

Health, Safety & Environment Report 2001/2002



Health, Safety & Environment Policy



Health, Safety & Environment Policy



Everyone who works for or with OMV should go home mentally and physically sound.

- All accidents can be prevented.
- We improve health conditions for all our employees in respect to the physical, psychological and social aspects at their working place.

All work processes must be safe for ourselves, our neighbours, partners, customers and the environment.

- Keeping risks as low as reasonably possible is top priority.
- We apply the best available economically viable technology.

HSE*) matters are managed in the same way as all other critical business issues.

- We strive for continuous improvement of environmental and safety standards.
- We establish specific goals based on international performance standards and measure our progress on a regular basis.
- We actively participate in climate protection measures and support alternative energy sources.

Line management is responsible for getting HSE right.

- We expect commitment and leadership from our line managers.
- We involve all employees in our HSE programmes.
- We expect from our contractors to follow our policy and related standards.

Our groupwide HSE standards supplement legal compliance.

- We comply with all relevant laws in everything we do.
- All over the world, we meet the high standards set by OMV regulations.

*) HSE = Health, Safety, Environment

Vienna, April 2003

Dr. Wolfgang Rutenstorfer
CEO and Chairman of the Board

Dr. Gerhard Roiss
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HSE-Highlights 2001/2002

Code of Conduct – our value system

Our environmental policy was revised, and our responsibility for health, safety and environment redefined for the new corporate code of conduct.

„OMV smoke-free zone“

A major anti-smoking campaign has resulted in one-third of those taking part giving up permanently. Participants received information, group therapy, individual coaching and nicotine substitutes.

Preventive health program

Many of our employees take advantage of the orthopedic examination and skin screening programs.

Health: Five-shift system

Agrolinz Melamin and Polyfelt are introducing a five-shift system which is better for employee health.

Think: Ahead discover safety

A Group-wide safety program was launched in 2002. More than 500 managers and supervisors, from foreman up to Executive Board level, attended training sessions on their safety management responsibilities.

Contractor safety

Since 2000 all team leaders at the Schwechat refinery have attended special safety training

sessions; the thousandth participant registered in January 2003. Since 2000 the number of accidents resulting in lost workdays has fallen from 54 to four.

Agrolinz Melamin setting new standards for action on climate change

In cooperation with Krupp Uhde Agrolinz Melamin is developing a unique nitric acid production process that will reduce the amount of nitrous oxide emitted with the exhaust gas. The new plant, due for commissioning in 2003, will cut GHG emissions by 500,000 t/y of CO₂ equivalent.

Pro Klimaschutz (Anti climate change initiative)

The Austrian oil industry has committed to reducing CO₂ emissions by least 1 mn t by 2012. An action plan has been drawn up which ranges from the replacement of inefficient boilers to the promotion of solar water heating systems, oil condensing boilers and improved building insulation, as well as energy advice.

Low-sulfur Super 95 iMotion

In 2001, four years before the EU deadline, OMV became the first branded oil company in Austria to market 95 octane gasoline with a sulfur content of less than 50 ppm.

Key HSE indicators 1998 – 2002

	% change	Trend
Occupational injuries, OMV employees	- 29,0	↘↘
Energy consumption	+ 4,0	↗
GHG emissions	- 2,5	↘
SO ₂ emissions	+ 3,2	↗
NO _x emissions	+ 2,6	↗
VOC emissions	- 59,0	↘↘
Dust emissions	- 30,2	↘↘
Wastewater loading, COD	- 56,0	↘↘
Wastewater loading, HC	- 51,0	↘↘
Groundwater withdrawal	- 11,5	↘↘
Total waste		

Only uniformly defined since 2001

OMV Deutschland supplying sulfur-free diesel

Four years ahead of the EU deadline, our Burghausen refinery began marketing diesel with a sulfur content of less than 10 ppm.

Natural gas filling station network expanded

By the end of 2002 OMV was operating five natural gas filling stations in Austria, and plans call for an increase to 26 by the end of 2004.

Environmental impact assessment in Pakistan

OMV commissioned a comprehensive environmental impact on a gas pipeline project and held a public hearing to discuss it.

Flood aid in 2002

- Polyfelt sent 100,000 sqm of geotextiles to help flood victims in Magdeburg.
- Proterra helped out with the restoration of contaminated buildings in Lower Austria.
- OMV heating oil distributors' hotlines advised when oil tanks or heating systems were at risk.
- OMV donated 100,000 liters of extra light heating oil to flood victims and 25,000 liters of fuel to fire services in the disaster area.



Incidents

Crude oil leak

Approx. 200 cbm of crude oil escaped from a pipeline in Lower Austria due to corrosion damage.

Alcylate release from a barge

Approx. 220 cbm of alcylate leaked into the Danube from a damaged tanker. The accident occurred in a lock, so the pollution was easy to clean up.

Unplanned emissions

Two ammonia releases at Agrolinz Melamin caused odor nuisance. However, there was no impairment to health.



Left: According to environmental impact assesment this pipe marked-out route becomes recultivated after completion.

HSE-Management

THE CHALLENGES WE FACE

Our Company operates in a highly complex internal and external environment that places heavy demands on its health, safety and environment (HSE) management systems.

Growth strategy

Our growth strategy is aimed at doubling both OMV's retail market share in Central and Eastern Europe and its upstream output in its core E & P regions — Europe, Africa and the Middle East, and Australia/New Zealand. We are rapidly evolving from a business based in countries with strong regulatory regimes that result in high standards of employee protection and environmental legislation into a global enterprise. This means that we are increasingly at work in countries where such norms are either non-existent or are in their infancy. The challenge is therefore to establish Group standards that apply to all our companies worldwide, to acquire the necessary expertise and to foster an HSE aware culture in all areas of operations. Some plant and equipment acquired along with new subsidiaries may bring additional environmental problems. We must set out to find economically viable means of rectifying any environment damage and harmonizing technical standards with our own. In isolated areas with little medical care, it is important to select employees who will best be able to cope with the conditions and put adequate emergency provision in place.

Sustainable development and climate change

Sustainability and climate change are particularly pressing issues for an oil and gas group like OMV. In Austria, public discussion of sustainability is primarily focused on environmental sustainability. However, we believe that sustainable business models involve accepting three forms of responsibility – environmental, economic and social.

Pollution prevention and risk management policy

EU regulation and international standards are placing new demands on our production technology and our efforts to minimize associated risks. Recent developments in the EU include: the Directive on the control of major-accident hazards ("Seveso II Directive"); the best available technology (BAT) based Directive concerning integrated pollution prevention and control ("IPPC Directive"); the Auto-Oil Programme aimed at phased reductions in traffic pollution; and the Chemical White Paper proposing new testing and information requirements. Meanwhile, new international safety standards for exploration and production – among many others – have come into being.

We are responding to these manifold challenges by adhering to the following principle (Code of Conduct): "Wherever we operate, we behave with the express intention of taking as our model the highest standards for health, safety and the protection of the environment and with the aim of continually improving our performance in these respects."

Among the management tools we employ to this end is our HSE management system.

This has the following components:

- The corporate HSE policy;
- The corporate HSE objectives and program;
- The HSE organization;
- Integrated management systems;
- The HSE risk management system.
- The legal compliance system;
- The reporting system;
- Communications.

OUR APPROACH

HSE policy

Our commitment to responsible health, safety and environment policies is embedded in the value system set out in our Code of Conduct. It extends to all investments that result in majority ownership or an operational role. When working in partnership with

other companies, we exercise the influence available to us to persuade our associates to observe comparable standards to our own. Our new HSE policy, adopted in April 2003, is derived from the Code of Conduct. It replaces the policy introduced in 2000.

HSE objectives and program

Every year we draw up an HSE program, setting objectives for the Group, the business segments and their operations. The objectives are incorporated in the respective balanced score cards.

The main thrusts of the program in 2002 were:

- The Think: Ahead safety program;
- The corporate climate change strategy;
- The response to the Auto-Oil programme.

HSE organization

Overall responsibility for HSE lies with our Chief Executive Officer, Wolfgang Rutenstorfer and the other Executive Board members in charge of operational business segments. They are assisted by a network of HSEQ managers and specialists.

HSE is on the agenda of all management meetings. In addition, HSE committees were set up during the period under review. Their tasks are progress chasing, conducting performance reviews, reporting on incidents and implementing improvements to the management system. Regular information exchanges between HSEQ managers and experts create synergies and ensure that uniform standards are applied.

Integrated management systems

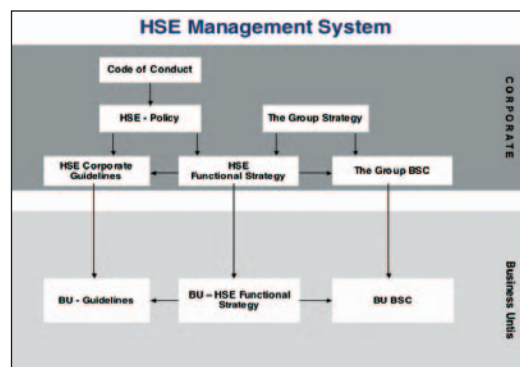
Our integrated management systems are based on business process models, and embrace all activities with environmental and safety implications. In the course of the changeover to ISO 9001:2000 numerous processes were modified in the light of environmental and safety considerations. Corporate HSE standards are included in the OMV business manual, and are accessible to all Group operations.

OMV Group objectives and program for 2002	Status
Reduce the number of occupational injuries	✓
Strengthen the Group's safety culture	✓
Use safety audits to demonstrate management accountability	✓
Introduce a new Group-wide HSE organization	✓
Adopt a climate change strategy	✓
Compile a GHG inventory	✓
Bring sulfur-free fuels to market	✓
Expand the natural gas filling station network	✓

We base our approach on ISO 14001 and Occupational Health and Safety Management System (OHSAS) 18000, and are looking to implement both on a Group-wide basis. Due to local or industry circumstances, some sites also employ other systems such as the EU's Eco-Management and Audit Scheme (EMAS), the chemical industry's Responsible Care program, the German Occupational Health and Risk Management System (OHRIS) or Safety Certificate Contractors (SCC).

HSE risk management system

Our HSE risk management system is present at all levels and in all processes. At Group level we monitor social developments and international legal provisions for their potential impact on OMV. We are currently developing a risk management system which will be installed at all fully consolidated Group companies. The "risk map" generated by the system plots the environmental and safety risks to which we are exposed and their



financial implications, as well as price and currency risks. Risk evaluations are performed during the planning of new plants or expansions, in conjunction with change management activities, and prior to the initiation of new business activities.

So-called “what-if” scenarios are progressively being added to the emergency and incident plans, meaning that OMV is prepared for as many such situations as possible. The crisis plans are frequently tested against different scenarios and optimized accordingly.

Legal compliance system

Our Code of Conduct commits us to observance of local HSE regulations wherever we operate, and harmonization with international industry standards. This also applies to countries where safety and environmental legislation is still in its early stages.

We ensure that these requirements are met by installing internal processes that detect new or revised regulations, and follow them through to implementation. At our processing plants the top priority is compliance with limit values. Ongoing communication with the authorities ensures that their cooperation is obtained in monitoring compliance with regulations and permits, and plans for new limits and licensing conditions.

Group companies conform to current environmental statutes, regulations and licensing conditions. Should Group companies exceed limit values or are in breach of licensing conditions, or where stricter limits are subsequently introduced, the Group achieves compliance by taking the action required by the authorities and making the related investments.

Reporting system

Our corporate HSE values and goals apply to all companies in which OMV holds a majority or is operator. All HSE data is recorded or calculated at plant level and aggregated at Group level. Data from companies where OMV has an interest of over 50% is included in proportion to the holding. Joint ventures in which OMV is the operator are included

on a pro rata basis even if the OMV interest is less than 50%; where OMV is not the operator data is excluded. Reporting on new companies or sites does not commence until they have been with the Group for a full year.

The following operations were included in our HSE reporting system during the period under review:

- E&P: E & P Austria; Proterra Neusiedl plant; Altec (55%).
- R&M: Schwechat and Burghausen refineries; all tank farms and pipelines; lubricant blending plant; AWP (55%); ELG (56%).
- Gas: Gas distribution network and storage facilities.
- C & P: Agrolinz Melamin Linz and Castellanza plants; Polyfelt Group plants in Linz, France and Malaysia.

The filling stations do not form part of our reporting system as they are operated by independent lessees. OMV is responsible for their equipment and maintenance.

OMV reports serious accidents whenever these result in one of the following:

- A fatal injury to an OMV staff member or an employee of a contractor;
- A release of more than 100 liters of product to an uncontained area;
- Emissions resulting in strong neighborhood complaints or, in more serious cases, danger to public health.

Top and line management receive ongoing information on achievements, incidents, trends and legal developments at all Group companies, as well as regular updates on target attainment.

Communications

As a company with global operations, we come into contact with a large number of interest groups, each with its own reasons for seeking detailed information on our activities and locations. We seek to engage in an open dialog with business partners,

local residents, government authorities, NGOs and the public. We attach particular importance to our relationships with residents. For instance, at our Schwechat refinery we established an environmental advisory council, consisting of OMV staff members, residents and local authority representatives, back in 1994. This body regularly considers developments at the plant, as well as complaints and suggestions. Likewise, the Burghausen refinery holds frequent discussions with neighboring communities and government authorities.

At the Linz Chemical Park a Quality Environment Safety Health (QESH) steering committee plans all site-wide activities. The committee's biggest success to date has been an agreement between the Upper Austrian provincial government, neighboring local governments and the companies to cooperate on responses to potentially harmful incidents.

In Pakistan, we have carried out 14 environmental impact assessments in conjunction with NGOs, and regional and national environmental agencies over the past decade. Community development projects have been launched to assist residents of areas in the vicinity of our Sawan and Miano projects.



Our objectives and programs

OMV plans to double its retail market share in the Danube-Adriatic region and its upstream oil and gas output by 2008, as well as expanding its gas marketing and melamine businesses.

Information about impacts of drilling operations are given to neighbours, OMV Pakistan.

In order to provide optimum HSE back-up for this strategy we have established the following HSE priorities for the 2003–2008 period:

- Expansion and optimization of corporate medical and medevac services;
- Expansion of the Think:Ahead program, focusing on management accountability, safety audits, incident investigations and learning from “near-misses” and unsafe acts;
- Introduction of the OMV HSE policy at new subsidiaries;
- Technical modification of newly acquired plant and equipment to conform to OMV safety and environmental standards;
- Development of low-polluting products and biofuels;
- Group-wide introduction of ISO 14001 or OHSAS certified integrated management systems, and internal HSE audits;
- Climate change programs and emission trading;
- Reductions in the frequency of incidents, spills and emissions;
- Crisis management system.

Health

THE CHALLENGE

The OMV Group attaches utmost importance to comprehensive, high-quality industrial medical care. We focus on Group-wide efforts to promote preventive medicine and provide health care for all staff going beyond statutory minimum standards.

OUR APPROACH

The activities of the OMV Group's industrial medicine service include more than 20,000 doctors' consultations and almost as many physiotherapeutic treatments, 5,000 preventive examinations and participation in some 300 inspections, as well as expert opinions and investigations.

While the Austrian Employee Protection Act lays down the minimum requirements regarding primary preventive care in the OMV Group, we also take a number of other forms of action that contribute significantly to our people's health.

ACTIVITIES

During the period under review Austrian apprentices were included in the PROFIT behavioral and preventive project for the first time. This pays special attention to encouraging young employees to take the initiative at their workplaces. A screening program on forgetfulness was carried out as part of the prevention scheme. This centred on improving employees' concentration and ability to retain information. The project also included preventive skin examinations to identify cases of eczema and provide early diagnoses of skin cancer. As a follow-up, OMV launched a pioneering skin protection plan. The objective is to determine the most skin-friendly cleaning agents for the various OMV sites, depending on the respective types of dirt and impurities to which staff are exposed. A serial functional orthopedic examination aimed at identifying muscle, ligament and joint disorders was also carried out during the reporting period.

As part of the "OMV smoke-free" campaign smoking advisory points were established at all sites. All conference rooms at OMV facilities were declared smoke-free zones. The Gänserndorf site was the scene of a disaster exercise carried out in conjunction with local authorities, the Red Cross and the neighboring district fire services. In connection with the exercise special training was given in the medical management of major disasters. In many countries where OMV is active there are no appropriate regulations for industrial medicine or preventive medicine. The system that has grown up in the Group includes arrangements in the Exploration and Production segment for assessment of medical personnel, the selection of local doctors and hospitals of choice, the drawing up of evacuation plans and general international staff assignment guidelines as well as an assignment medical preparation scheme. Foreign assignment seminars are held for expatriate staff and families. In the case of longer assignments, intermediate examinations are held at two-year intervals. There are plans to extend these medical standards to other business segments.

OBJECTIVES

The main objectives of our industrial and preventive medicine services are the implementation of Group-wide occupational medical care and provision of access to general medical care for all staff. In addition, selective needs-based screening programs are being planned and carried out.

Work is also proceeding on updating the emergency evacuation plan.

Safety

THE CHALLENGE WE FACE

"Everyone who works for or with OMV should go home mentally and physically sound!" These words from our CEO Dr. Ruttenstorfer commit us to world class safety standards for our own employees and for those of our business partners.

The greatest challenge we face in achieving this goal is "human error", as some 96% of all accidents are caused by unsafe acts.

Because of this, the OMV safety program focuses on attitudes to safety.

We process and transport inflammable liquids and gases, operate large-scale plants and systems associated with significant potential hazards – some of them in built-up areas, environmentally sensitive areas or remote desert regions – and engage the transportation of hazardous goods to our customers. Contractors' employees work at OMV sites on our behalf. We aim to make all these work processes safe for ourselves, our neighbors, business partners and customers, and the environment.

In order to hit our safety targets we focus on the following areas:

- OMV Think:Ahead safety program;
- Contractor safety;
- Plant safety and fire protection;
- Shipments of hazardous materials;
- Security.

OUR APPROACH

OMV Think:Ahead safety program

In 2002 we launched a Group-wide program under this title, aimed at improving on OMV's already high safety standards, and going beyond legally required activities and training courses.

The "Think:Ahead discover safety" slogan calls on staff to think procedures out in advance, and embark on a voyage of discovery, exploring their own day-to-day activities, putting work processes under the microscope and pinpointing unsafe practices. Under the program, mounted in conjunction with consultants

DuPont Safety Resources, we are working to enhance management's understanding of safety and sense of responsibility for it across the entire Group, as well as worker alertness to unsafe actions and conditions. Our safety management approach makes no distinctions according to rank or duties in the Company.

Whether they are plant operators, project planners or administrators, all our people are expected to play their part in avoiding accidents. Monthly safety audits by executives, HSE committees at all management levels as well as a redesigned reporting system have all helped to increase the importance attached to precautionary thinking throughout our company.

Safety objectives

At Group level our safety objectives for 2003 are included in the balanced score card system:

Lost time incident rate (LTIR)	< 4
Safety audits performed	> 90%

Line responsibility

HSE is all about line responsibility. Our executives therefore receive comprehensive safety training, including practical exercises, so as to enable them to fulfill their responsibilities in this area.

Safety courses

Some 535 employees at all levels of management received training in their safety responsibilities and completed practical exercises in 2002.

Safety audits

Safety audits are monthly management walk arounds. This is an opportunity to talk to OMV staff and contractor workers about the safety aspects of their activities.

Correct behavior is praised, unsafe acts and conditions noted and preventive measures agreed. Every segment establishes the audits to be carried out and the locations concerned at the start of the year.

Almost 2,000 safety audits were performed at OMV sites in 2002. Some 87% of the targets set were achieved.



**Safety Audit in the
Competence-Center**

Accident and incident investigations

The causes of every accident or incident are investigated by a team under the superior of the staff member involved. This enables steps to be taken to prevent a recurrence. A variety of methods are used to determine the necessary preventive measures. Findings are documented and circulated around the Company.

We take great care over the recording of industrial accidents, and encourage staff to report all incidents, including near-misses. However, there is no denying that the accident figures are not entirely accurate. The reliability of voluntary reporting depends on a number of factors, including the working atmosphere, efforts to meet ambitious targets, and cultural influences. Creating a climate in which our people and contractors' employees will regard reporting accidents as a way of making things better is one of the main challenges we face.

Contractor safety

OMV attaches utmost importance to safe cooperation with business partners and contractors. During plant turnarounds there are

often several thousand contractor workers on site. In the E & P business seismic and drilling operations are largely performed by contractors.

We also expect them to observe OMV's high safety standards. To ensure that this is so, we hold comprehensive induction and training courses, and issue clear instructions even before contracts are drafted.

Both our wholly owned refineries and E & P Austria require contractors to have Safety Certification for Contractors (SCC). In the case of major contracts, safety performance is part of the bonus system. By the end of 2004 at the latest, SCC or similar certification will be obligatory for all works in areas of plants where there is a high risk of fire and explosion, as well as for large contracts. In the case of E & P projects, safety aspects and procedures are laid down by separate agreements, and compliance is regularly audited.

Examples:

- Schwechat Refinery: In 2000 all team leaders began receiving special safety trainings. Since then the incidents resulting in lost workday injuries have fallen from 54 to 4. The thousandth course participant was registered on January 29, 2003.
- OMV Pakistan: Construction of a gas processing plant in the Thar Desert: Thanks to comprehensive safety planning during all engineering and construction stages as well as daily safety exercises for the local workforce, up to commissioning in the summer of 2003 some eight million working hours were recorded without a single accident.

Until recently, recording of industrial accidents involving contractors was only watertight at our major sites. However, from 2003 onwards further contractors and partner companies, such as drilling companies to which OMV farms out work, have been incorporated in the reporting system.

Plant safety and fire protection

Hazard analysis

We have professional technical and organizational emergency response systems in place, and coordinate these with the responsible authorities. Throughout the world, our plants are designed for very high levels of safety. We work with our contractors to meet internationally accepted safety and environmental standards. We operate refineries and tank farms next to densely populated areas and an airport (VIA), as well as a facility at the Linz Chemical Park, and pipelines passing through nature reserves, and have accumulated a great deal of experience of safety precautions. We attach high priority to continuous improvement of the protective measures taken.

During the period under review, the Seveso II Directive was implemented in Austria and Germany, and extended to cover mining activities. OMV operates several production sites that are subject to the Directive. Establishing and upgrading standards for these operations to meet the new requirements was therefore an important focus of HSE activities in 2001 - 2002. Risk assessment, safety management systems and official inspections were central to these activities.

Emergency response plans

Our emergency plans clearly and unambiguously establish the contact persons, work flow, call flow and responsibilities in the event of a crisis. The effectiveness of all plans is tested by regular exercises. In each case the simulation process focuses on testing alarm systems, the coordination of rescue organizations, and the efficiency of management structures and communication channels.

Fire protection

We attach great importance to ensuring that our works fire brigades have first-class equipment. For example, a specially designed fire truck delivered to the Schwechat

refinery works fire brigade in 2002 sets a new standard for the whole of Europe. The extinguishing capacity of this vehicle in the first five minutes is 50% higher than with other commercially available types. Moreover, it can be operated by one man, freeing up the other firefighters to undertake additional duties.

A digital video system permits optimum visualization of unfolding situations. Potential dispersion scenarios and related threats in the event of releases of hazardous substances are modeled by COMPAS – a realtime decision support system. Training courses and exercises with detailed scenarios are carried out regularly at the major production facilities and pipelines. These are needed to maintain and enhance the professional skills required for dealing with emergencies. During the period under review, fire fighting exercises for filling station operators were conducted on site with local fire brigade personnel in attendance.

Shipments of hazardous materials

OMV constantly strive to find the best means of transporting our raw materials and products in environmental and economical terms. The first choice is pipelines – the safest and most environmentally sound way of transporting large, steady product volumes. In 2002, 3 mn t or 35% of the products supplied from the Schwechat refinery and the Lobau tank farm, and some 1.8 mn t of material from the Burghausen refinery were delivered by pipeline. Pipeline transportation prevent an estimated 218,000 road shipments of hazardous materials, assuming an average load of 20 t per truck. Crude oil landed in Trieste is also carried by pipeline. It travels to the Schwechat plant via the Adria-Wien Pipeline (AWP) and on to the Burghausen Refinery via the Transalpine Pipeline (TAL).

There is no escaping the fact that, as an oil and gas group, we transport, produce and market hazardous materials. In order to assu-

re high standards, we do not just look for competitive freight rates but apply quality and safety criteria to the selection of carriers. Safety principles and responses to accidents are regulated in detail by the contracts. In addition, in conjunction with the authorities we spot check some 3% of our shipments of hazardous materials. Every driver attends an annual safety training course at the loading facilities.

One of the greatest environmental challenges for the oil industry is marine transportation. OMV applies high safety standards to its shipping operations. All vessels currently under charter to OMV are less than 20 years old and in demonstrably good condition. With effect from 2004 we will only be chartering double-hulled ships and will reduce the age limit to 15 years. Since the countries along the entire length of the Danube constitute OMV's core region, and activities are to be massively expanded, in 2003 we joined the European Barge Inspection System (EBIS).

Notable incidents in the reporting period:

- In June 2002 a tank wagon delivering sulfuric acid to Agrolinz Melamin developed a leak.
- Some 220 cbm of alcylate escaped from a leaking tanker into a lock on the Danube. The product was vacuumed from the surface of the water.

Security

For a company that is expanding rapidly in countries with varying standards, security is a key issue. This concerns both our staff and our facilities. The OMV crisis committee met regularly in the immediate aftermath of September 11 and during the subsequent developments in Afghanistan. OMV was one of the first companies to repatriate families and later also employees out of Pakistan. This was a delicate decision to take, and was only made after weighing up all the potential risks. To reduce the number of robberies at filling stations, we have given a lead to the industry by introducing a security manual,

emergency checklists, training courses for franchisee support staff, a safety quick check card and video surveillance systems as standard shop and forecourt equipment.

In 2001 OMV Erdgas updated its security plan. The risks were identified and assessed by conducting detailed surveys of pipeline systems and holding a large number of workshops. The numerous inspections and scenario analyses led to additional safety measures.

To improve the management of potential emergencies, the incident rooms at a number of sites have been reequipped.

OUR ACHIEVEMENTS

During the period under review there were no fatal industrial accidents at our locations involving OMV or contractor employees.

Lost time incident rate

Definition: Lost time incidents are occupational injuries resulting in one or more lost workdays. The lost time incident rate (LTIR) is the number of lost time incidents per 1 mn hours worked.

In 2002 the LTIR was down on the previous two years, at 5.4. Falls and tripping were the most frequent type of accident, accounting for 27% of all accidents, followed by crushing and scalding which both represented 18% of the total.

A growing number of occupational injuries in 2002 prompted us to launch a Group-wide safety program which became fully operational at the start of 2002.

Long-term accident trend

A major safety drive cut the number of accidents at the Schwechat refinery from 47 in 1990 to zero in 2001.

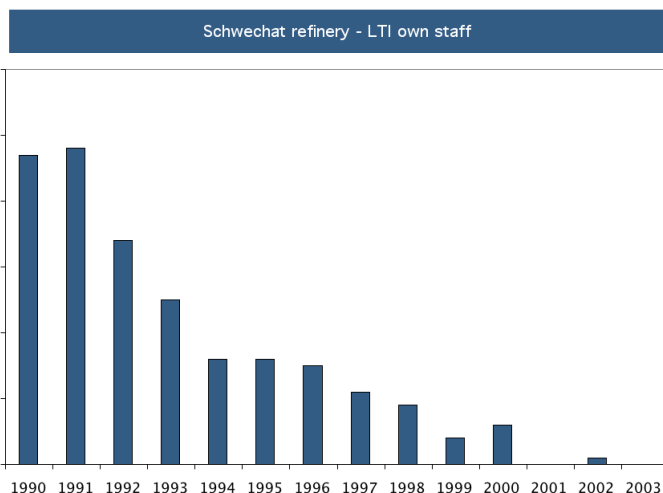
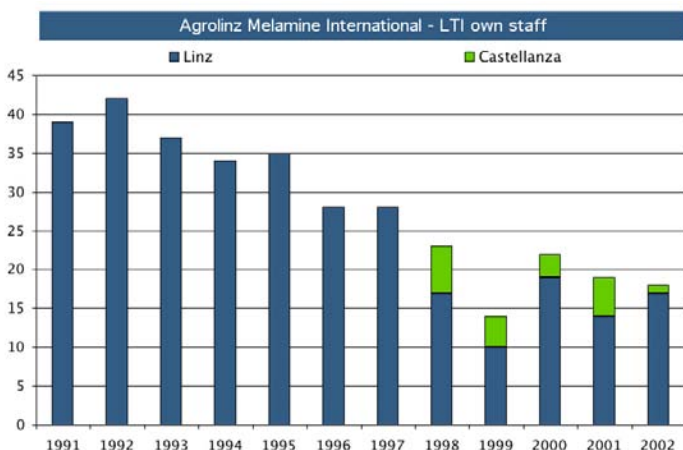
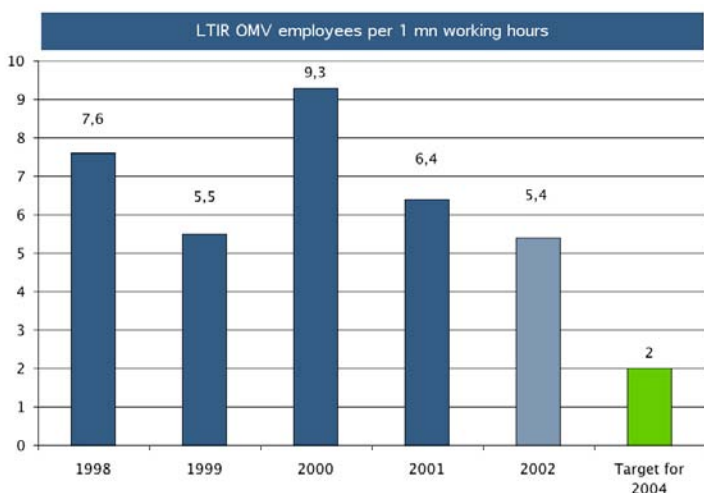
There have been no reportable accidents (> 3 lost workdays) at the Burghausen plant for six years.

OUR OBJECTIVES AND PROGRAMS

OMV has set itself the aim of becoming the industry leader in terms of safety. We are therefore energetically pursuing our Think:Ahead discover safety program. Our ultimate aim is a zero accident rate, and by 2005 we want to record an LTIR of less than 2 for our own employees.

Contractor safety, and traffic safety through "defensive driving" are further priorities in all countries where we operate.

One of the main objectives over the next few years will be to create a climate that encourages our employees to look out for unsafe acts and conditions, and report them.



OUR SAFETY EFFORT IN PRACTICE

Eight million accident-free hours of work during the construction of a gas processing plant in Pakistan.

OMV is building a sour gas processing plant at the Sawan gas field in Pakistan's Thar Desert. The project includes the construction of a plant with a capacity of 500,000 cbm/hour, gas pipelines linking the four wells with the plant, a supply pipeline, and all the necessary infrastructure including an access road and buildings. The plant will enter service on schedule in the summer of 2003, after only 18 months' construction time in outside temperatures over 50°C. A workforce that peaked at 1,800 during the construction phase lost not one single day as a result of an industrial accident.

The project was managed by Clough Engineering Limited, an Australian company. One of the main reasons for selecting this company was the results of a detailed audit of its safety management system. The two sides signed a comprehensive, binding HSE plan, setting out the main related activities and responsibilities, including those of subcontractors.

Right: 50°C and full personal protection equipment.

Bottom: Safety Standards set in an inhospitable environment.



The plant is located in a very remote area in the midst of the Pakistani desert. The population has virtually no access to hospitals or schools, and the majority have little contact with the outside world. We set out to provide as much employment as possible for local people. Daily safety training sessions, weekly exercises, top-quality safety equipment and regular checks to see that it was used, and a high level of commitment on the part of the entire management team made it possible to deliver such an outstanding safety performance under these difficult conditions.



Environmental protection

THE CHALLENGES WE FACE

OMV's core business is oil and gas exploration, production, processing and marketing. We operate in countries with varying regulatory regimes, but always maintain the high environmental standards of our original EU markets when expanding into new countries. Due to our rapid expansion, aimed at doubling R & M's market share in Central and Eastern Europe and E & P's output in its core regions, bringing all operations up to Group standards will be one of the greatest challenges.

We produce and sell oil and natural gas, which are finite resources. Because of this, we see minimizing the environmental impact of operations, developing improved, low-emission products, realigning strategy towards sustainable development and combating climate change as especially important responsibilities for all business segments.

Therefore our main emphasis is on

- Working for sustainable development
- Combating climate change
- Developing improved products
- Improving environmental performance at production sites
- Restoring contaminated sites
- Environmental costs

OUR APPROACH

Working for sustainable development

We believe that working for sustainability means shouldering economic, environmental and social responsibilities.

Oil and gas, which keep people moving and provide many of the products needed in everyday life, are not renewable energy sources. Precisely because of this, we must strive to take a responsible approach to our task of supplying them.

OMV is an integrated oil and gas group. We are the crossroads of the European natural



Hydrogen plant commissioned in July 2003, Schwechat refinery.

gas transmission network. Gas is widely regarded as the main energy source of the future, and we will be responding to this trend – for instance, by building CNG filling stations. The sections of this report on climate change, products and production sites contain numerous examples of action by OMV to minimize its environmental impacts.

During the period under review we also focused on the following activities:

- Adoption of a Code of Conduct based on the UN Global Compact, following a critical assessment of our corporate values and working methods. We will be taking stock of our progress in meeting each of the standards set by the Code of Conduct in our first Performance Report which will appear in November 2003.
- Ahead of any acquisition or other strategic investment we evaluate environmental and social impacts.
- In 2002–2003 we assessed opportunities in our sector for sustainable lines of business. With regard to renewable energy forms, we have decided to concentrate on liquid bio-fuels and wood pellets.

- OMV Germany is a founding member of the Bavarian Environment Pact, and was also involved in the formulation of the second pact, entitled "A Sustainable Economy in the 21st century."
- In the run-up to the World Summit on Sustainable Development OMV funded the introduction of environmental education at a Johannesburg school.

Combating climate change

OMV gave close consideration to the impacts of our activities, and to action on improved transportation and heating fuels, greenhouse gas emissions at our sites, voluntary agreements under Austrian law, emission trading, and CO₂ storage in depleted oil and gas reservoirs.

This resulted in the following climate change activities during the period under review:

Milestone for Agrolinz Melamin

A EUR 2.1 mn project carried out in 2003 will be the largest single Austrian investment in combating climate change to date. In cooperation with Krupp Uhde, Agrolinz Melamin has developed a unique nitric acid production process that will cut emissions of the GHG nitrous oxide (N₂O) by 1,600 t or 500,000 t of CO₂ equivalent. This will represent a 30% fall in GHG emissions at the company's Austrian plant and a 9% reduction for the OMV Group as a whole. Agrolinz Melamin won the Upper Austrian provincial government's "Climate Saver" award for this project.

CO₂-sequestration

A growing number of projects around the world concern capturing CO₂ and transporting it to storage facilities. In a joint project with the Leoben University of Mining and Metallurgy, we have investigated the technical feasibility of storing CO₂ in depleted reservoirs in Austria. We have also been looking at stripping CO₂ from exhaust gas and transporting it to such reservoirs by pipeline.

Pro Klimaschutz (Anti-Climate Change) initiative

At the instigation of OMV, in 2002 the Austrian oil industry adopted a voluntary target of avoiding 1 mn t of CO₂ emissions by 2012. The program includes action to improve the energy efficiency of space and water heating systems, and to promote improved thermal insulation of older buildings.

Development of sulfur-free fuels

It also brings improved fuel-economy: OMV's Super 95 iMoton cuts fuel consumption by approx. 4% over an engine's entire lifetime.

Expansion of the natural gas filling station network

Compressed natural gas (CNG) emits 20–30% less CO₂ than gasoline.

Preparation of a CH₄ life cycle inventory for the gas distribution network.

Preparations for emissions trading, including participation in the first simulated trading round.

Group-wide GHG inventory.

climate change dialog

OMV Germany is among the companies that are piloting a state-wide monitoring system as part of the Bavarian "climate change dialog" project.

Climate change programs at our sites

Most of OMV's greenhouse gas emissions arise from the combustion of fossil fuels, but process emissions from plant nutrient and petroleum coke production, and from gas purification also play a part. Improved energy efficiency at all locations is the main lever on reduced GHG emissions. We regularly audit energy consumption and CO₂, methane (CH₄) and nitrous oxide (N₂O) emissions at our sites.

Developing improved products

As an oil and gas group, our top priority is continuous improvement of the environmental performance of existing products. This means both reducing the harmful emissions they cause and ensuring that products are transported to the consumer in the best possible manner.

Key product developments in 2001 - 2002

Low-sulfur Super 95 iMOTION

In April 2002 OMV became the first branded oil company in Austria to launch a super gasoline grade (95 octane) with a sulfur content of less than 50 ppm (0.005%). This is below the limit prescribed by the EU for 2005. The iMOTION additive package, designed for modern power units, prevents the formation of deposits in the injection nozzles, inlets and combustion chamber, resulting in fuel savings of up to 4% over the entire engine life cycle.

OMV Germany supplying sub 10 ppm sulfur diesel

Our Burghausen refinery began supplying the South German market with sulfur free diesel in 2001 — four years before the EU deadline.

Five-point program for environmentally benign transport

In March 2003 OMV Chief Executive Officer Wolfgang Ruttenstorfer and Austrian environment minister Josef Pröll signed an agreement under which we will begin marketing sulfur free (< 10 ppm) gasoline and diesel throughout Austria on January 1, 2004. In the case of gasoline engines these fuels bring a marked reduction in NO_x and hydrocarbon emissions, and in that of diesels the main effect is lower ultra fine particulate emissions. The agreement will decrease emissions from the country's entire vehicle population at a stroke.

Urea solution for reduced NO_x emissions and 10% fuel savings in commercial vehicles

Agrolinz Melamin has developed the new AdBlue technology in cooperation with commercial vehicle manufacturers. This permits compliance with the Euro 4 and Euro 5 emission standards (to be introduced in 2005 and 2008, respectively) for heavy duty commercial vehicle diesel engines. In combination with selective catalytic reduction technology the AdBlue solution breaks NO_x down into nitrogen and water. The technology also cuts fuel consumption by 10% as compared to previous approaches to NO_x emission reduction. The first OMV filling station with AdBlue dispensing equipment opened in Dingolfing, Bavaria, in 2003. We are considering equipping additional stations along the main traffic corridors in Central and Eastern Europe.

Natural gas as a transportation fuel

We are rapidly expanding our network of CNG filling stations. By the end of 2002 we had five public refueling facilities in operation, and a further 21 are due to enter service by the end of 2004.

EU Cleaner Drive project

OMV is involved in this three-year project, aimed at promoting environment friendly alternative transport fuels. We are contributing our LPG and CNG know-how.

EU BIOSTAB project

OMV is participating in the EU's BIOSTAB (Stability of Biodiesel) project which is helping to develop quality standards for biodiesel by field testing its behavior with heating oil burners in eight heating systems.

EU BIOFLAM project

on alternative heating technologies and fuels Since 2001 OMV has been coordinating an EU project entitled "Application of Liquid Biofuels in New Heating Technologies for Domestic Appliances Based on Cool Flame Vaporization and Porous

Medium Combustion.” The project is developing new combustion technologies for the use of liquid biofuels in domestic water heaters. The systems under development will be compatible with parallel alternative energy use (solar, heat pumps, etc.)

Major environmental projects relating to plants and infrastructure

Schwechat refinery

Construction of a hydrogen plant – a major step towards meeting Auto-Oil Programme specifications – commissioned in July 2003. This will provide the hydrogen required to produce sulfur-free fuels from 2004 on.

The new hydrogen plant is further proof of OMV’s pioneering role in environmental protection. All our Austrian filling stations will begin offering top-quality sulfur-free fuel on January 1, 2004 – five years ahead of the EU deadline. This will not only cut vehicle emissions but will also open the way for the development and introduction of low emission engines. Sulfur-free fuels can be used with all vehicles, and do not require engine conversions.

Burghausen refinery

A 10°C increase in the inlet temperature in the crude furnaces and replacement of the burners in the steam cracker, resulting in lower energy use; construction of a deep desulfurization unit to produce low-sulfur diesel fuel; retrofitting of easily volatile product storage tanks with double roof edge insulation in order to reduce VOC emissions.

Tank farms

Installation of a new vapor recovery system at the Lustenau tank farm in order to reduce VOC emissions.

Filling stations

Replacement of monowall by double-wall tanks.

Natural gas

Retrofitting of turbines with low NO_x burners.

Exploration & Production

Environmental impact assessments of the construction of a gas pipeline as part of the Sawan field development project in Pakistan.

Exploration & Production, Austria

The project for the microbiological purification of produced water won an Austrian Industry Environmental Award in 2001.

Agrolinz Melamin

Reduction of nitrogen loading of wastewater from the ammonia plants, four years ahead of the statutory deadline, and reduction in NO_x emissions from two furnaces at the melamine plant to less than half the original level.

New generation of heating oils for condensing boilers

OMV’s heating oil distributors are now supplying the new OMV econPlus and Heizöl extra leicht futurePlus grades. Thanks to its low sulfur content OMV econPlus supports ultra-modern combustion systems. The combination of low-sulfur fuel and state-of-the-art technology helps reduce emissions. Polyfelt is launching Envirofelt PP an erosion protection mat made of unstabilized polypropylene (PP) Envirofelt facilitates rapid plant growth on slopes. It protects the surface of the soil against erosion by cloudbursts, intense sunlight and wind, and creates a growth promoting microclimate. Polyfelt introduced Envirofelt CO in 2003. This product is a biodegradable erosion protection mat made entirely of natural coconut fiber. The natural decomposition of the fiber means that Envirofelt CO also promotes plant growth by acting as a fertilizer.

Agrolinz Melamin promoting use of the Hydro-N-Tester The Hydro-N-Tester is an aid to accurate nitrogen fertilizer management.

It helps farmers achieve significant increases in wheat yields whilst reducing nitrate emissions. Agrolinz is promoting the introduction of this new handheld measurement instrument in Austria.

Improving environmental performance at production sites

We are committed to fulfilling our responsibilities to our employees and the environment. Because of this, we focus on using proven, state-of-the-art technology that offers good trade-offs between environmental and economic objectives. We apply the latest ecological and safety research findings to upgrading our plant, and developing our processes and products, seeking to strike a judicious balance between environmental and economic considerations. The main improvements in plant emissions were made between 1990–2000 or earlier. During this period we spent heavily on flue

gas scrubbers and wastewater treatment plants, as well as vapor recovery and NO_x reduction systems. Since 1998 OMV has invested some EUR 650 mn in environmental protection, EUR 460 going to controlling atmospheric emissions.

We have set ourselves the goal of doubling our retail market share in Central and Eastern Europe. We plan to expand our filling station network to over 2,000 outlets. Regardless of legal requirements, we build all our stations to uniform environmental and safety standards. These include double-walled tanks, and vapor recovery and gas displacement systems. We see the related costs as an investment in the future.

We regularly monitor the environmental impacts of our production sites. Each plant has specific performance parameters, which are linked to targets. At Group level we use the following key performance indicators to assess environmental impacts:

- Energy consumption;
- Greenhouse gases (CO₂, CH₄ and N₂O);
- Atmospheric pollutants (SO₂, NO_x, VOC and dust);
- Freshwater consumption;
- Wastewater loading (COD, BOD5 and hydrocarbons);
- Waste (hazardous and non-hazardous waste, and waste oil).

In accordance with standard industry practice, we relate performance indicators for refineries to crude throughput, those for natural gas to transport capacity and those for all other areas of business to product output.

Restoration of contaminated sites

OMV owns some old industrial sites which were severely contaminated during the Second World War. The properties listed in the Austrian register of contaminated sites are being restored in consultation with the authorities. OMV's subsidiary Proterra plays an important part in this work.

We attach high priority to soil conservation, and to immediate testing and removal of soil



Bulgaria: all our stations are built to international safety and environmental standards.

and groundwater after product releases. Identifying environmental burdens is a key element in the site acquisition process. OMV proceeds with great care, drawing on the expertise of the specialists at OMV Proterra or external consultants.

In the retail business it is sometimes necessary to close uneconomic or obsolete filling stations, and in E & P the decommissioning of production wells is an integral part of the field life cycle. In both cases funds are set aside to pay for future site reinstatement, and the same applies to the recultivation of our landfills.

Environmental costs

We account separately for environmental investments and ongoing environmental protection expenses. Legal, contractual or de facto recultivation obligations that come into being when an investment is made are of particular importance to our Group. Our core activities frequently give rise to such obligations, which relate to oil and gas wells in the E & P business, above-ground facilities, and filling stations on third-party land. Appropriate provisions are carried in our balance sheet.

OUR PERFORMANCE IN 2001–2002

Climate change and improved performance at production sites

Our key performance indicators are:

- Energy consumption;
- Greenhouse gases (CO₂, CH₄ and N₂O);
- Atmospheric pollutants (SO₂, NO_x, VOC and dust);
- Freshwater consumption;
- Wastewater quality (COD, BOD5, hydrocarbons and total N);
- Waste (hazardous and non-hazardous production waste, and waste oil).

Energy consumption

Definition: The total energy consumption of all OMV production sites, expressed in petajoules (PJ), includes: electricity purchased from outside suppliers; own gas use; solid, liquid and gaseous fuels used for combustion processes; and energy losses through flaring

The main forms of energy used by OMV are refinery and natural gas. Instead of being flared off our refinery gas meets about 25% of the energy needs of Schwechat refinery. Natural gas is the principal energy source both for our gas transmission operations and for Agrolinz Melamin.

Our energy consumption was 76.5 PJ in 2002 – an increase of about 4% on 1998. The two refineries operated during the reporting peri-

od claimed some 72% of total energy use. Both refineries are about half way up the international Solomon Index table for bulk refineries.

In 2002 Schwechat refinery provided 2,068 TJ in energy for district heating.

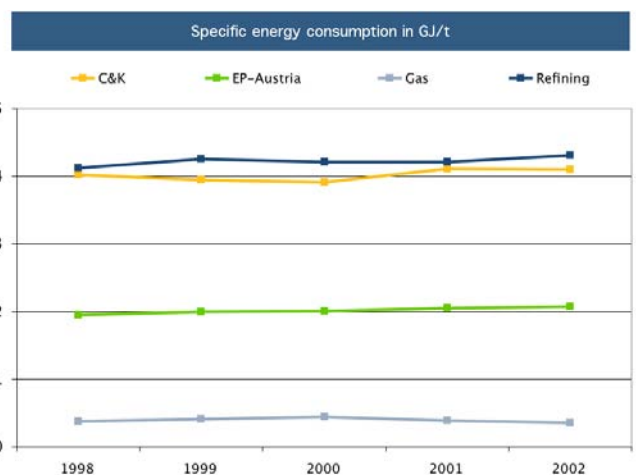
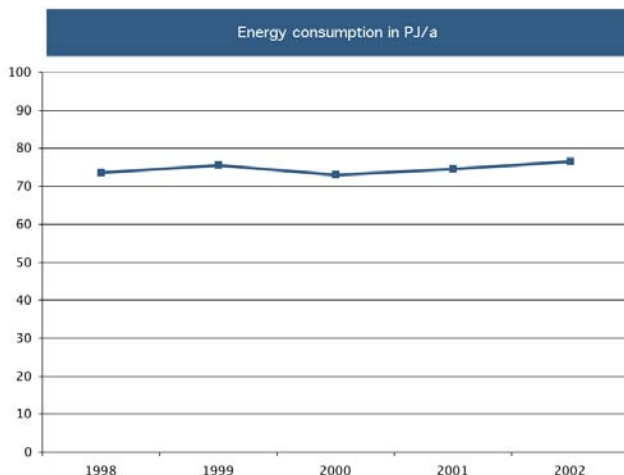
The energy consumption per unit of output of the refineries, Agrolinz Melamin and E & P's Austrian exploration activities has been steadily edging up. However, specific energy consumption in our gas transmission operations has been reduced by commissioning of sections of the third strand of the Trans Austria Gas pipeline (TAG Loop II.)

Greenhouse gases (CO₂, CH₄ and N₂O);

Definition: Total greenhouse gases in mn t of CO₂-equivalent, comprising pyrogenous, process and diffuse emissions from all OMV production sites

OMV's greenhouse gas emissions chiefly arise from combustion processes, but to a lesser extent are also associated with gas purification, and fertilizer and petroleum coke production.

CO₂ accounts for some 85% of our greenhouse gas emissions. Nitrous oxide – responsible for 14% of total emissions – is only released during the production of plant nutri-



Emissions 2002 in mn t	Group	Austria
GHG	5.82	4.82
CO ₂	5.0	4.0

Emissions 2002	Group in t/y	Austria	change since 1998 in %
SO ₂	5,947	65	3.2
NO _x	6,686	80	2.6
VOC	1,720	66	- 59
Dust	282	74	- 30.2

ents. As we only operate high-pressure pipeline networks our methane emissions (1% of the total) are a secondary issue. The other greenhouse gases named in the Kyoto Protocol are neither used nor emitted.

GHG emissions have declined by 2.5% since 1998, and stood at 5.82 mn t in 2002. This trend was mainly driven by falling N₂O emissions. The 21.2% drop in Agrolinz Melamin's nitrous oxide emissions since 1998 is mainly attributable to the discontinuation of some product lines, contracting fertilizer sales, and changes in the product mix in 2001 - 2002.

Among the factors that determine the refineries' CO₂ emissions is the quality of the fuels produced. Stricter statutory quality standards for automotive and heating fuels, e.g. lower sulfur limits, call for more complex processes and increased energy inputs, and hence result in rising CO₂ emissions.

Some 82% of our GHG emissions or 4.8 mn t come from our Austrian sites, and 18% or just over 1 mn t from operations in other European countries, principally Germany.

Specific greenhouse gas emissions in t of CO₂ equivalent/t

Relative to tonnes of output in the C & P and E & P segments, and to throughput in Refining and Gas

As our greenhouse gas emissions largely relate to energy consumption, changes in specific GHG emissions from the refining, gas and Austrian E & P businesses are a strong pointer to the overall trend. Specific GHG emissions from Agrolinz Melamin are closely related to the product mix. Specific CO₂ emissions from the Schwechat and Burghausen refineries have been cut by 9% and 12%, respectively, since 1990.

Atmospheric pollutants (SO₂, NO_x, VOC and dust)

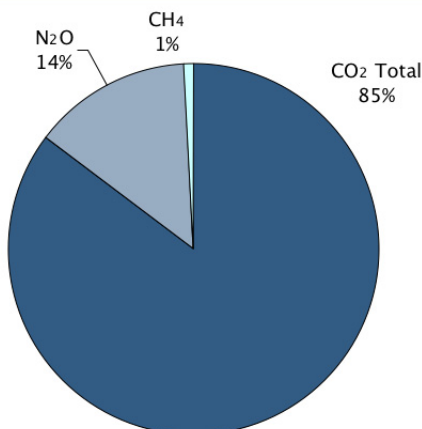
Definition: Total emissions in t from combustion plants, and process and diffuse emissions from all OMV production sites

Since 1990 we have reduced pollutant loading by more than one-quarter (6,300 t.) However, since 1998 SO₂ and NO_x emissions have been rising slightly owing to increased energy use. Our performance with regard to VOC avoidance is excellent, due to new or upgraded vapor recovery systems at tank farms and the use of a mobile flaring unit during tank cleaning operations.

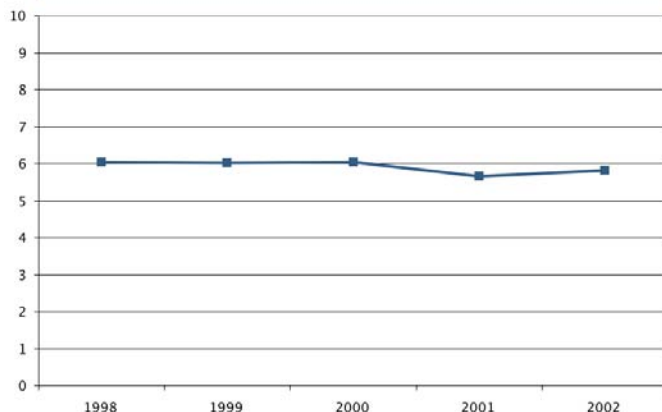
Specific pollutant emissions in kg/t

Definition: Total emissions of SO₂, NO_x, VOC and dust expressed in tonnes, per tonne of product output in the C & P segment and the Austrian E & P operations, and per tonne of throughput in the Refining and Gas segments

GHG-emissions by gases in CO₂-Equivalent



GHG emissions in mn t CO₂ Equivalent



Waterquality 2002 in t/y	Group	change since 1998 in %
COD	901	- 56
BOD5	33	- 39
Hydrocarbons	3	- 51

Freshwater consumption

Definition: Total groundwater withdrawal or purchases at OMV production sites, in cubic meters (cbm)

Objectives and programs

The main challenges we will be facing over the next five years will be those presented by OMV's growth strategy — doubling of R & M's market share in CEE and of E & P's output, as well as expansion of the gas and melamine businesses — as well as climate change and the EU's anti-pollution programs.

Our objectives are

- Compliance with the Auto-Oil Programme at both refineries in time for the nationwide launch of sulfur-free gasoline and automotive diesel in Austria on January 1, 2004;
- Implementation of climate change (nitrous oxide emission reduction) projects at Agrolinz Melamin;
- Participation in emission trading during the 2005–2007 and 2008–2012 periods;
- Continuation of the CO2 sequestration project;
- Assessment of JI/CDM projects;
- Marketing of biofuels;
- Further expansion of the CNG filling station network;
- Action to bring the production facilities of recently acquired companies up to OMV standards.

Our processes use groundwater for cooling purposes. Both our refineries are equipped with closed loop freshwater cooling systems. As a result of our efforts to minimize the use of freshwater and recycle treated water as much as possible (recirculation) groundwater withdrawal has fallen by 2.6 mn cbm or 11.5% since 1998.

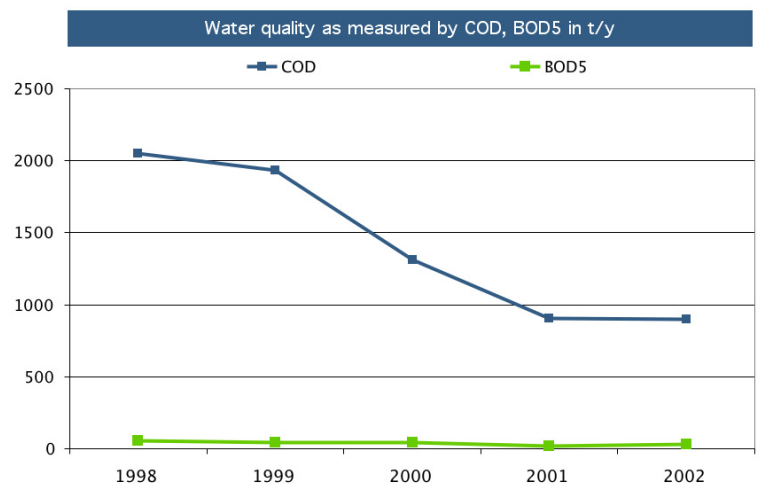
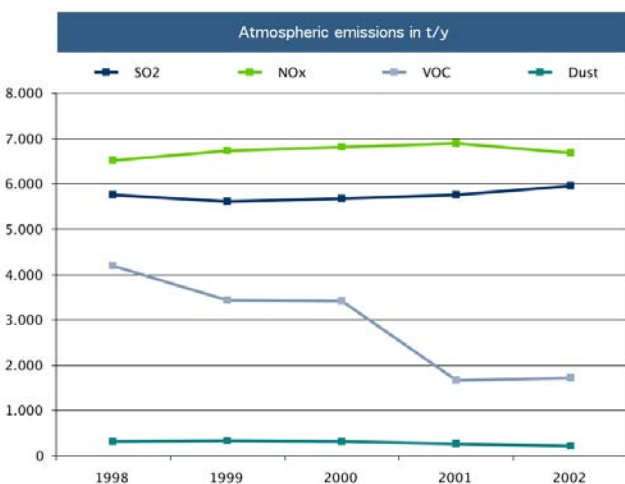
Wastewater quality (COD, BOD5 and hydrocarbons)

Definition: Quality of wastewater streams from OMV production sites (loading in t), measured before discharge to receiving water

We have made considerable progress in improving wastewater quality. This reflects the conversion of the internal wastewater treatment plants at the Schwechat refinery and Agrolinz Melamin, and commissioning of the Schwechat Wastewater Association treatment plant.

Waste

Definition: Total waste arisings in t, i.e. waste from production sites and office buildings, as well as soil excavated from sites suffering from production related contamination (construction waste such as rubble and excavated soil is not included:) recognition is in accordance with the European definition of waste; companies in which OMV holds an interest of over 50% are included on a pro rata basis



In 2002 OMV's waste arisings totaled 59,612 t, of which 67% were recycled. Due to varying legal requirements the waste figures for periods prior to 2001 are not comparable, and are therefore not given. Since 2001 the same definitions have applied to all business segments.

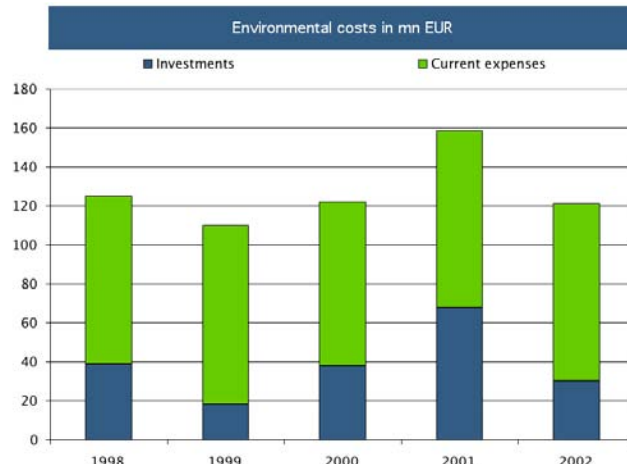
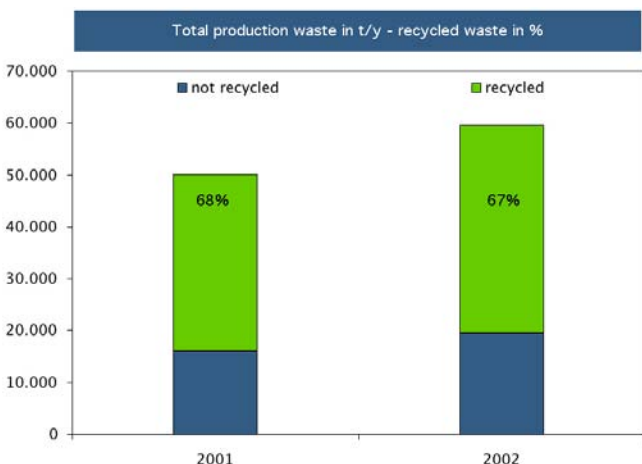
Key waste avoidance actions during the period under review:

- A new waste management system introduced at Agrolinz Melamin was commended by the environmental law department of the Upper Austrian provincial government, and has been adopted as best practice.
- Contaminated soil is biologically treated at our waste treatment plants in Neusiedl an der Zaya (BNFZ and OMV Proterra) and Arnoldstein (Altec, a subsidiary of OMV Proterra).
- Improvements to the Group-wide waste disposal system run by OMV Proterra – better logistics (containers and shipments) and new, environment friendly disposal methods – have resulted in a marked reduction in waste volume as well as cost savings.

and about EUR 10 mn to decommissioning and restoration. Environmental investment in 2000 and 2001 was EUR 68 mn above the long-term average. This was because the period saw the inception of major projects related to the EU Auto-Oil Programme such as the construction of a second diesel desulfurization unit in Burghausen, as well as modernization of the wastewater treatment plants at Agrolinz Melamin and Burghausen. Site reinstatement costs related to production wells, filling stations on third-party land, tank farms and landfills are systematically accrued over the useful lives of the assets or the relevant contract durations. As of the end of 2002 the provisions for these purposes reported in the balance sheet under "Accrued decommissioning and restoration costs" totaled EUR 240.7 mn.

Environmental costs

In 2002 we spent EUR 122 mn on environmental protection – roughly average for the past few years. Of this amount some EUR 30 mn went to environmental investments, EUR 83 mn to current expenses



ENVIRONMENTAL PROTECTION IN PRACTICE

Agrolinz Melamin is setting new standards in action against climate change

Four years of cooperation between Agrolinz Melamin and German chemical engineering company Krupp Uhde have resulted in the development of a new process for removing the greenhouse gas nitrous oxide from the exhaust gas streams of nitric acid plants. The EUR 2.1 mn plant – the first full-scale unit of its kind – will come on stream in autumn 2003. The new process will prevent about 1,600 t/y of nitrous oxide – 500,000 t of CO₂ equivalent – from entering the atmosphere. This represents a reduction of 30% in site and 9% in Group emissions. The amount of greenhouse gas involved is equal to the emissions of about 340,000 new diesel cars, each driving 10,000 km per year.

In industrial nitric acid production processes ammonia is atmospherically converted into nitric oxide over a platinum or rhodium gauze catalyst. Apart from the desired product, nitrogen monoxide (NO) – which is oxidized and absorbed in water to form nitric acid in subsequent stages of the process – the reaction yields an undesired by-product, nitrous oxide (N₂O.) Unlike NO, this is not decomposed in the course of the HNO₃ process, and is released into the atmosphere in

the exhaust gas. N₂O emissions typically range between 4 - 9 kg per tonne of nitric acid. Global nitrous oxide emissions from nitric acid plants are put at 400,000 t/y.



OMV Proterra is a technology leader in site restoration

The restoration of contaminated site no. 34, the old Neunkirchner Schraubenwerke factory, began in October 2001. The client, Neunkirchen Council, has commissioned OMV Proterra and another well-known company with the project management and all engineering and restitution work. Reinstatement of the site has now been completed. Some 300,000 cbm of buildings have been demolished and approx. 300,000 t of contaminated waste (approx. 15,000 t of it hazardous) disposed of. The Austrian national contaminated site restoration fund bore 95% of the cost of the EUR 21.8 mn project. The town of Neunkirchen now has a 65,000 sqm reinstated site in an excellent location. There were no accidents during the work. OMV Proterra played a major part in this achievement. As site coordinator, it was principally responsible for safety.

Right: Site restoration at the old Neunkirchner Schraubenwerke factory

Left: Nitrous oxide removal: The new process, which has until now only run on a pilot plant, is now being implemented in a full-scale plant at Agrolinz Melamin's Austrian location.



OMV Group

Production and products		1998	1999	2000	2001	2002
Exploration & Production						
Crude oil and NGL production	mn bbl	15.8	19.2	20.0	19.8	19.5
Whereof in Austria		6.9	7.0	7.0	7.0	6.8
Natural gas production	bfc	43.7	47.9	51.5	52.3	65.6
Whereof in Austria		38.0	41.0	42.3	43.5	43.7
Gas						
Transmission Volume in Austria	mn cbm	28,802	31,908	34,824	33,380	34,541
Importe	mn cbm	6,050	5,942	5,909	5,890	6,200
Gas sales in Austria	mn cbm	6,564	6,540	6,567	6,622	7,032
Refining and Marketing						
Crude oil imports	1,000 t	9,869	9,187	8,432	9,470	9,689
Crude oil processing	1,000 t	13,135	12,564	11,891	12,815	13,128
Where of crude oil	1,000 t	10,777	10,109	9,403	10,430	10,472
Where of third party processing (Schwechat)	1,000 t	1,927	1,929	1,976	1,829	1,938
Where of semi-finished prod. and oth. inputs	1,000 t	431	526	512	556	718
Capacity utilization rate	%	95	90	88	94	95
Sales Volume (in 1,000 t)						
Total		11,935	11,440	10,843	11,820	11,667
Petrochemicals		1,494	1,485	1,325	1,516	1,551
Gasoline		2,180	2,149	1,802	1,943	1,928
Jet fuel		921	920	894	973	925
Diesel fuel		2,825	2,895	3,012	3,105	3,460
Extra light heating oil		2,166	1,963	1,825	2,185	1,856
Fuel oil		1,425	1,127	1,148	1,069	942
Bitumen		291	330	341	400	415
Coke		207	211	167	191	205
Others		426	360	329	438	384
Retail Networks						
	Number	1,033	1,080	1,136	1,160	1,232
Austria		566	558	548	534	517
Chemicals and Plastics						
Plant nutrient sales	mn t	0.94	1.10	1.10	0.97	1.11
Harnstoff und Melaminabsatz	mn t	0.30	0.35	0.31	0.24	0.28
Safety figures						
LTIR	per 1mn hours worked	7.6	5.5	9.3	6.4	5.4
Environmental Indicators						
Energy consumption	PJ	74	76	73	74,5	76,5*
Groundwater consumption	Mio m ³	22.5	22.6	20.9	21.07	19.87
Atmospheric emissions						
SO ₂	t	5,762	5,613	5,671	5,750	5,947
NO _x	t	6,518	6,723	6,810	6,891	6,686
VOC	t	4,189	3,439	3,408	1,671	1,720
Dust	t	310	331	320	263	216
GHG	mn t CO ₂	6.0	6.0	5.7	5.8	
CO ₂	mn t	4.9	4.9	4.9	4.8	5.0
CH ₄	t	1,722	2,795	1,259	2,288	2,634
N ₂ O	t	3,301	3,391	3,483	2,539	2,603
Waste water						
COD	t	2,053	1,931	1,313	906	901
Hydrocarbons	t	6	8	7	2.6	2.8
Waste*						
Hazardous production waste	t				12,092	17,623
Non-hazardous production waste	t				37,670	41,555
Waste oil	t				382	434

Comment:
*) For the first time 2002 the OMV participations with more than 50% were counted with its respective share at the energy consumption and the waste.

OMV Aktiengesellschaft

SCHWECHAT REFINERY AND LOBAU TANK FARM

Main production plant	Capacity mn t/a	Main utilities	Capacity
Crude oil distillation plant	9.60	Water treatment (reverse osmosis, total desalination)	cbm/h 660
Ethylene plant	0.35	Power stations (power and steam supply for all plants) 170 MW	t/h 1,250
Vacuum distillation plant	3.57	Circulatory cooling system (circulation)	cbm/h 55,000
Platformer	0.95	Wastewater treatment plants	cbm/h 3,130
HDS-units	2.26		
Mild Hydrocracker	1.93		
KEP	0.67		
FCC plant and gas postprocessing plant	1.36		

	1998	1999	2000	2001	2002
Employees	839	814	763	763	768

Main products

		1998	1999	2000	2001	2002
Total	1,000 t	8,606	8,236	7,770	8,557	8,472
Petrochemicals	1,000 t	636	594	481	717	734
Gasoline	1,000 t	2,180	2,123	1,842	2,004	2,010
Jet fuel	1,000 t	531	509	561	518	482
Diesel fuel	1,000 t	2,527	2,547	2,643	2,721	3,038
Extra light heating oil	1,000 t	1,016	934	881	1,111	805
Fuel oil	1,000 t	1,425	1,189	1,042	1,047	942
Bitumen	1,000 t	291	340	320	439	461

Safety figures

LTIR own employees	Per 1 mn worked hours	5.8	2.8	4.3	0	1.7
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Environmental indicators

Energy consumption	TJ	38,188	37,488	35,134	36,556	38,242
Groundwater consumption	mn m ³	9,5	11,5	11,1	9,6	8,2
Atmospheric emissions						
SO ₂	t	3,824	3,572	3,458	3,633	3,707
NO _x	t	3,387	3,274	3,093	3,327	3,465
VOC	t	3,750	2,997	2,991	1,134	1,140
Dust	t	111	120	108	120	113
GHG	mn t	2,72	2,53	2,44	2,50	2,58
CO ₂	mn t	2,72	2,53	2,44	2,50	2,58
Wastewater emissions						
COD	t	266	246	209	189	200COD
Hydrocarbons?? oder öl in wasser??	t	5	7	6	2,8	2,6
Waste						
Non hazardous production waste	t	3,681	6,664	5,391	1,903	2,024
Hazardous production waste	t	3,299	4,359	8,730	7,473	3,903
Waste oil	t	56	38	87	35	57

OMV Germany

BURGHAUSEN REFINERY AND THE FELDKIRCHEN AND STEINHÖRING TANK FARMS

Main production plant	Capacity mn/a	Main utilities	Kapazität
Crude oil distillation plant	3,40	Power station (steam supply for all plants)	Steam t/h 240
Ethylene plant	0,35	Circulatory cooling system	cbm/h 18,000
Aromatics plant	0,53	Waste water treatment plant	cbm/h 400
Coking plant	1,60	Water treatment (total desalination)	cbm/h 235
Calciner	0,30		
HDS-unit	096		
HDS II-unit	0,60		
Claus unit	0,01		

	1998	1999	2000	2001	2002
Employees	650	556	484	499	469

Main products

	1,000 t	2,695	2,746	2,512	2,782	2,799
Total	1,000 t	635	652	592	604	624
Petrochemicals	1,000 t	384	408	365	456	454
Jet fuel	1,000 t	315	431	364	432	487
Diesel fuel	1,000 t	1,147	1,035	988	1,071	1,021
Extra light heating oil	1,000 t	214	220	203	219	213
Coke	1,000 t					

Safety figures

LTIR	Per 1 mn hours worked	0	0	0	0	2,72

Environmental indicators

Energy consumption	TJ	15,925	16,157	14,918	15,172	15,307
Groundwater Consumption	Mio m ³	4,5	4,3	3,7	3,9	4,0
Atmospheric emissions						
SO ₂	t	1,893	1,896	2,063	1,964	2,079
NOx	t	1,011	1,071	923	1,103	1,125
VOC	t	400	400	370	464	464
Dust	t	78	81	74	69	71
GHG	mn t CO2 Equivalent	0,84	0,86	0,80	0,81	0,89
CO ₂	mn t	0,84	0,86	0,80	0,81	0,89
Wastewater emissions						
COD	t	110	89	90	104	82
Hydrocarbons	t	0	3	3	4	3
Oil	t	< 0,1	< 0,1	< 0,1	< 0,1	< 0,1
Waste						
Non-hazardous production waste	t	3,833	3,857	5,498	4,251	5,253
Hazardous production waste t	3,832	1,365	688	365	369	
Waste oil	t	32	30	28	33	19

OMV Aktiengesellschaft

EXPLORATION AND PRODUCTION, AUSTRIA

Main production plants		Hauptbetriebsmittelanlagen	
Producing wells crude oil and natural gas	1,028	5 Turbokompressoreinheiten Produktion (Installierte Leistung)	15,94 MW
Live oil meter stations	15	Wasserflutanlagen (Kapazität / a)	10 Mio m ³
Oil production plants	13		
Gas storage wells including observation wells	204		
Crude oil tank farm	25,000 cbm		
Production line and formation water pumping line mains	2,500 km		
Sour gas desulphurization plants (MDEA gas treating unit, Claus plant)	2		
Typical raw gas throughput of sour gas treating plants	600 mn cbm/a		
Underground storage facilities	3		
Storage withdrawal rate (max cbm/h)	1,155,000		
Tyoical storage turnover (bn cbm/a)	1,800		
Gas storage capacity max bn cbm	2,320		
Glycol dehydration units			

	1998	1999	2000	2001	2002
Employees	1091	820	793	803	760

Main products		1998	1999	2000	2001	2002
Crude oil and NGL	t	931,770	952,205	940,874	942,376	944,324
Natural gas	Mn cbm (Vn)	1,017	1,098	1,133	1,165	1,167
LPG	t	33,067	39,689	32,816	37,645	37,540
Sulphur	t	9,991	9,438	9,542	10,912	9,444

Safety figures		1998	1999	2000	2001	2002
LTIR	Per 1 mn hours worked	9,9	8,8	13,7	6,3	10,1

Environmental indicators		1998	1999	2000	2001	2002
Energy consumption	TJ	1,851	1,942	1,924	1,968	1,953
Atmospheric emission						
SO ₂	t	42	143	145	150	158
NO _x	t	205	219	213	225	224
GHG	mn t CO ₂ Equivalent	0,248	0,282	0,258	0,291	0,289
CO ₂	mn t	0,248	0,282	0,258	0,291	0,289
Waste						
Non-hazardous production waste	t	*)	*)	*)	16,552	12,838
Hazardous production waste	t	*)	*)	*)	1,338	603
Waste oil	t	n,e,	n,e,	6,85	56	66

Comment:

*) For the first time 2002 the OMV participations with more than 50% were counted with its respective share at the energy consumption and the waste.

n.r. = not reported

Agrolinz Melamine International

LINZ SITE

Main production plants	capacity in in 1,000 t/a	Main utilities	Capacity
Ammonia plants	500	Cooling water inlet and filter capacity	cbm/h 36,000
Nitric Acid plants	520	Demineralized water plant	cbm/h 400
Urea plant	400	Steam generator	t/h 50
Melamine plants	80	Air compressors	Ncbm/h 20,000
Complex fertilizer plant	400		
Calcium Ammonium Nitrate Plant	650		

	1998	1999	2000	2001	2002
Employees	1081	878	830	827	849

Main products

		1998	1999	2000	2001	2002
Plant nutrients	mn t	0,94	1,10	1,10	0,97	1,11
Urea and Melamine	mn t	0,30	0,35	0,31	0,24	0,28

Safety figures

		1998	1999	2000	2001	2002
LTIR own employees	Per 1 mn hours worked	9,2	6,2	13,3	10,7	12,7

Environmental Indicators

Energy consumption	TJ	7,412	8,021	7,912	8,060	7,860
Specific energy consumption	GJ/t	8,59	8,54	8,38	8,66	8,33
Groundwater consumption	mn cbm	2,0	1,9	1,0	2,1	2,3
Atmospheric emissions						
NH ₃	t	101	116	98	79	60
NO _x	t	718	716	735	710	719
CH ₄	t	159	101	100	389	371
Dust	t	115	125	133	122	96
GHG	mn t CO ₂ Equivalent	1,639	1,657	1,661	1,354	1,390
CO ₂	mn t	0,612	0,564	0,579	0,566	0,575
N ₂ O	t	3301	3391	3483	2539	2603
Waste water emissions						
COD	t	461	474	452	424	450
N-total	t	1,194	1,194	1,107	873	609
Waste						
Non hazardous production waste ¹⁾	t	840	768	652	673	683
Hazardous production waste	t	95	34	76	36	25
Waste oil	t	29	20	49	20	19

Agrolinz Melamine International

CASTELLANZA SITE

		1999	2000	2001	2002
Key figures					
Sales	mn EUR	57	60	62	68
Employees		249	208	195	164
Safety figures					
LTIR	Per 1 mn hours worked	9,6	9,1	15,1	3,4
Environmental indicators					
Energy consumption	TJ	2,181	2,344	2,175	2,800
Specific energy consumption	GJ/t	20,93	22,87	22,90	23,03
CO ₂	mn t	0,120	0,168	0,123	0,128
NO _x	t	227	268	178	192
Total production waste	t	380	408	426	549

Natural Gas

		1999	2000	2001	2002
Key figures					
Sales	Mio EUR	837	1,192	1,421	1,474
Employees		175	177	153	234
Gas transmission Volumes	Mio m ³	31,908	34,824	33,380	34,541
Safety figures					
LTIR	Pro 1 Mio Arbeitsstunden	7,2	10,8	4,2	2,7
Environmental indicators					
Energy consumption	TJ	8,551	11,300	9,554	8,987
Specific Energy consumption	GJ/m ³				
NO _x	t	1,213	1,605	1,344	957
VOC	t	16	19	17	23
GHG	Mio t CO ₂ Äquivalent	0,516	0,685	0,574	0,532
CO ₂	Mio t	0,5	0,6	0,5	0,5
CH ₄	t	2,187	2,535	2,328	1,805

Polyfelt Groupe

POLYFELT LINZ, BIDIM AND POLYFELT MALAYSIA

		1999	2000	2001	2002
Key figures					
Sales (including J.V. Australia)	mn EUR	80	87	85	87
Production	t	23,612	26,569	29,018	26,849
Employees		290	300	300	307
Safety figures					
LTIR	per 1 mn hours worked	19,77	25,4	12,7	6,4
Environmental indicators					
Energy consumption	TJ	231,31	262,48	253,40	233,31
Specific energy consumption	GJ/t	9,8	9,8	7,8	8,6
Total production waste	t	1,100	1,250	1,066	1,184
Waste recycled	%	85	85	74	86

Proterra

(INCLUDING ALTEC)

		1999	2000	2001	2002
Key figures					
Sales	mn EUR	9,1	11,1	7,7	10,1
Biological treated soil and sludge	t	58,000	27,000	29,800	28,400
Employees		67	60	57	56
Safety figures					
LTIR	per 1 mn hours worked	8,8	0	26,31	0
Environmental indicators					
Energy consumption	TJ	2,80	2,51	2,67	2,71
Specific energy consumption	GJ/t	0,05	0,10	0,09	0,10
Total waste	t	3,000	2,690	6,270	13,640
Waste recycled	%	10	10	10	10

Auto-Oil-Programme

Auto-Oil-Programme I – EU joint project to define the impacts of vehicle technology and fuel quality on air quality (in European urban areas)

Auto-Oil-Programme II – EU joint project to define and evaluate various technical measures in road transport to improve air quality (in European urban areas).

Compressed Natural Gas

Highly compressed natural gas used as fuel.

EMAS

EU Eco-Management and Audit Scheme. The EU's voluntary corporate environmental management and audit scheme, aimed at continuous improvement of environmental standards.

Greenhouse gases (GHG)

The Kyoto Protocol lists CO₂, CH₄, N₂O, HFC, PFC, SF₆ as greenhouse gases.

ISO 14000 ff

International series of standards for operational environmental management.

Kyoto-Protocol

In December 1997 the signatory states at the Kyoto climate protection conference agreed to reduce their greenhouse gases by 5,2 % by the years 2008-2012.

Responsible Care

The international chemical industry health, safety and environment programme, launched in 1984.

SCC – Safety Certificate Contractors

Management system for safety, health and environment protection.

Think: Ahead discover safety

In 2002 OMV started a corporate wide safety program to improve the safety performance. More than 500 managers ranging from board members down to first line supervisors participated in special trainings focusing on their personal responsibility for safety.

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Cover: Employee at OMV Natural Gas
inspects TAG, Trans-Austria gas pipe.

