzel, Divisional Executive of Retail ATM (right), from Bytes Specialised Solutions with the UPS system.

Solar powered traffic lights at intersections in Johannesburg supplied by Rentech.



Rentech combats theft of solar units

Theft of solar units has been a considerable obstacle to their expansion in South Africa. Rentech has now harnessed international technology from its supply partner Uni-Solar, to produce solar modules designed to be glued to a surface in such a way that an attempt to remove a unit will damage it irreparably. Telkom is using these modules, sticking up to four at a time onto a metal backing sheet, which means that if thieves want to make off with the solar modules, they need to be geared up to move a unit that is 2.8m long and 1.6m wide and can weigh up to 60kg. State-of-the-art technology stores the energy produced by the solar modules in a maintenance-free battery through a maximum power point tracking charge controller. Some of these units are being used to power traffic lights during periods of load-shedding.

Heavy metal seepage at Crabtree in Wadeville

At Crabtree in Wadeville, the MS Alexander & Associates environmental compliance report found that lead powder, containing lead stearate, tribasic lead sulphate and kulubrite, is seeping from the waste disposal skip into the stormwater system when it rains. Better storage will help to solve the problem, which is currently being caused by the skip being over-full and Crabtree has taken immediate action to dispose of the waste in a less haphazard manner. The lead waste is also being removed to an area away from the stormwater drain system. Crabtree is in the process of implementing systems to have drain sampling conducted on a regular basis, which will enable it to immediately identify and control any future seepage of any kind into the stormwater system.

Sulphuric acid emissions and pollution risks at Powertech Batteries

Powertech Batteries uses two hazardous substances, sulphuric acid and lead, during the manufacture of lead acid batteries. The handling of the acid causes continual minor spillages which if not correctly controlled can detrimentally affect the environment by polluting the soil and subterranean water systems under the concrete floor. Sulphuric acid vapour emissions and lead seepage are also environmentally detrimental. Recognising its responsibility to mitigate such risks, Powertech Batteries spent R130 000 on upgrading the scrubber systems at its battery factories in Port Elizabeth, which will reduce sulphuric acid atmospheric emission.

Lead oxide dust and lead vapour at Powertech Batteries

Lead oxide dust is being extracted into bag houses following a R1.6 million capital expenditure on automotive dust extraction at the plant. There are plans for lead vapour from conventional grid casting to be

eliminated by a change in processes for which Powertech Batteries has committed R50 million.

Sulphuric acid seepage risk at Powertech Batteries

At Powertech Batteries an epoxy floor coating, which is a mixture of 'silicone sand' and a sealant, is applied in the charge room areas as well as in other areas where smaller quantities of sulphuric acid are used. The coating prevents any seepage into the subterranean soil and water and is either completely stripped off once a year (during shutdown) or carefully repaired where the coating has been breached.

Material issue

Energy usage and efficiency

Energy usage and efficiency is identified through the environmental auditing processes at Powertech and measured separately at each of its operations. Data is collected annually in order to measure the trends in performance over time. The current results, compared with previous years' performance, are tabulated in table E.13 of the 2007 environmental survey conducted for our submission to the JSE SRI index (see Appendix C on page 89). A summary of our initiatives to reduce our energy usage and increase the overall energy efficiency throughout Altron follows:

Powersave@Altron: Meeting our collective responsibility to save energy

Altron recognises that every South African stakeholder, from big industry and corporates to small companies and individuals, has the responsibility to save energy and reduce the demand on power. As such, the Altron group has implemented Powersave@Altron, a group-wide energy-saving awareness programme.

Environment *continued*

Reporting to the risk management committee, a task team steered by Altron's CE and other key executives and members of senior management, has determined three objectives:

- ▶ To create power-saving awareness among all staff members.
- ▶ To motivate and activate Altron group companies to have their businesses audited and the necessary energy-efficient changes applied in order to save on their electricity costs and in this way to qualify for Eskom's rebate programme.
- ▶ To create a basket of energy-saving solutions which will be marketed internally and externally.

In addition to the group-wide energy-saving initiatives, Altron subsidiary companies are making their own contribution to the reduction of energy consumption.

POWERTECH

Powertech Transformers has replaced all its factory lights with more energy efficient lighting, while Powertech IST has committed to reducing power consumption by 15% – 20% and has embarked on a programme to retro-fit its entire premises with electronic ballasts for its fluorescent lights and to install motion sensors that will ensure lights are switched off automatically if nobody is present in the building.

Powertech Batteries has invested R2 million in the installation of power factor correction equipment at its Port Elizabeth factory, which has resulted in significant reduced peak consumption and the power factor rating has increased from 0.7 to a new level of 0.9.

ALTECH

All of the Altech operations have invested in additional standby generating capacity to reduce their respective dependency on Eskom power.

Material issue

Environmental impact of products and services

Altron is in the interesting position that it markets products and services that have both a positive and negative impact on the environment, presenting the Altron group with both risks and opportunities. Waste is identified through the environmental auditing processes at Powertech, and a number of indicators have been identified that relate to this issue. These are measured separately at each of the company's operations. Data is collected annually in order to measure the trends in our performance over time. The current results, compared with previous years' performance are tabulated in table E.14 of the 2007 environmental survey conducted for our submission to the JSE SRI Index (see Appendix C on page 89). A summary of our initiatives to reduce our waste and improve recycling or recovery throughout Altron follows:

POWERTECH

Powertech IST provides products and solutions that contribute towards sustainable development and sound environmental management. These include off-gas filtration, flue gas cleaning, process gas conditioning and compressed air and other gaseous processes in the fluid systems sphere. Other solutions include the treatment of industrial water to remove pollutants which render the water suitable for re-use as industrial or potable water.

Products and services from Powertech IST Otokon

Powertech IST Otokon has expertise in energy management and has flourished as a market leader in providing demand-side management services, with specialisation in process and production rescheduling, compressed air and cooling systems, industrial and residential hot water control, co-generation and heat recovery and motor systems. This company also plays a key role in helping Eskom finding solutions to decrease energy demands.

Hydrogen Fuel Cell System by Powertech IST

Powertech IST introduces the GenCore 5 kW Fuel Cell System to southern Africa from Plugpower Inc in the USA. Over 500 of the GenCore Fuel Cell systems are currently in the field in the United States, Turkey, the United Kingdom, Asia, Europe and over 40 systems in South Africa.

Installations are providing back-up power for telecommunication networks (fixed line and wireless) and industrial uninterruptible power supply applications.

A fuel cell is an electrochemical device, with virtually no moving parts, that converts chemical energy directly into electricity. Heat and pure water are the only by-products. It produces silent and clean direct current electricity, like a battery. The inputs required are hydrogen and air, while the environmentally friendly outputs are electrical power, heat and water. There is no noise, no vibration and no pollution.



Scrap battery recycling at Powertech Batteries, through its Willard brand

Powertech Batteries has embarked on a scrap battery recycling programme to raise funds for planting indigenous trees in disadvantaged communities. Working in partnership with Food and Trees for Africa, Powertech Batteries is therefore not only helping to offset its carbon footprint by planting trees that naturally reduce carbon dioxide in the atmosphere and therefore control global warming, but is also uplifting local communities through urban greening. The lead-acid batteries are recycled in a multi-phase process that creates lead ingots from the lead grids and oxide and plastic pellets from the plastic parts. Old battery acid is processed and treated to become either water which is released into the sewerage system, or sodium sulphate, and odourless white powder used in laundry detergent, glass and textile manufacturing.

Recycling and saving water at Powertech Batteries

In the past year, Powertech Batteries has focused on recycling and water-saving initiatives. It conducted a feasibility study on water bath charging in its industrial plant, which could result in a saving of 66 kilolitres of water per day. The study on lead oxide waste paste and water in the industrial battery plant has been completed and a system of paste recovery, which prevents wastage and further treatment of lead oxide, has been devised. The lead oxide is used in a damp waste format in the downstream process, which reduces paste wastage, water wastage and effluent neutralisation wastage by some 80% to 90%.

Wooden pallets which are subject to high degrees of waste contamination are being phased out in favour of reusable plastic pallets, and Powertech Batteries has achieved a conversion rate of approximately 25% in this regard.

Around 160 tonnes of Powertech Batteries' lead waste is reclaimed and recycled while its liquid effluent is treated and discharged into the municipal sewer. About 80 bags of personal protective equipment are sent to landfill per month with a licensed hazardous waste contractor. Plastic is reclaimed and recycled and all plastic wrapping and contaminated wooden pallets are treated as hazardous waste and disposed of accordingly. Powertech Batteries' scrap collection rates are at an all-time high, with 100% of the scrap in respect of sales concluded during the months of December 2007 and January 2008 being collected. This rate of collection is monitored by SABMA (South African Batteries Manufacturing Association) which reports that this is the highest achievement among all international battery manufacturers.

ALTECH

Altech UEC's packaging material waste is recycled through a service provided by Mondi, while steel waste is collected for recycling by the Reclamation Group. Hazardous waste is disposed of through Wastetech, which issues Altech UEC with certificates of safe disposal. Altech UEC recycles its plastic waste and, in compliance with European standards (RoHS and WEEE), also recycles 66% of all decoders (such figures are weight-determined).

Altech NamITech is in the process of conducting a pilot project, issuing 10 000 corn-based biodegradable cards to one of its major banking customers for evaluation and approval, in order to establish potential usability and market acceptance by their client base. At ACS, any waste material that cannot be recycled is disposed of using specialist waste disposal companies compliant with environmental best practices.

