

# **Corporate Responsibility.**

Report 2003



# About this report

This report succeeds our 1998, 2000 and 2001 Environmental Reports. While environmental protection continues to play a key role in everything we do, and is thus the main thrust of this publication, we now intend to address additional central issues that are essential to responsible corporate governance. Our target audience consists of analysts, investors, authorities, opinion leaders and business partners, with employees in all parts of the Group, representing an equally significant constituent. This report is supplemented by our annual and personnel reports, which include more in-depth information on economic and social aspects of RWE's activity.

All of the Group's worldwide core businesses have been included in this report, which covers 2002 and 2003, with the exception given on page 84 under "Companies included." Our acquisition of Transgas has already been integrated in management-related statements, but has not yet been accounted for in the data section. Environmental data presented in that portion are based on the input-output balances of the respective management companies. Figures were determined using ERIS, the Group's internal environmental reporting and information system, and can be accessed via the Internet. We continue to break down environmental data and programs by business area in the annex since our business areas, Energy, Water and Environmental Services, deal with greatly varying environmental aspects. Our financial investment Heidelberger Druckmaschinen AG publishes its own sustainability report.

Our reporting policy is in line with the guidelines set forth in the Global Report-02 ing Initiative. We received important stimuli from guestionnaires prepared by sustainability-oriented rating agencies. In addition, we held a workshop in January 2003 with sustainability analysts and representatives of scientific institutions to evaluate our last report. Valuable indicators of our stakeholders' need for information were also provided by the expansive survey conducted on our behalf by Hamburg-based Systain Consult in the spring of 2003.

The external audit carried out for this report targeted the chapters "Strategy and management" and "Sustainable development." We intend to have the entire report audited externally next time.



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We also provide information on RWE's environmental protection activities and 03 sustainability strategy on the Internet.

01 www.heidelberg.com 02 www.globalreporting.org 03 www.rwe.com > RWE Group > Responsibility





2002–2003 at a glance

# 2002–2003 at a glance



## Management

More than 300 employees attended the Convention of the Future on Sustainability in September 2002.

RWE's Environmental Reporting and Information System expanded to include foreign companies and investments.

Management practices for corporate responsibility established at RWE Innogy and RWE Thames Water.

RWE's Executive Board adopted a sustainability strategy in October 2003.

RWE Group reduced the number of management companies it has from 13 to seven.

## Business

Improved sustainability performance led to renewed inclusion in the Dow Jones Sustainability World Index (rank 4 among industry sustainability leaders in the electricity sector).

WestLB issued A+ rating based on data from Ethical Investment Research Service (EIRIS).

Net debt declined faster than planned, falling to €17,800 million in 2003.

Water Business Area increased customer base to 70 million.

Electricity generation in Germany rose one percent since 2002.

Secondary raw materials' share of revenue increased by 35 percent since 2001.

Services business grew by almost 300 percent thanks to energy savings consulting and contracting since 2001.

## Environment

CO<sub>2</sub> emissions per kilowatt hour of electricity were reduced by 30 percent at Niederaussem power plant.

Generation capacity from renewables rose 260 percent compared to 2001.

After successful trials, already more than 600,000 tons of replacement fuels were used in the power plants in 2003.

Policy on handling oil transports adopted by RWE Trading.

Spending on environmental protection maintained at a high level (2002: €416 million, 2003: €375 million).

Internal environmental audits lead to considerable improvements throughout the Group in 2003.

Uniform audit system established and utilized across the Group for assessing environmental management.

## **Employees and society**

Industrial safety management systems implemented in all German companies.

Number of employees with disabilities increased from 3.4 percent in 2001 to 3.7 percent in 2003.

The share of traineeships hardly changed between 2001 and 2003 and stayed almost constant at 5.4 percent and 5.5 percent.

Comprehensive program initiated to assist the employees who will be affected by reorganization.

Necessary workforce reductions are carried out in a socially acceptable manner, avoiding operating lay-offs.

RWE joined the United Nations Global Compact Initiative in December 2003.

# Contents

- 2 Preface
- 4 Group portrait
- 7 Strategy and management
- 19 Sustainable energy supply
- 31 Water market of the future
- 41 Taking efficient action
- 49 Managing integration
- 57 Behaving in a competitive environment

## 63 Data and targets Portraits of the business areas Environmental data Economic data Social data

- 84 Companies included
- 86 Contacts
- 87 Imprint

**GRI-Index** 

Auditor's report

# **Statements**

- 23 Addressing future developments early on Mike Tyrrell, HSBC Investment Bank
- **33** Strong growth stimuli Dr. Philippe Rohner, Pictet Global Water Fund
- **45** Joining forces to create added value Brian R. M. Mackle, Diageo
- 51 Diversity: a source of innovation Prof. Martha Maznevski, International Institute for Management Development (IMD)
- **61 Investing in one's reputation** Prof. Karl Homann, Ludwig-Maximilians-University Munich

Inside flap

Outside flap

# Preface

Energy, water and environmental services make up RWE's core business. These utilities have become much more important for the quality of our living standards and our environment. Whereas supply security and prices for electricity, water and environmental services used to be the point of focus, the sustainability of profitable activity is now becoming ever more significant. For us, RWE's contribution to climate protection plays a key role in this context. This gives rise to the question of how we should handle resources and take responsibility for future generations.

Not once have we tried to avoid this debate. In fact, we have helped it flourish. RWE's declared mission is to contribute to establishing a global trend that economizes resources, guarantees secure, high-quality supplies, and creates wealth. This is the very philosophy that determines RWE's strategy for sustainability. It is being implemented throughout the Group and applies to approximately 127,000 employees worldwide.

Therefore, the logical conclusion was to refine the substance of our environmental report and adapt it to the state of the debate on sustainable thinking and action. We want to answer the questions you may have regarding "Our Responsibility" in this report. We will stay this course in the coming years—with your support and constructive comments. Our customers expect this level of commitment —and rightly so. Since we are an international multi-utility group, our more than 90 millionstrong world customer base expects high-quality products and services from a single source. They equally expect us to treat the environment in which we all live with respect, setting an example for others.

Sustainability-oriented investors and analysts confirmed our environmental performance. RWE significantly improved its ranking in the 2004 Dow Jones World Sustainability Index, winding up fourth in the energy sector.

This rating honors the transparency and openness we have accorded to our code of conduct a fundamental principle that we intend to reflect in this report.

Climate protection is one of the major challenges facing us. To address this, we carry out comprehensive modernization projects for our portfolio of power plants, which allows us to lower climate gas emissions profitably and to impressive orders of magnitude. Our latest-generation, lignite-fired power station sets global standards. We are convinced that this technology paves the way for coal-based electricity as a viable option for the future, also under sustainability considerations. In addition, we dedicate a lot of time to exploring ways to use renewable energy profitably. In this light, we expanded our renewable energy capacity considerably in recent years.



Harry Roels

We supply 70 million customers with fresh drinking water and sanitation around the world. This is a responsibility that one cannot do justice to without a high degree of sustainable activity. Less industrialized nations reach their limits of economic performance when it comes to investing in secure clean water supplies. This is why RWE participates in public private partnership models, which make use of and integrate local know-how.

Given our Group's wide international reach, it is paramount for us to learn from one another, safeguard cultural diversity, appreciate different social requirements, and develop a healthy understanding of each other. These are important ingredients of sustainable governance.

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Dr. Gert Maichel

These fundamental concepts are expressed in this report, substantial portions of which were audited by external examiners for the first time. We hope this makes for an exciting read, and we invite you to participate in our dialogue, via e-mail at info-responsibility@rwe.com. What are your thoughts on RWE's commitment? What does "sustainability" mean to you?

Harry Roels President and CEO

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Dr. Gert Maichel Executive Vice President and Environmental Coordinator

# **One global partner**

The UK, Eastern Europe and North America are RWE's key markets alongside Germany. Headquartered in Essen, Germany, the RWE Group serves some 90 million customers in these markets, supplying them with electricity, gas, heat or drinking water. In addition, the Group handles the disposal and recycling of wastewater and refuse (Business Area Portrait > page 64). Fiscal Year 2003 saw RWE generate €43,900 million in global revenue from these operations.

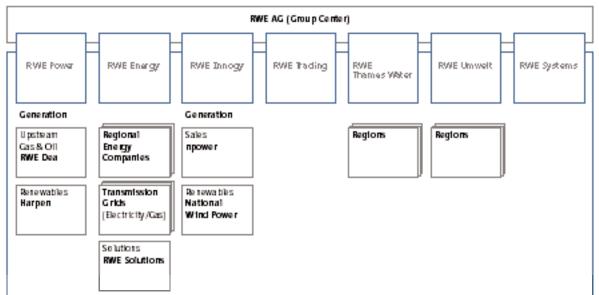
#### Integration and internationalization

RWE began to transition its business into an international group in 1998, in the wake of the liberalization of energy markets in Continental Europe. Since then, RWE has acquired Thames Water (UK), American Water Works (USA), Innogy (UK) and Transgas (Czech Republic). Today, about 45,500 of RWE's 105,000 employees in core businesses work abroad. The RWE Group earns every second Euro, or 50 percent, of its operating result outside Germany.

**RWE's Group structure** 

core businesses





New companies are integrated as part of RWE's "everything from a single source" strategy. One especially noteworthy challenge is that RWE must be perceived to a have a single, clear strategy, despite the diversity it displays in various markets as a group with international operations. At the same time, management wants to safeguard the local identity and qualities of the companies operating under the RWE umbrella brand.

#### Group restructuring

As of October 1, 2003, the Group reduced the number of management companies it has from 13 to seven. Continental European electricity and gas sales operations are now spearheaded by RWE Energy. Twelve regional energy companies cater to the needs of customers on the European Continent. RWE's Continental European power plant portfolio, as well as lignite production, has been grouped under RWE Power, which is also responsible for renewables and the exploration and production of oil and gas. RWE Innogy is responsible for power generation as well as electricity and gas sales in the UK.

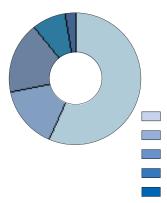
Far-reaching information on the Group's structure, acquisitions, investments, corporate governance, emissions trading, as well as RWE's business areas (plants, customers, products and market trends) can be obtained from the Internet.

#### RWE AG shareholders percentage

Institutional	Allianz AG	7.66
	Munich Re	5.88
	Other institutional investors	39
Local	RW Energie Beteiligungsges. mbH	11.1
	Others	23
Private		13
	Of which employees	3

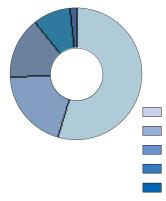
### Workforce by region 2003

percentage (104,992 employees in core businesses\*, 97% of which are in OECD countries)



Germany	56.7
UK	15.1
Rest of Europe	17.5
Americas	8.3
Asia/Africa/Australia	2.4

## **Revenue by region 2003** percentage (€40,217 million in core businesses\*)



Germany	54.7
UK	19.6
Rest of Europe	15.1
Americas	8.9
Asia/Africa/Australia	1.7

## **Revenue by business area 2003** percentage (€40,217 million in core businesses\*)

RWE Power	10.1
RWE Energy	54.3
RWE Innogy	13.8
RWE Trading	6.1
RWE Thames Water	10.6
RWE Umwelt	4.8
RWE Systems, et al.	0,3

\* Including RWE Systems, Group Center, consolidated





# Developing common goals

The RWE Group has been abiding by its guidelines for sustainable development since 2000. In October 2003, management adopted a suitable Group strategy. Center stage is taken by fields of activity, which RWE intends to pioneer. Our guidelines support this ambition.

RWE is a world-leading supplier of energy, water and environmental services. As a result, the company operates in sensitive markets, seeking to offer secure supplies and maintain affordable prices, while offering environmentally-friendly products and services and maximizing performance. In the electricity and gas utility sectors, RWE focuses on Europe, where liberalization is rewriting the rule book. By contrast, the company conducts its water business in both industrialized and newly industrializing countries. Countries where the private sector is now involved in the delivery of services that were once provided by the State have opened up new windows of opportunity for RWE. However, any arrangements involving the private sector are naturally scrutinized to ascertain whether they are capable of ensuring secure supplies to broad seqments of the population over the long term. Therefore, RWE must deliver goods and services required to fulfill vital needs affordably, while living up to its social responsibilities and meeting the capital market's demands.

#### Challenges

For companies with international operations, being a good corporate citizen requires appropriate action at all political levels. At the 2002 o 01 World Summit in Johannesburg, the United Nations (UN) requested the support of business to make a decisive contribution to combating poverty and the shortage of safe drinking water and effective sanitation. Climate protection has been on the agenda since the 1992 Conference in Rio de Janeiro.

The European Commission has been developing recommendations for companies on corporate responsibility since 2001. The strategy encourages companies to consider sustainability issues in their business processes and aims to have companies report on the process. The OECD (Organization for Economic Cooperation and Development) developed guidelines including a behavioral code for multinational enterprises doing business abroad. In light of these developments, the capital market is attaching more and more importance to the stance companies take with respect to sustainability. Risk avoidance and innovative concepts that support forward-looking corporate policy are becoming steadily more important as rating criteria.



RWE accepted the challenge. The company is developing a strategy to systematically include environmental and social considerations in the company's business processes. Paramount in this endeavor is the assumption of responsibility worldwide-in new markets, in the face of changing demands, and with employees worldwide.

#### Future convention

Work on drafting a strategy for sustainable development got underway at the RWE Future Convention in September 2002. More than 300 managers from all of the Group's companies met to discuss the significance of sustainable development for the RWE Group. Having received a report on the findings, the Executive Board issued the directive to define fields of activity as well as tasks aiming to boost the Group's sustainability performance. In the last one-and-ahalf years, the RWE Group has made considerable headway.

#### Internal survey

Our employees are one of our most important stakeholders, as they expect the company and its orientation to protect their interests—and rightly so. At the same time, they have the best knowledge of what others expect of the company, thanks to the direct contact they maintain with customers, government officials and suppliers. It is against this backdrop that representatives of our corporate environmental coordination and corporate development departments carried out in-depth surveys. Working in concert with the management companies, they identified and evaluated opportunities and risks of sustainable development-a fundamental cornerstone for our strategy.

To identify our external stakeholders' expectations, we commissioned Systain Consult, the Hamburg-based consulting firm, to conduct a survey of non-governmental organizations, fund managers, customers, municipalities, trade unions, consumer associations and scientific institutions. The main focus of this research concentrated on energy, water and waste. Results of the survey, which was principally carried out in Germany, were available in June 2003 and were combined with the results of the internal survey. Setting priorities

01 www.johannesburgsummit.org

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#### External survey

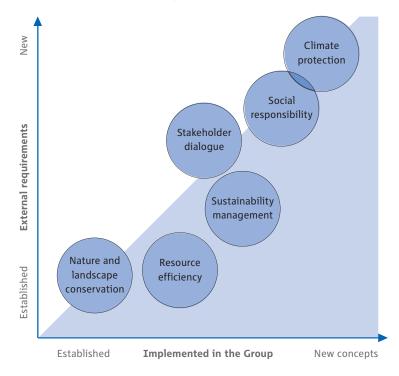
Management and operating company representatives identified six focal topics based on the outcome of the two surveys. In October 2003, the Executive Board adopted a strategy for sustainability, which focused on a number of priorities. These are described in the following chart (> Fields of Activity Promoting Sustainable Development at RWE, page 10). The snapshot taken in January 2004 identified those areas which are already being developed and those that still require the support of sub-projects.

This gives us a basis for constantly monitoring the way we do business with respect to political and social conditions and meeting the capital market's requirements-a key prerequisite for upholding the acceptance of our entrepreneurial action in the public's eye. We want at all times to be able to assume a clear, credible position on the importance we attach to sustainable development and its delivery at the operational level.

A comprehensive survey in 2003 identified stakeholders' information needs and desires.

RWF's sustainability strategy was adopted by the Executive Board in October 2003.

#### Fields of activity promoting sustainable development at RWE



## Achieving sustainability

Organizing envir mental management has been a responsi bility of the RWE AG Executive Board since 1998.

Sustainability in the RWE Group is managed through an existing network of environmental management units, whose scope of responsibilities will gradually expand. Dr. Gert Maichel, Executive Vice President for Multi-Energy at corporate headquarters, is the Group's environmental coordinator. He is assisted by the Group Environmental Policy/Research and Development unit. He meets with the executive board members responsible for environmental affairs at our management companies in the Environmental Protection Coordination Committee to agree on a joint approach. This body receives expert support from the Environmental Officer's Task Force, a group of experts that convenes several times a year.

Organizing environmental protection The Group's environmental management guidelines and the performance targets for environmental protection provide a framework for the organization and implementation of the Group's environmental protection measures. The performance targets stipulate that all Group companies set up an environmental management system that is consistent with the ISO 14001 standard, thus constituting a minimum requirement. Whereas environmental protection activity in the mining sector is regulated by strict mining laws, RWE Umwelt operations must meet our demanding environmental management requirements by complying with ISO 9001 standards as well as certification according to the German Waste Management Facility Directive (> table on status of certification, page 12).

Furthermore, the general performance targets dictate the processes for the management of environmental risks on a Group-wide basis. Framework performance targets for environmental due diligence have been used to assess the risks associated with acquisitions since 2000.

#### **RWE** guidelines for sustainable development

Through its core businesses, RWE offers services that are indispensable to modern society. RWE makes sure these services make a significant contribution to improving the standard of living of today's and tomorrow's population wherever it does business around the globe. This enables RWE to secure the company's value and earn an appropriate return on capital employed over the long term.

We make a key contribution to protecting our climate and securing supplies. As one of Europe's largest multi-utility companies, it is especially incumbent upon us to reduce greenhouse gas emissions. Our state-of-the-art power plants and efficient use of energy help us make a substantial contribution to this cause. We tap new potential through the increased use of innovative technology, renewable energy sources, and combined heat and power generation.

We assume responsibility for our employees and society whole-heartedly. We play a proactive role in solving societal and structural problems in our regions of activity. We promote our staff's motivation, responsibility and initiatives. We provide them with secure jobs under healthy work conditions and cater to their individual and cultural needs. Mutual respect and tolerance help us achieve our company's doals.

Transparent action and responsible governance are fundamental Group-wide principles. All our actions are guided by Group-wide rules across Group divisions and company levels. They ensure clear, forward-looking governance and help mitigate economic and ecological risks. We regularly review our Group-wide rules and adapt them to changes in conditions.

#### We seek open dialogue with our stakeholders.

We report on our activities regularly and transparently. We respect other people's opinions and strive for acceptable consensus when discussing controversial issues. The exchange we have with our stakeholders helps create new concepts.

We secure our future through the efficient use of resources. We constantly improve our processes to reduce resource consumption, water losses, and the amount of waste we produce. Continued investment in our plants and grids as well as in our employees' expertise increases our capacity and profitability. We offer our customers a comprehensive range of services promoting the efficient use of resources in their energy consumption and waste management activities.

We believe nature and landscape conservation is a key element of responsible action. In all business processes, we see to it that nature and landscapes are impacted as little as possible. We take farreaching measures to safeguard biodiversity, protect groundwater and wetlands, and preserve nature's myriad functions. We adhere to high standards when recultivating the areas that we subject to intensive use.

### **RWE Group locations with external certification**

(As of Sept. 30, 2003)

			fied in compliance L4001 or EMAS	Sites certi with ISO 9	fied in compliance 9001
	Employee equivalents	Number	Coverage by employees	Number	Coverage by employees
RWE Power	19,280	3	2 %	2	1%
RWE Energy*	42,655	7	10%	31	19%
RWE Innogy	9,357	14	90%	0	0 %
RWE Trading	397	0	0 %	1	5 %
RWE Thames Water	17,521	15	45%	22	52 %
RWE Umwelt	12,578	27	9 %	237	79%
RWE Systems	2,889	0	0 %	2	27 %

\*Excluding RWE Schott Solar.

#### International environmental management

Group-wide transfer seminar on environmental management in the spring of 2003 with representatives from eight countries.

As RWE extends its international reach, the Group's legacy environmental management system is faced with new challenges. This was why a Group-wide transfer seminar took place in the spring of 2003, attended by representatives from eight different countries. Discussions revealed that the principles and procedures implemented in environmental management activities are similar in all our companies, regardless of the difference in local legislation. Therefore, the Group directive and the general performance targets are valid and can be put into practice worldwide. This was the basis on which the participants agreed on the following additional joint measures:

- Mutual support in establishing an environmental management system by sharing best practices and guidelines.
- Efficient compliance with statutory regulations through the use of Group-wide, uniform checklists.

#### Internal management audits

ERIS, the internal environmental reporting and information system, is the basis of RWE's environmental management system. It tracks the status of environmental compliance of each management company, gives access to environmentally relevant data, and acts as a tool to conduct regular management audits. Since 2003, these audits have been carried out by the Group Environmental Policy/Research and Development unit and show how general performance targets are met by the Group companies.

An overview of the Group's status is prepared by weighting the results delivered by the individual companies according to the number of people employed (> see chart on Environmental Management in Practice in the RWE Group, page 13). On evaluation of the data, it becomes clear that a high level of environmental management has already been achieved and is deeply rooted throughout the entire Group.

#### Legal requirements

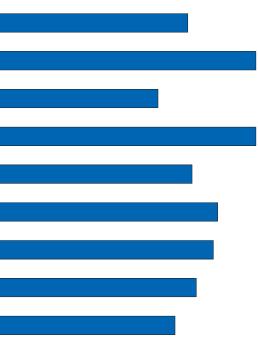
At the company level, we need to develop a uniform audit procedure for compliance with statutory regulations. We are taking steps to develop a uniform system that can be applied through-





out the Group. From 2004 onwards, management performance as well as adherence to legal requirements at all RWE companies and sites will be examined and evaluated using similar standards. In doing so, we intend to improve our environmental performance and reduce risks.

Resolute adherence to environmental law also provides business opportunities. For example: Germany's environmental legislation imposes very ambitious limits and stringent procedural rules in more areas than one. This, no doubt, is partly responsible for the fact that RWE now boasts a wealth of know-how in the fields of emissions control and water protection, nature and landscape conservation, as well as energy and waste management. This benefits our foreign investments, such as Hungary and Croatia, where we have contributed to lowering emissions by upgrading our coal power plants with German state-of-the-art technology. Our experts



in the restoration of landscapes previously occupied by mining works are highly sought worldwide-quite possibly a boon to our international reputation. Furthermore, RWE Industrie Lösungen GmbH, which offers engineering solutions for retrofitting power stations, enables us to derive a financial profit from our high environmental standards.

RWE Umwelt is under investigation for three cases of alleged improper handling of hazardous waste. The company paid a million euros in fines for unauthorized plant operation. Our UK subsidiary, npower was fined €288,000 (£200,000) for inappropriate blocking of residential direct debit customer transfers. npower has changed its policies to resolve the issue and make its approach consistent across all our residential systems. RWE Thames Water had to pay €455,300 (£62,000 and US\$416,000) in fines in 2003 (> page 38).

Investigations and fines in 2002 and 2003.

#### Social responsibility

Cooperation

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**Roadmap to sustainability** 

Priorities for social responsibility differ from one region to the next much more than they do in terms of environmental protection. This is why RWE focuses sharply on cultural backgrounds and regional welfare legislation to determine how best to shoulder responsibility for its employees and to make a positive contribution to the life of the communities it serves. Although we will set general performance targets in this area, social responsibility can only be practiced convincingly on location. After all, "all business is local." In consequence, planning and implementing measures for employees and communities should be left up to local organizational units, giving them freedom to act within a predefined framework, and subject to careful monitoring and reporting procedures.

RWE contributes to the debate on developing

through a number of committees. One of RWE's

most significant endeavors is its participation in

1998

new solutions for sustainable development

the e7 initiative, a union of nine leading G7

electric utilities. RWE is the only German industrial enterprise in the World Bank's Prototype Carbon Fund that was established to test climate protection tools in January 2000.

In addition, RWE is a member of econsense, a group of over 20 premiere German multi-businesses aiming to play a pioneering role in sustainable business activity. In October 2003, RWE joined the "Global Business Coalition," which unites more than 70 top-notch international companies in a common battle against AIDS.

#### Stakeholder dialogue

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In order to successfully implement our strategy for sustainability, we must work effectively with our stakeholders. Last year, RWE made use of the capital market's mounting demand for voluntary information on sustainability from companies. In March 2003, we accepted WestLB Panmure's invitation to come to Paris to present our strategy for preventing climate change. In the summer of 2003, we showcased our strategy for sustainability to a number of key investors in London. Since then, we have held a series of talks with investors interested in sustainable development, who scrutinized our strategy for preventing climate change. RWE pursues an open information policy in its dealings with the Carbon

Disclosure Project and independent organizations. Maintaining dialogue with our stakeholders helps us tune in to current trends and make necessary adjustments.

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Strategy	environmental protection	up environmental management guideline	Group-wide transfer seminar on sustainability	Group sustainable development guidelines	Pilot studies on sustainable development	Future convention on sustainable development	Sustainability strate adopted
Implementation	Permanent staff of environm	nental officers	Implementation of the Environmental Reporting and	Performance targets for	Environmental management	▼ Beginning of the	International envir mental manageme
·			Information System (ERIS)	environmental management	reviews	internal and external surveys	transfer seminar
Communication	1st systematic environme	ental report	Inclusion in Dow Jones Sustainability Group Index World	2nd environmental report	Inclusion in Dow Jones Sustainability Group Index STOXX	3rd environmental report	Stakeholder worksh on the environmental

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09 www.rwe.com > RWE Group > Responsibility > Dialogue 10 www.sustainability.com

08 www.cdproject.net

11 www.sustainability-indexes.com

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In December 2003, RWE joined the Global Com- 10 07 pact of the United Nations. This initiative was launched in 1999 by UN General Secretary Kofi Annan at the World Economic Forum in Davos. The companies taking part in this initiative promote a set of common core values in the areas of human rights, labor standards and environmental practices.

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#### **Reporting workshop**

Since reporting is critical to external evaluations of the company, RWE invited experts from scientific institutes, rating agencies, banks and the EU Commission to Essen in January 2003 to discuss room for improvement. The findings of this 💟 discussion served as a basis for this report.

London-based SustainAbility Ltd's international ranking was testimony to our meeting major stakeholder requirements via our reporting. Nine German reports were among the world's top 50. RWE's 2001 Environmental Report was ranked as the fourth-best German publication. Its predecessor, the RWE Environmental Report 2000 won the "German Environment Reporting Award" of the German Chamber of Auditors.

#### **Recognition and assessment**

Sustainable Asset Management, the rating agency, re-assessed RWE's sustainability perfor- $\mathcal{J}_{m}^{11}$ mance in the fall of 2003. This qualified the company for re-inclusion in the Dow Jones Sustainability Group Index (DJSGI), which was established in 1999. Thanks to our excellent results, we advanced to the number four spot in



the global multi-utility category. RWE is represented in the DJSGI World, the DJSGI STOXX, the ASPI (Advanced Sustainable Performance Indices) and Pictet's "Global Water Fund".

Evaluations issued by WestLB and the rating agency imug (Institute for the Market, Environment and Society) also recognized our sustainable practices. We received an "A+" ranking from WestLB based on **EIRIS** (Ethical Investment Research Service) criteria in the fall of 2003. RWE was also placed among the top 25 in the imug study of 300 European companies for inclusion in a sustainability fund that is to be set up in collaboration with Conseur, the consumer organization.

Our use of nuclear energy explains why we are not included in other sustainability indices such as FTSE4Good. While we feel that nuclear energy represents a viable alternative, it is a criterion for exclusion in many funds based on ethical principles. Information concerning indices and funds is available on the Internet platform sustainable investment.

## Outlook

RWE took a major step by adopting a strategy for sustainability in 2003. Setting up projects to assist the implementation process is one of our primary aims for 2004.

Some projects have already been identified to make advances in climate protection. This is an area where RWE intends to establish criteria to identify and carry out Clean Development and Joint Implementation projects under the Kyoto Protocol. To step up our company's social responsibility, we are concentrating on evaluating our sponsorships. We will support our sustainability management process by developing a code of conduct that will help implement the OECD guidelines. In addition, we will consider sustainability issues and criteria in our internal processes, such as purchasing.

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We largely achieved the goals of our 2001 environmental program. Some of them were re-evaluated and transferred to the program for sustainable development.

Inroads were made in the development of a system of key criteria, albeit more slowly than planned. We will address the concept again once we start implementing our strategy for sustainability. We can then use it to benchmark the extent to which we achieve our goals in the six fields of activity. Our subsidiary RWE Thames Water has developed an exemplary, systematic n 15 and useful key criteria concept, which it presented in its environmental report 2001/2002. We intend to develop a similar system for the entire RWE Group.

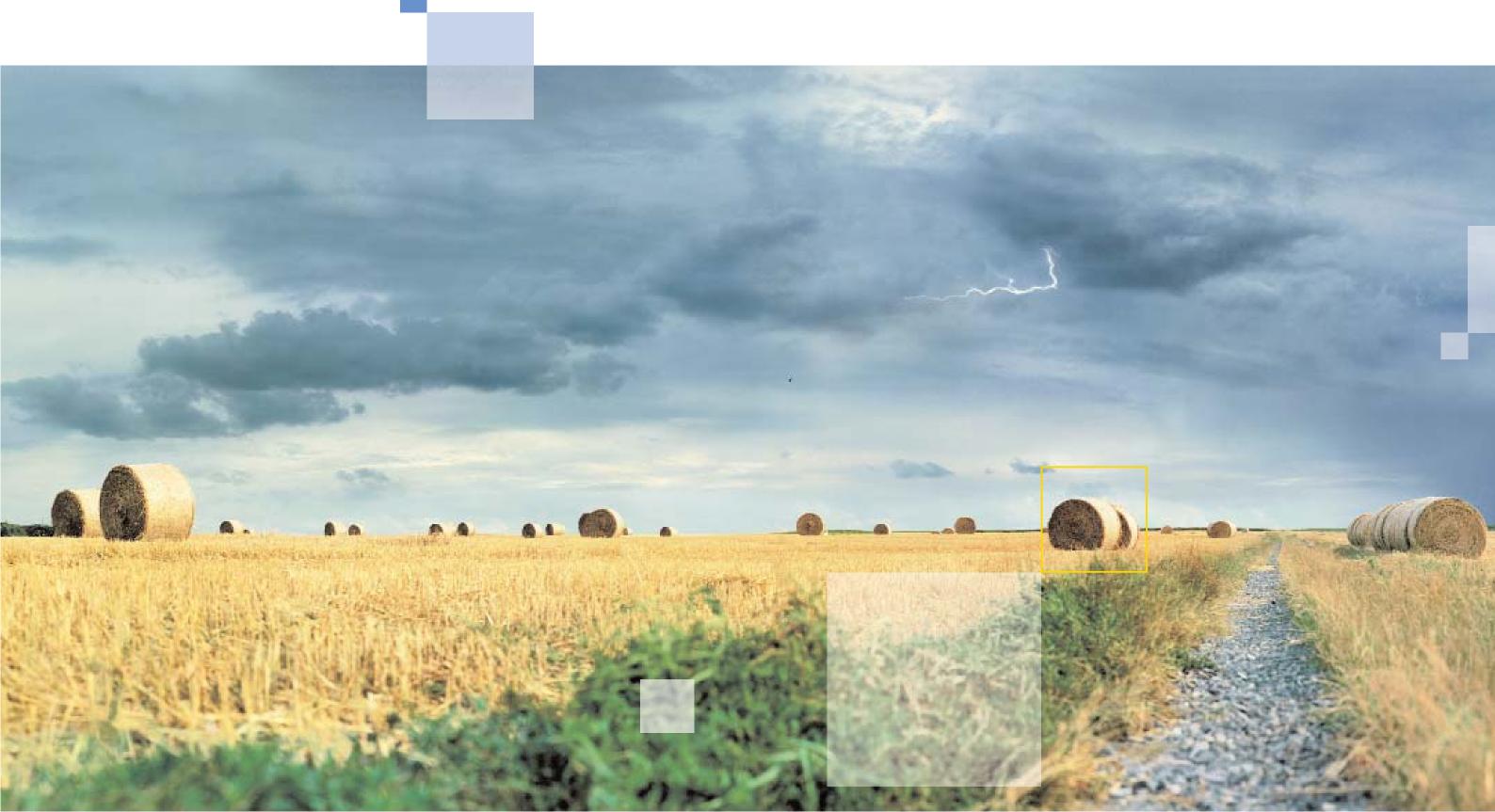
## Group sustainable development program

In line with our strategy for sustainability, we expanded our Group program since the last report to address the issue of social responsibility, and will set our sights on new goals as we go forward. This report is structured according to the six fields of activity that take center stage in our sustainability strategy. One of the first steps in implementing this program is to assess and clarify the goals at the management companies. This will be one of the first tasks handled by our sustainability management system. Therefore, the management companies' programs currently still focus on environmental protection. They have been grouped by business area for the purposes of this report and are available on the Internet (> pages 74, 77 and 79).

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Field of activity		Status and/or comments
Climate protection		
Preparation for greenhouse gas emissions trading.	12/04	
Investment decision on additional replacement power plants.	12/04	The first lignite-optimized power station was commissioned in 2002 as part of our portfolio planning.
Take stock of greenhouse gas emissions that are not yet covered by emissions trading.	12/04	
Test Joint Implementation and Clean Development Mechanisms within the scope of the Prototype Carbon Fund and e7.	ongoing	First few projects completed; additional projects are being implemented.
Social responsibility		
Develop a Group-wide strategy for charitable activity.	12/04	
Test new forms of social engagement, such as promoting charitable work done by employees.	12/05	Completed in the UK; pilot projects in Germany based on UK model.
Improve cooperation between employees and employers across country borders.	ongoing	
Sustainability management		
Widen the scope of the Group's Environmental Management Guideline to include sustainability aspects.	12/04	
Bring the Group's rules in line with international demands concerning responsible corporate management.	06/05	
Write a Group-wide code of conduct.	12/05	Group-wide sustainability guidelines are already in place.
Expand the internal reporting system to address sustainability issues.	12/05	Via ERIS.
Devise a system of key figures to monitor sustainable development.	12/05	
Introduce a Group-wide, uniform auditing system for compliance with environmental laws.	12/04	Auditing tools already exist.
Consideration of sustainability criteria in the supply chain.	12/04	Status examination of the top suppliers.
Dialogue with stakeholders		
Analyze the Group's existing stakeholder relations.	06/04	In collaboration with the Institute for Management Develop- ment (IMD) in Lausanne.
Establish an ongoing, institutionalized dialogue with stakeholders.	from 06/04 onwards	Forums and conversations with customers, employees, NGOs, etc.
Collect and evaluate results.	from 06/05 onwards	Customer and employee surveys, etc.
Efficient use of resources		
Improve the identification and assignment of costs incurred for environmental protection.	12/01	Pending; possibly to implement new regulations.
Identify best practice throughout the Group and in cooperation with customers.	12/04	
Apply findings throughout the Group.	12/05	
Nature and landscape conservation		
Identify best practice throughout the Group.	12/04	
Derive Group-wide standards and recommendations.	12/05	





# **Covering tomorrow's needs**

Profitability, supply security, environmental protection and climate conservation: These are the tenets to which we pledge as we strive to achieve sustainability in the energy industry. Moreover, these are the tenets to which our strategy has been tailored.

Power supply, including electricity, gas and heat, constitutes RWE's largest field of business. In 2003, it accounted for 71.4 percent of the Group's revenue. Our market leadership in Germany and the UK, along with our investments in Hungary, Poland, the Slovak Republic, Austria, the Czech Republic and the Netherlands, make us Europe's third-largest energy utility. RWE provides 22 million private and commercial customers with electricity and 11 million customers with gas. As a leading player in the energy industry, we are aware of our special responsibility for making our own contribution to ensuring sustainable energy supplies over the long term.

#### Our strategy

As far as the energy industry is concerned, our stakeholders have a keen interest in profitability, security of supply, environmental protection and climate conservation. Proof of this can be found in the large number of statutory regulations with which we are required to comply. The large-scale investments needed in this sector mean that we need a predictable political framework within which to operate. After all, the tapping of new sources of energy and funelling of fresh funds into power plants and power lines doesn't happen overnight. Such projects can only be realized if they are backed by long-term strategies and budgets.

Basic conditions for several areas such as emission reductions and the promotion of renewablesbased energy have already been established. Climate conservation will have a framework set in 2004, covering the period from 2004 to 2012. We do recognize; however, that more emphasis is needed on a long-term strategy. As such, we need to be flexible in our approach so that we can continue to optimize profitability, guaranteed supplies, environmental protection and climate protection.

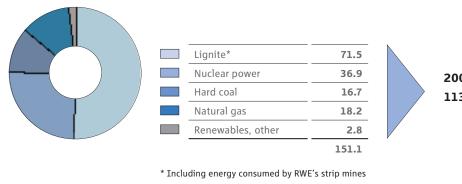
Our strategy is based on a balanced energy mix, including energy from renewable sources, distributed power provisioning, new technologies, and the maintenance and modernization of our transport and supply facilities for electricity and gas.

#### Our mission: profitability

The deregulation of the energy industry has introduced competition in electricity markets, and we are beginning to see competition develop in the gas market in Germany as well. As a result, in both Germany and the UK, electricity markets have been characterized by rigorous competition with volatile wholesale prices. A regulatory body, the Office of Gas and Electricity Markets (Ofgem) oversees the competitive market in the UK. Germany is preparing to set up its own regulatory authority, which is to be leaner than its UK counterpart. We expect the

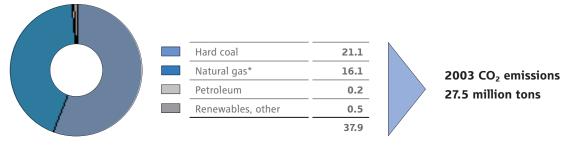
Germany: RWE power generation in 2003

in terawatt hours (proprietary plants only)



UK: RWE power generation in 2003





\* Including combined heat and power

regulatory regime to provide us with a framework for our business activity. Besides ensuring fair competition, the regulator should also tailor its rules to promote the security of supplies.

#### Our mission: supply security

The power outages experienced in the summer of 2003 in the USA, Sweden, Denmark, the UK, France and Italy effectively demonstrated the importance and value of maintaining a high degree of supply security.

Of course, security of supplies primarily depends on the capacity and operational safety of our electricity grids, gas pipelines, power stations, and gas storage facilities. Therefore, substantial

20

2003 CO<sub>2</sub> emissions 113 million tons

investments must be made to guarantee energy supplies that are secure and available around the clock. In 2003 alone, RWE spent €650 million in maintenance-mainly in power plants, transformer stations, switching stations and grids. In doing so, we are making a significant contribution to keeping transmission and distribution networks "electrified" and "under pressure." As the deregulation of Europe's energy markets progresses, it poses new challenges. One example is the steep increase in electricity and gas transit operations over the last few years.

Another prerequisite for energy supply security is a diversified energy mix, building predominantly on domestic energy sources and longInvestments in supply infrastructure amounted to 1.2 percent of the Group's total sales in 2003.

Growing dependency on energy imports.

term arrangements for the supply of fuels from other countries. RWE principally uses nuclear fuel, lignite and hard coal. Natural gas and renewable sources are also included in its mix. This allows us to take advantage of the benefits of each energy fuel source. We focus on supplying energy using domestic energy sources in order to minimize our dependency on imports. After all, the European Union, which is our most significant operational market, is highly dependent on imports of energy sources. In 2003, the import ratio averaged 52 percent (Germany: 62 percent; UK: 0 percent). By comparison, 72 percent of the electricity generated by RWE is based on domestic energy sources. German hard coal and lignite as well as natural gas from the British North Sea were the most predominant energy sources, with a smaller portion accounted for by renewables. We also own

significant stocks of nuclear fuel along with the entire technology chain needed to manufacture fuel elements.

In the competitive UK trading market, RWE Innogy has a diverse plant portfolio, making it possible to quickly supply the appropriate capacities in fierce demand situations.

#### **Our mission: climate conservation**

RWE aims to adhere to the national climate strategies in Germany and the UK by reducing its greenhouse gas emissions in both countries and by taking advantage of all economic instruments. One of the main mechanisms in climate conservation is emissions trading, which is likely to become an option in the European Union in 2005. The financial impact this will have on us will depend on the number and price of emis-

### Direct CO<sub>2</sub> emissions by commercial activity in Germany (Change from 1999 to 2001 in millions of metric tons)

Coal and peat					0.1	
Food and beverages				-2.2		
Paper and cardboard				-1.9		
Coking and petroleum products		-2	7.9			
Chemical products			-21.0			
Glass and ceramics; stone and earthenware				-3.5		
Metals				-9.6		
Energy and gas	-51.6					
Other manufacturing sectors			-20.8			
Services					9.0	
-6	0	-40	-20	(	)	20

Source: German Bureau of Statistics, 2003.

#### Statement: Addressing future developments early on



Analyst,

Social Responsible

Investment, HSBC

Investment Bank. London (UK) With the market for sustainable investment funds growing in Germany and throughout Europe, we are continually searching for companies whose commitment to sustainable development makes them suitable for inclusion within such funds.

The growth of these funds is supported by the performance advantages that accrue to companies operating their businesses in line with the principles of sustainable development. Such advantages include: cost savings, better employee relations, new product options and a superior reputation.

There are usually two important factors to assess in such companies: first, the underlying performance of the company's core business and secondly the company's willingness to communicate openly with investors. During 2003, RWE took important steps in both respects.

In respect of its core business, RWE's early analysis of the potential impact of European emissions trading scheme is encouraging. With the details of the scheme still unclear, we believe that it is positive when companies take a long term view of the issue and tackle it early through proactive action in their own operations and lobbying efforts that support sustainable solutions.

Also during 2003, RWE became one of the first German companies to present its strategy for sustainability to investment analysts in London. This was an important step for the company, as companies that communicate their sustainability strategies openly are more likely to inspire investor confidence and see a corresponding premium in their share price.

sions allowances, as well as the rules of the allocation procedure. Final details of the national allocation plans were not available by the editorial deadline of this report at February 29, 2004. Regular updates on this position will be provided on the Internet as they become available.

When we start participating in emissions trading, we also intend to make use of the flexible Kyoto instruments, including Joint Implementation (JI: projects carried out in concert by two or more industrial nations) and Clean Development Mechanism (CDM: projects implemented in

01 www.rwe.com > Investor Relations > Fact book "Emissions trading" (PDF) 02 www.prototypecarbonfund.org 03 www.e7.org

cooperation between industrial and developing 102 countries). By becoming a member in the Prototype Carbon Fund, we took a first step towards testing these mechanisms. Spearheaded by RWE, 103 the e7 Initiative is doing preparatory work with 💟 a view to improving the energy efficiency of schools and kindergartens in Sofia (Bulgaria)-a project that fulfills the JI criteria included in the Kyoto Protocol. Seeking to make systematic use of the options offered by JI and CDM projects, RWE will issue Group-wide guidelines in 2004 that establish the requirements that have to be met when participating in such projects.

## Our energy mix

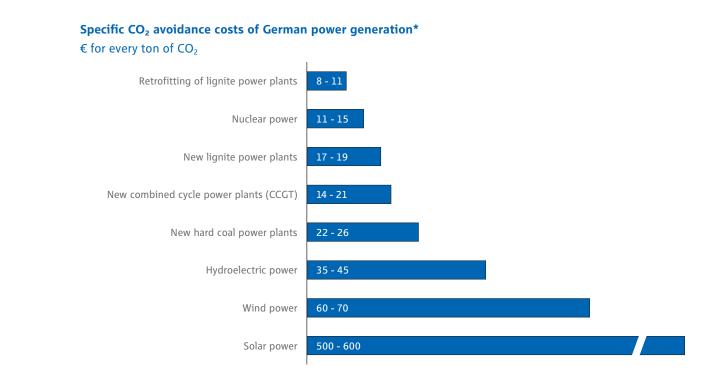
RWE's diversified mix of energy fuel sources is key to ensuring supply security and climate conservation. This is believed to be the best way to equip the company to take on future challenges.

#### Lignite and hard coal

Using coal as an energy fuel source has been a hotly debated issue in the public for ecological reasons for a long time. However, this debate is about to experience a paradigm shift, at least in Germany. Commissioned by the German government, the German Council for Sustainable Development, ascribed high importance to coal in Germany's future energy structure in the guidelines, entitled "Prospects of Coal in a Sustainable Energy Industry," which it presented in October

2003. In a passage on coal, the guidelines read: "The Council advocates the use of coal in Germany, because it promotes domestic power plant technology for export purposes, and because coal increases supply security, as reserves are well distributed globally. However, coal will only be a preferred option as long as climate conservation requirements can be met by the middle of the century."

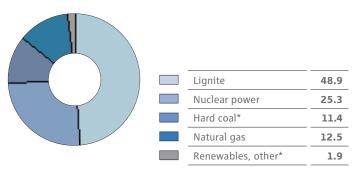
We are convinced that our concept complies with the environmental standards governing the use of coal according to sustainability principles. since we have achieved marked improvements in coal power plant technology. Therefore, RWE's goal is to gradually replace the lignite-fired power plants it owns and operates in Germany with the latest generation units. Considering



\* Energy import price fluctuations have been taken into account; renewable energy subsidies have not.

## RWE's German energy mix in 2003

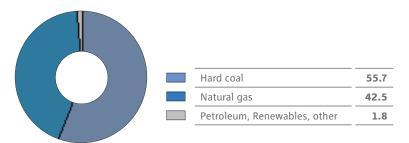




\* Excluding generation from power plants not owned by RWE, the capacity of which RWE has available based on long-term agreements (38,400 million kWh from hard coal plants, 3,000 million kWh from hydroelectric plants and other sources).

#### **RWE'S UK energy mix in 2003**

percentages (proprietary plants only)



way of preventing  $CO_2$  emissions (> figure above). This will raise efficiencies by an average of 20 to 30 percent over current levels. RWE commissioned the first lignite-optimized power station unit (BoA) with an efficiency of 43 percent in Niederaussem (North Rhine-Westphalia) in September 2003. The new unit will replace six 150 MW units of the Frimmersdorf power plant, some of which are half a century old. They have an efficiency of about 30 percent. Thanks to its considerably higher efficiency, with an installed capacity of 1,000 megawatts (MW), this new type of power plant reduces annual CO<sub>2</sub> emissions by approximately 3 million tons.

the political framework, this is the most efficient

Plans for the next BoA facility are underway. Since 2002, we have been in detailed discussions with residents and politicians in Neurath

and Niederaussem, both of which are potential sites. The approval process is in the pipeline, and we expect to obtain a construction permit after 2004.

In 2002, we successfully completed KOMET, the hard coal joint-venture project. It examined new materials for usability at very high operating temperatures-an indispensable prerequisite for boosting efficiency. RWE and a group of power plant operators are in talks with the state of North Rhine-Westphalia regarding the construction of a 600 MW reference power station with an efficiency of at least 46 percent.

An overview of RWE's German power plant locations and lignite strip mines is available on the Internet.

New lignite-optimized power station achieves efficiency of 43 percent.



### Natural gas

Installed capacity in renewable energy sources rises to 1,085 MW.

60 MW offshore

wind farm goes

online in the UK.

power generation for decades. It has the lowest CO<sub>2</sub> emissions among fossil fuels and is thus considered quite environmentally friendly. As a result, natural gas has gained a dominant position on the heating market, as it is especially well suited for use in distributed power generation and combined heat and power generation (CHP). In Germany, RWE operates over 50 large and small environmentally-sound thermal power stations, which have a combined thermal capacity of 1,180 MW. Furthermore, we operate a large-scale CHP facility at two chemical sites in Germany and 16 CHP plants in the UK. Another one is under construction.

Natural gas has steadily increased its share in

In pure power generation, RWE uses natural gas primarily to cover peak loads. To what extent we will make use of gas in the future will depend on how gas prices develop as well as on the cost of emissions certificates. Supply security is yet another factor. Germany already depends on gas imports to a great extent, with the Netherlands (20 percent), Russia (36 percent) and Norway (28 percent) as its main suppliers. According to the UK government's Energy White Paper (2003), the UK is likely to become a net importer of gas by 2006. RWE operates two major gas power stations in the UK, which accounted for some 40 percent of energy generated in 2003.

Therefore, RWE intends to broaden its production base through investments in production areas in the North Sea and North Africa. We are now less dependent on gas transports than ever, thanks to our acquisition of Transgas. We can compensate for seasonal fluctuation in gas supply and consumption with our German natural gas storage facilities.

#### Renewable energy

We attach great importance to the role of renewables-based energies in the future energy mix. In 2003, RWE operated renewables-based power stations (hydroelectric power, excluding pumped storage, wind power, photovoltaics and biomass) with a combined installed capacity of about 1,085 MW. Nevertheless, we do not concur with the optimistic forecasts made by several environmental organizations, claiming that renewable energy may cover the world's entire energy consumption within a few decades.

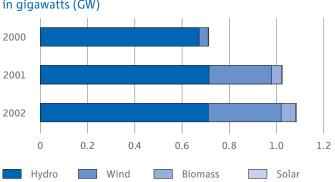
**Wind energy.** We believe that wind power has significant potential for growth, although each country will have its own economic and environmental limit to the amount that can be built.

RWE's main thrust is in the UK, where it is focusing on onshore and offshore facilities since geographic conditions and wind resources are more favorable in this region. The first major offshore wind farm in British waters at North Hoyle off the coast of Wales started generating in November 2003. With an installed capacity of 60 MW, the North Hoyle offshore wind farm has a high wind yield and was built close to the coast. This would not have been possible in Germany.

Consent has already been received for the construction of another offshore facility in the UK with an installed capacity of up to 150 MW. In addition, the UK Government has recently granted a lease for development of two more large offshore wind farms, which could be built later in this decade. Onshore wind farms with several hundred megawatts of capacity are scheduled to be built in the next three years. As a result, RWE will secure its lead in wind power utilization. Suitable inland sites can also be found in Spain, where we have already built plants with a combined capacity of 119 MW, as well as in France and Italy. We plan to invest €88 million in new wind power stations in these countries in the next few years.

Biomass. In the period under review, we made progress not only in utilizing wind energy, but also in the construction of biomass-driven power stations. These are generally designed as heat-fired CHP plants. RWE currently operates three biomass power plants. A fourth plant is being built and two more are in the planning process. In total, these plants will have an installed capacity of 37 MW electrical or 164 MW thermal. They cover our customers' heat consumption and produce electric power. We procure biomass-usually wood chippings-from the customer's region. Further construction projects will depend on the availability of affordable fuels. We aim to use biomass as a co-firing agent in our UK power plants.

Fuel cells. Fuel cells are still in their development and test stage. But encouraging advances have been made in testing high-temperature MCFC cells. Rated at up to 300 kilowatts (KW), they are an interesting alternative primarily for industrial and commercial customers. Since the spring of 2002, we have been testing a 250 KW fuel cell. During the first 18 months, the module achieved an excellent result of 12,000 hours of service. We started a joint venture to manufacture these modules with MTU Friedrichshafen in 2003. We expect to launch them on the market starting in 2006. We are also involved in testing fuel cell heating devices for single- and multiple-family homes. However, given their current state, these devices will not be marketable until 2008.





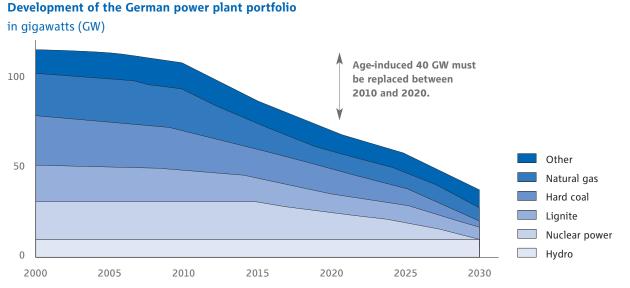
**Photovoltaics.** Our main activity in this field is the manufacturing of solar cells and modules. Seeking to ramp up production, we incorporated our operations in the RWE Schott Solar GmbH joint venture in 2002. This company is Germany's biggest solar cell manufacturer and ranks fifth worldwide, with a production capacity of 53 MW at present.

### Decentralized structures

In some sub-markets, the promotion of renewable energy and combined heat and power generation is leading to an expansion of distributed electricity and heat supply—a trend that fuel cells are likely to accelerate. In this light, RWE believes it is important to bring its power plant portfolio and network infrastructure in line with future supply requirements. More than anything else, the irregular infusion of wind energy into the grid necessitates considerable capital expenditure, as well as the provision of expensive balancing power.

### Nuclear power

RWE operates five nuclear power stations in Germany, which accounted for a quarter of the energy we generated in 2003. But we will have to phase them out by 2023 to comply with an Joint ventures founded for the production of photovoltaic and fuel cells.



Basic assumption: All power plants are shut down after 40 years of operation. If nuclear power plants are decommissioned as mandated by the German government's phase-out plan, an additional 21.7 GW will have to be replaced.

agreement reached by the German government and industry in June 2001. This means that RWE will have to make up for an annual 40 terawatt hours (TWh) of lost electricity production during this period, without, of course, losing sight of supply security or climate protection.

Since no disposal site for fuel rods will be available in Germany over the medium term, the operators have committed themselves to provide on-site interim storage at their power plants. Our first one started operation at the Emsland nuclear power station at the end of 2002. During the approval process, the Federal Agency for Radiation Protection got the public involved to a large extent. Public hearings were held at all sites with a total of 1,700 participants. RWE distributed additional brochures to the residents about security at the interim storage sites and future developments. The sites in Biblis and Gundremmingen will be in operation until the end of 2005. We are investing a total of approximately €80 million for the construction of interim storage at three sites.

We will have to decommission the nuclear power stations currently in operation at the end of their use. RWE is already amassing necessary expertise. For example, we will gain insight and experience from the dismantling of the test nuclear power plant in Kahl that is scheduled for completion by 2006. This will help us fully decommission and greenfield larger plants in the future. All in all, RWE is responsible for five nuclear power stations, which have already been taken offline (Kahl test plant, Gundremmingen A, Lingen A, Mülheim-Kärlich and THTR Hamm-Uentrop). They are currently in various dismantling phases.

### Outlook

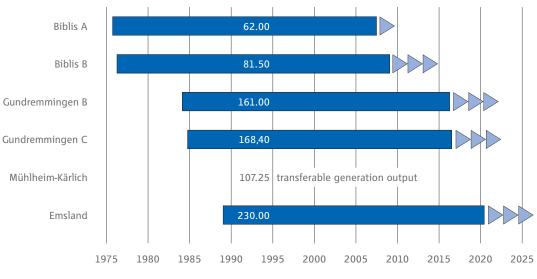
Within the next two decades, the energy carrier mix in Germany will have to be rebalanced. At present, the increased use of lignite and hard coal is the most affordable alternative from an economic perspective. But this option leads to considerably higher CO<sub>2</sub> emissions. Therefore,

there will be increased pressure to engineer even more efficient coal power plants. Highly efficient gas power stations are another option, especially in the peak- and medium-load range. The extent to which natural gas can increase its share in energy production will mainly depend on the development of gas prices. Taking into account climate protection aspects, we also feel that it will be necessary to continue using our nuclear power resources. Nevertheless, based on the agreement with the federal government, the future lifespan of nuclear power plants is limited.

Other examples of sustainable energy supply In 2002, RWE Trading decided on a charter policy for oil transports, which demands high transport safety. More ...

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### **Remaining service lives of RWE's German nuclear power plants** in terawatt hours (TWh)



07 www.rwe.com > RWE Group > Responsibility > Special Focus: Energy > Best Practice

- 08 www.npower.com > yourhome > green > juiceandwindpower
- 09 www.rweschottsolar.com

10 www.erdgasfahrzeuge.de

11 www.rwe.com > RWE Group > Responsibility > Special Focus: Energy > Best Practice

**RWE** invests some €80 million for the construction of three interim storage facilities



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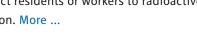
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In the UK, we offer a domestic green energy product, npower JUICE, which enables domestic customers to purchase a renewable energy 08 product at no additional cost. More ...

The staff in RWE Solar GmbH's SmartSolarFab engineers environmentally-friendly products, using environmentally-sound production processes. More ...

Natural gas opens up new prospects for road traffic: RWE Gas assists customers who buy gasn 10 powered vehicles. More ...

Our lignite strip mines do not produce unhealthy fine dust emissions, nor do they subject residents or workers to radioactive radiation. More ...







# **Opportunities for everyone**

Supplying a growing global population with clean drinking water is one of the biggest challenges facing humanity. RWE Thames Water is making its contribution to the cause in its capacity as the world's third-largest water utility.

We provide water supply and wastewater management services in many parts of the world, serving more than 70 million people, in Europe (UK, Spain, Portugal, Poland, Hungary, Italy, Germany and Turkey), the Americas (USA, Canada, Puerto Rico and Chile), Australia and Asia (United Arab Emirates, Indonesia, Singapore, Malaysia, Thailand, India and China). This makes RWE Thames Water the world's third-largest service provider in this sector.

#### The situation we face

Global water consumption has been rising for decades, and is forecast to continue to increase steadily, putting further pressure on limited freshwater resources. Industrialization and rising living standards in northern nations have contributed to this trend, as has the growth of the population in the southern hemisphere. Statistics show that every third person lacks basic sanitary facilities, with one in six lacking access to clean drinking water. According to reports from international organizations, thousands of people die every day from diseases resulting from poor sanitation or water shortage. This is the case especially in many African countries, as well as in parts of the Middle East, Asia and Latin America.

The UN was emphatic in addressing this issue in its September 2000 Millennium Declaration, which included a commitment to halve the proportion of people without access to clean water by 2015. Two years later, the international community set a similar target for sanitation at the World Summit for Sustainable Development in Johannesburg. These are huge challenges that cannot be tackled by any one sector of society. Achieving the targets will require collaboration and the combined skills and resources of the public and private sectors and civil society organizations. RWE Thames Water is committed to playing a full part in this essential process, in partnership with others.

The water sector faces considerable challenges in industrialized nations as well. In this context, an important focus is on environmental issues, including careful use of water resources, maintaining natural environmental systems, achieving further reductions in aquatic pollution and managing the demand for water—in homes, from industry and for agriculture. The importance of these issues is reflected in the EU Framework Directive for Water, which came into force at the end of 2000 and aims to achieve its goals

sive approach to managing water, in rivers and groundwater, in individual catchment areas, operating across administrative boundaries. This approach is sometimes known as Integrated Water Resource Management (IWRM). In the UK, Thames Water has operated in this way for many years, and has a wealth of experience that will be useful in other countries and regions.

by 2015. The Directive requires a comprehen-

#### Statement: Strong growth stimuli



Dr. Philippe Rohner,

tional Management Ltd.,

Senior Investment

We established the Pictet Global Water Fund in January 2002, because we see strong growth indicators in the water business. There is a heightened need for private capital on the global water market, with expertise just as crucially in demand—especially in management. Governments and states cannot go it alone. Since opportunities offered in the water sector tend to be long-term in nature, we only invest in companies that have a clear-cut strategy.

Developing countries are increasingly seeking to attract investment in their water sectors. However, such ventures are high-risk endeavors, as basic conditions usually lack the required level of stability, and currency risks play a role that should not be underestimated.

Manager, Pictet Interna-Zurich (Switzerland)

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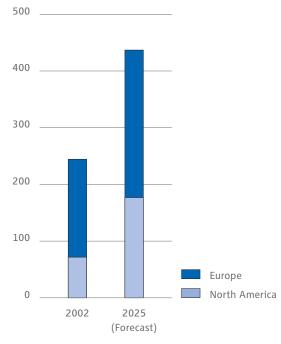
#### **Our contribution**

Our current operations are mainly in industrialized nations (Europe and North America) as well as in some of the newly industrialized countries in Asia and Latin America. However, RWE Thames Water is also actively engaged in a variety of projects in developing countries. These range from the concession to supply water to one half of the city of Jakarta, Indonesia, to an aid-funded consultancy project to reduce water and billing losses in Bangalore, India.

We are proud of the work we do in these areas ₀ 03 and believe that private sector participation (PSP) is an effective way to break the vicious circle of under-investment, low or no tariffs and poor service that characterizes many urban areas in the developing world. By doing so, it also helps

Public-private partnerships can lower risk for companies involved, while increasing public acceptance at the same time. If the state ensures water supplies as a service instead of "selling" its water resources, citizens are less inclined to assume that their fundamental right to water is in jeopardy. If such ventures are to be successful for companies, local authorities and businesses must nurture constructive dialogue.

## Water market growth trend in millions of people, supplied by private providers



We believe that water resources, quality standards and prices should remain under public control.

Source: Masons Water Yearbook 2003 - 2004, October 2003.

to build in protection for the poorest populations of society. However, as a commercial enterprise operating on long time scales, we have a responsibility to our shareholders to identify all the risks inherent in any project.

Where capital investment is involved, the potential for social, political and economic instability has to be given particularly careful consideration, as does the possibility of foreign exchange rate fluctuations. We also recognize the crucial

importance of establishing good, supportive relationships with local and national governments and local communities. For these reasons, we will only consider commercial participation where our involvement will be welcome, where we can make a real difference, where we can operate sustainably (financially, environmentally and socially) and where there are strong institutional and regulatory frameworks in place.

We recognize that private sector participation (PSP) in the provision of water supply and sanitation can be a controversial issue in some parts of the world. That is why we make it clear that we do not offer "one-size-fits-all" solutions. Each set of circumstances will be different, and will require a tailored approach. The private sector can contribute focused and disciplined management skills, with world-class scientific and technical expertise. But in all cases the actual water resources must remain under public control, as must quality standards and water prices. Another essential element is that contracts should only be awarded on the basis of open and fair competition between domestic and foreign water companies, to ensure that the public authorities have the broadest possible range of partners from which to choose.

#### Responsibility

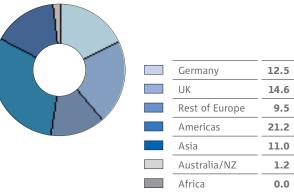
RWE Thames Water is well aware of the fact that our long-term success is inextricably linked to our ability to demonstrate that we are a responsible company-when acting both as service provider and as corporate citizen. Our first responsibility will always be to provide an excellent service to our 70 million customers, ensuring good environmental performance, strong community engagement and sound business practices. We can also play a full part in some noncommercial activities, such as supporting initiatives that provide access to clean drinking water and effective sanitation in parts of the world where the needs are urgent but where we have no commercial involvement. For instance, we are strong supporters of WaterAid, the leading non-governmental organization working to improve the water supply and sanitation for the world's poorest populations in parts of Africa and Asia. One in ten of our UK staff is registered as a volunteer for this excellent organization. The company, our employees, pensioners, customers, partners and suppliers have donated more than €24 million (£14 million) to WaterAid since 1990.

#### Nature conservation

04

Policy makers in the EU and USA have long recognized the importance of the natural environment. As performance and quality standards are driven ever higher for water customers in these markets, great care is taken to make sure that the natural environment is considered in decisionmaking to ensure its protection and enhancement. In the UK for instance, our groundwater and river abstractions are assessed to ensure

### Customers in the water market by region 2003 in millions of customers



they comply with UK and EU legislation, such as the EU Habitats Directive, sometimes leading us to take a fresh look at our operations.

One example: We rely on abstraction of groundwater from the Upper River Kennet valley for drinking water. This nationally important chalk stream had been suffering from the lasting effects of habitat degradation caused by various human activities when, in 1999, Thames Water initiated a 5-year river rehabilitation project in partnership with regulators and community interest groups. The award-winning project has already delivered a range of enhancements to the river by making best use of the existing flow and soft engineering techniques. These improvements are benefiting wildlife and fish, and it is hoped that it will inspire further river rehabilitation projects.

#### Supply security

Industrialized nations' demand for water is increasing, particularly in densely populated areas. This can put a strain on the environment and the ability of water operators to keep customers supplied 365 days a year. As the effects of climate change begin to materialize through hotter summers and less frequent, more

Rehabilitation proiects help conserve resources.

Climate change represents a new challenge for the water business.

intensive, rainfall events, the challenges become even greater. How we are rising to this challenge is well demonstrated by our operations in London, UK and in California, USA.

By 2016, London is expected to have 700,000 more residents. 2003 saw record summer temperatures and the driest ever start to the autumn (a key time of year for recharging groundwater across the region). The company has drawn up 25-year water resources plans to make sure that customers' taps won't run dry in the future. A program of demand management and resource development measures has been devised, ranging from reducing leakage from pipes to artificially recharging aguifers and utilizing desalination technology in the Thames estuary. The program includes the possible construction of a major new reservoir in the longer term to protect supplies for customers in Oxfordshire as well as London.

In California, our American Water business is facing a considerable challenge in balancing the interests of the environment with the 100,000 people it supplies with water on the Monterey Peninsula. Strict water conservation plans have been in place for some years in this semi-arid region of the USA with development of new resources constrained due to potential environmental issues. Progress is being made through the Coastal Water Project, which is bringing together the views of a broad range of water and environmental stakeholders. The project includes construction of a seawater desalination facility along with an aguifer storage and recovery system. Environmental features included in current plans involve locating the desalination facility near an existing power plant to allow blending of brine discharge with cooling waters.

The project will also reduce abstraction from the Carmel River and assist in the recovery of two protected endangered species, the steelhead trout and the California red-legged frog.

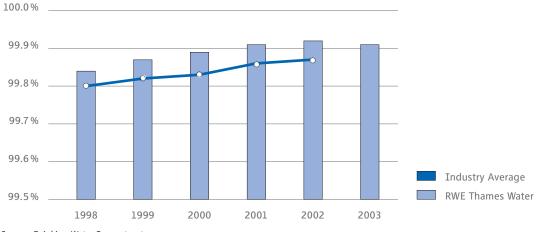
Producing drinking water from seawater is a promising solution to the problems faced in obtaining drinking water in many of the world's regions. This process is sometimes considered more expensive and energy-intensive than alternatives. Nevertheless, we are convinced that we can contribute to improving energy-efficiency levels via our expertise. With our recent acquisition of PRIDESA in Spain-one of the world's leading desalination companies that operates 45 seawater desalination plants-we established a solid basis for becoming involved in one of the future's promising solutions to global water needs.

#### Investing for the future

London's water and wastewater networks have evolved over 200 years. Despite investment by Thames Water—for example, the €360 million (£250 million) Thames Water Ring Main - many mains and sewers are aging and urgently need replacing. More than half of the city's water mains are over 100 years old. Around a third are over 150 years old.

Since 1989, our €8,600 million (£6,000 million) investment program has focused on improving drinking water and discharges to rivers from wastewater treatment works. Both are cleaner than ever before, meeting stringent quality standards. These improvements were essential to meet both public expectations and legal obligations.

#### Drinking water quality compliance by private suppliers in the UK



Source: Drinking Water Inspectorate.

Priority now has to be given to modernizing the basic pipe networks carrying water and sewage. This will require a major investment program comparable to the one delivered since 1989. The scale of problems such as sewer flooding and burst water mains, will increase unless we take immediate action. Urgent investment is needed to counter the increasing impact of population growth and more frequent flash flood incidents.

We are already channeling a record amountapproximately €187 million (£130 million) of operational and capital expenditure in 2003into reducing leakage levels, particularly in London, where soil conditions and heavy traffic significantly exacerbate the problem. In the three years to 2000/01 our "find and fix" approach to reducing leakage worked well, cutting losses by 38 percent. However, record heavy rainfall and saturated ground conditions in 2000/01 led to movement in London's clay soils. This caused substantial damage to our pipes. Despite increased investment since then to reduce

company opens new

Acquisition of a leading desalination

perspectives.

leakage, levels have continued to rise. As a result of this experience, we have adopted a new approach to leakage reduction. In several supply zones, we are replacing whole sections of our network.

Securing this shift in priorities toward investing in the maintenance of our underground assets is a key objective we are taking forward with our regulators. This will be proposed as part of our 5-year Periodic Review of Prices, due to take effect in 2005.

Expertise gained in London benefits us several times over in other projects. In Jakarta, Indonesia, we reduced water losses caused by leaky pipes to 42 percent in 2003 and plan a further reduction of 2 percent per year. As part of an agreed long-term investment plan guaranteeing the supply of water to a total of 2.5 million people in this concession area, local water prices have been increased, with the approval of the

Water losses due to leakage in the London water network are a significant problem

Despite an increase. water prices in Jakar ta are acceptable even for low-income customers.

This is the first increase since 2001, resulting in overall tariff growth below the rate of inflation. Water prices remain in the middle of the range for Indonesian cities, with low-income areas less hard hit than the more affluent. The important point is that residents pay much less for water supplied through the new mains than for bottled drinking water sold by street vendors.

regulator by an average of 40 percent in 2003.

#### Wastewater management

We also attach high importance to standards applied in the disposal of wastewater. After all, we must protect groundwater and surface water as a natural resource for society to use, including for drinking water. RWE Thames Water operates wastewater systems with a combined length of more than 90,000 kilometers worldwide, and over 650 wastewater treatment facilities. treating in excess of 5 million cubic metres of wastewater each day.

We have invested more than €1,400 million (£1,000 million) in wastewater treatment facilities in the River Thames catchment area since 1989 - an area with over 12 million residents. As a result, the Thames is one of the cleanest metropolitan rivers in the world today, and is home to 121 species of fish. As of 2002, 97 percent of the waterways in the Thames catchment area boasted water quality ratings ranging from good to fair, an improvement of more than 50 percent since our investment program started at privatization. However, there were several pollution incidents from our UK sewage network in 2003, with a variety of causes including spells of extreme high rainfall affecting our sewers. We were convicted of six offences during the year and paid fines totaling €89,300 (£62,000).

We have taken a series of measures to try to reduce these incidents. We recently appointed a pollution control manager who focuses entirely on incidents. In addition, we streamlined our event processes to make sure that we not only respond appropriately, but also learn from each wastewater incident. Two major workshops, led by members of the Executive Board and involving more than 80 key employees, provided useful opportunities for identifying further potential improvements and for explaining the necessity for the highest possible standards of environmental care. We are also engaging with our regulators to ensure that more investment is directed towards the maintenance and improvement of our sewerage network in future years.

Across our newly acquired American business and Chilean operations, we received €366.000 (US\$416,000) in fines for offences during 2003. We will be bringing increased management focus to reduce these violations in 2004.

A good example of the transfer of our environmental strategy to newly industrialized countries is Chile-a politically and economically stable nation. We entered this market in 2000 and have since become the country's second-largest water supplier and wastewater management company. Since September 2002, our €13.5 million (US\$17 million) investment has meant that we have been able to treat the wastewater

produced by about 140,000 people along the Río Quilque. Previously wastewater was discharged into the river without treatment. As a result of our involvement, water quality experienced a sustained improvement. Studies by the University of Concepción have demonstrated that the Río Quilque and its tributaries have seen oxygen concentration rise considerably, with nitrogen, phosphorus and bacterial levels decreasing at the same time. Nature and humans benefit from the effects equally. Nature benefits as opportunities for ecological development improves. Humans benefit because farmers working in the region can now use river water for irrigation, which enables them to cultivate an additional 6,500 hectares of land. This story has been repeated across our Chilean operations where we have increased coverage of wastewater treatment from below 30 percent to more than 80 percent since we entered the market. We are continuing this improvement and aim to reach 100 percent coverage by 2007.

Our wastewater treatment expertise is also in high demand in other countries. Since July 2002, we have been involved in the construction of Eastern Europe's largest sewage plant in Zagreb, Croatia, which will treat the wastewater produced by about one million people. In Ajman, part of the United Arab Emirates, we are constructing and will be operating a new wastewater treatment plant and sewage collection system. As a result, within four years, we will be able to serve the 200,000 people of Ajman, while allowing for future growth.

05 www.rwethameswater.com > Who we are > Global Water Issues > Water & Energy 06 www.rwethameswater.com > How we work > The Environment > Case Studies 07 www.rwe.com > RWE Group > Responsibility > Special Focus: Water 08 www.rwethameswater.com > How we work > The Environment > Principles

## **Further examples**

Thames Water covers roughly 13 percent of its UK energy demand and almost 8 percent of its worldwide needs through its own renewable energy sources, using methane and sludge-powered generators. More ...

The Barn Elms Wetland Center in London is the biggest man-made urban nature conservation area in Europe. Before its opening in May 2000, RWE Thames Water used the premises for water storage. In terms of diversity of species, it has come to exceed all expectations. More ...

In 2003, RWE Thames Water was a proud sponsor of the Young Environmentalist of the Year Awards for a fourth successive year. More ...

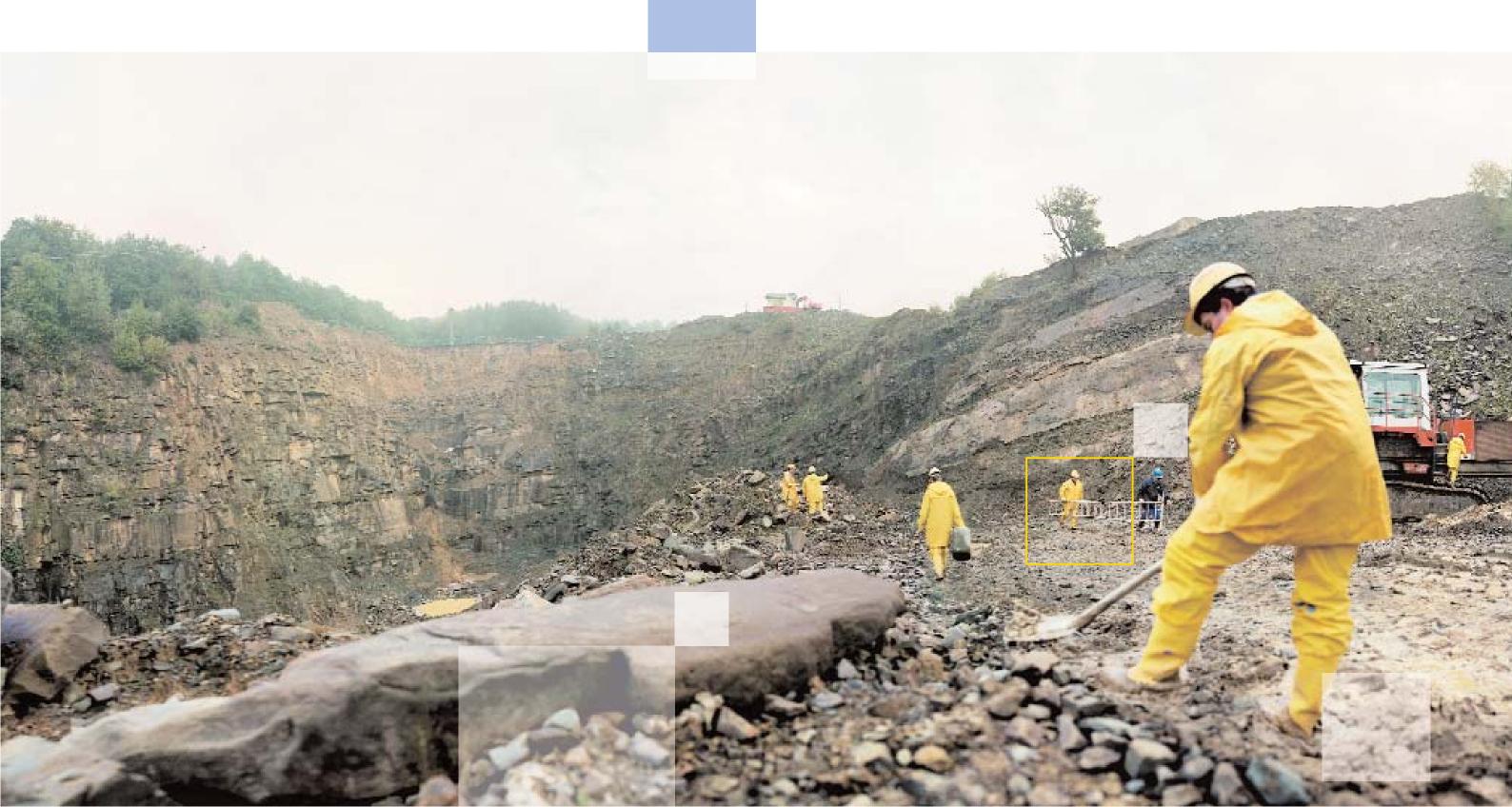


n 06

The environmental performance and commitment of all business units in the water division is reviewed four times a year by a committee chaired by the Deputy Chief Executive of RWE Thames Water. More ...







## Creating added value

RWE constantly seeks to make efficient use of energy and resources in its internal work and production processes. And with the knowledge gained through our own experience, we are able to make a greater impact by marketing our expertise externally as a service.

Efficiency is the name of our game—whether we are identifying energy savings potential or crafting solutions to ensure the efficient, environmentally-friendly recycling and disposal of waste. RWE's markets in this field primarily include Germany and the UK. Our services for energy efficiency and energy infrastructure already accounted for 4.6 percent of consolidated revenue in the electricity and gas business in 2003. The Environmental Services Business Area's share of RWE's revenue declined moderately and recorded 4.8 percent in 2003.

#### Our setting

The European Union (EU) is striving to become "the most competitive and dynamic knowledgebased economic space" in the world by 2010. This goal was declared by the European Council at its March 2000 meeting in Lisbon. The EU has been according special importance to sustainability, i.e. decoupling economic growth from resource consumption, for quite a while. The latest example of this is the EU Commission's proposed guideline submitted in December 2003, aiming to promote energy services. Since we are active in this field, these European targets will represent new market potential, especially after the EU expansion by 10 accession states in 2004.

Demand for energy services strongly depends on the economic situation and cost pressure: the worse off the economy and the more expensive the electricity, the greater the need for know-how that exhausts all savings potential. RWE clearly realized this in 2002 and 2003. Based on this trend, we believe that Germany's energy contracting market will triple in size to some €450 million by 2005. Moreover, this service is likely to be met with increasing interest in other countries, too.

Whereas weakness in efficiency consulting boosts energy contracting, for us, it has an adverse effect on waste management. When orders received in the industry drop, less waste that needs to be disposed of is produced. In Germany, this situation was made even more difficult in the last two years by the fact that, from 2005 onwards, only preprocessed waste may be dumped. As a result, prices charged by waste incineration plant operators have dropped considerably. That has caused the revenue of waste incineration plants operated by RWE to decrease.

#### Our goals

Efficiency has a lot to do with intelligent concepts. Therefore, our employees' brain power is a major key to new solutions that equally spare resources, funds and the environment. And since RWE aims to maximize efficiency in its own organization, as well as in its use of energy and raw materials, we need to come up with new solutions time and again- solutions for the preprocessing of recycling material, and for our energy services and knowledge management. This ensures that we remain highly profitable while adhering to the principle of sustainable development.

#### Energy contracting

Accounting for 51 percent of Harpen's revenues in 2002 (€257 million) and with new potential for growth, energy contracting has become an important line of business for this RWE subsidiary. We offer companies, as well as administrative and municipal organizations, a compre-

## Environmental resources used for commercial purposes in Germany

percentages (change from 1991 to 2001/2002)

Energy		
Raw material extraction and import		
Water extraction	-14.3	
Residential areas, roadways and parking lots		
	-20	

Source: German Bureau of Statistics, 2003.

Starting in mid-2004, the power plant will supply the 50,000 residents of Berlin-Gropiusstadt with heat, consuming some 200,000 tons of mature stand a year. Compared to coal-fired facilities, the new plant will reduce CO<sub>2</sub> emissions by about 235,000 tons a year. Berlin's business community awarded Harpen the "2003 Climate Conservation Partner of the Year" prize in the "promising innovative ideas and plans" category. Another wood-fired thermal station with an installed capacity of 47 megawatts (MW) of heat and 9 MW of electricity has been up and running in Kehl (Baden-Württemberg) since 2002.

The EU supports the

energy and resources

and has submitted a

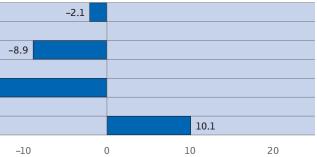
suggestion for a guideline on energy

services.

efficient use of

hensive service package that includes the delivery of heat, electricity, and steam and refrigeration. Another service we provide is the assumption of the entrepreneurial risk associated with plant construction and operation. We recently experienced a boom in demand for biomass power plants, similar to the timber thermal station we built in Berlin-Neukölln.

> Timber thermal station in Berlin receives award for significantly reducing CO<sub>2</sub> emissions.



Our third 20 MW biomass-fired power plant will be completed in Bergkamen (North Rhine-Westphalia) in 2005. In addition, a fourth plant is currently in the planning phases. In addition, RWE Umwelt runs a wood-fired thermal station in Zapfendorf (Bavaria) with an installed capacity of 5.5 MW.

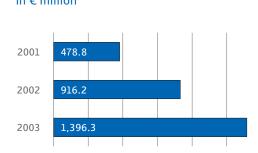
#### Efficiency consulting

Given the heightened level of competition and the ensuing rise in cost pressure, companies are increasingly focusing on their core business. In that regard, some are opting to outsource energy management to outside providers, as exemplified by our subsidiary, RWE Solutions. Our solutions arm is Europe's largest energy supplier to industrial key accounts. RWE Solutions uses its infrastructure business to deliver far more than primary and secondary energy. Services include efficiency consulting, plant optimization, contracting (including operation and maintenance), as well as the operation of a diversity of auxiliary and secondary facilities.

Efficiency contracting is a service with promising future prospects.

The potential harbored by our efficiency consulting activities is evidenced by the success garnered by the savings contracting program we implemented for Sainsbury, a UK retail chain of 470 supermarkets. RWE Solutions won the 0<sup>01</sup> bid for this ambitious project in May 2002. It aims to slash Sainsbury energy costs by 12 percent starting in May 2004, and we partake of the realized cost savings according to a contractually agreed quota. To achieve this goal, our team of experts identified all noteworthy savings possibilities and saw to it that plants were optimized accordingly.

### Revenue from consulting services in the energy infrastructure business\* in € million



\* Revenue generated by RWE Solutions (excl. power deliveries).

250 500 750 1,000 1,250 1,500

One component of this comprehensive cooperation project is the supply of energy at fixed prices, guaranteed by RWE Solutions. RWE Innogy is responsible for supplying electricity to all Sainsbury outlets, as well as natural gas to 400 of these stores. Climate protection has also been a beneficiary: Sainsbury's CO<sub>2</sub> emissions were down approximately four percent in 2003, equivalent to a reduction of 11,157 tons. We implemented a similar project in collaboration with the UK food producer Diageo.

#### Waste

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In its quest to make efficient, distributed waste incineration a reality, RWE Umwelt joined forces with a leading plant engineering firm. Working together, we designed a modular incineration facility that can run profitably on as little as 50,000 tons of feedstock a year. By consequence, it is especially well suited for use in sparsely populated regions and is capable of shortening transport routes significantly. The first of these small plants has been under construction since 2003 in Ludwigslust (Mecklenburg-Western Pomerania). The plant is scheduled for operation on June 1, 2005, when the Technical Guideline for Residential Waste comes into effect.

We also offer tailor-made waste management a facility that enables the automatic sorting of solutions to corporate clients. One example is waste and improves its recycling quota by 10 General Motors' UK-based subsidiary, Vauxhall, percent, while lowering waste disposal costs. which became a customer in 2002. We implemented a comprehensive waste management Reuse program for Vauxhall's Ellesmere Port plant, which High levels of efficiency in using resources can manufactures approximately 1,000 cars a day and only be attained once valuable waste products,

attaches great importance to it environmental performance. As part of the program, we installed

#### Statement: Joining forces to create added value



Brian R. M. Mackle,

Manager, Diageo\*,

Dublin (Ireland) &

London (UK)

**Business Engineering** 

n 03

Like most other brewing companies in the UK, Guinness signed the brewing sector's agreement on climate tax. This has rewarded us with a significant tax break/incentive as long as we maintain improved energy consumption in our plants over a period of 10 years. We targeted to halve specific energy consumption at the Park Royal Brewery, London, one of the UK's biggest breweries, and one of the largest stout breweries in the world. This was a stretch, but an achievable target, provided the correct approach and appropriate investment strategy was adopted.

As a company, we leverage our brewing operations expertise across plants. Since we are not experts in the total energy/utility business, we sought help from the best the industry has to offer. Enter RWE Solutions, to whom we awarded an operations contract for all utilities and energy supply on site at Park Royal, beginning October 1, 2002. To date, RWE Solutions helped us reduce specific energy consumption by roughly 40 percent, thus decreasing our annual energy bill by some 350,000 Euros. We are on target to achieve the 50 percent reduction by mid-2004. As a result of this success, we enlisted RWE Solutions' services again. This time, we seek to optimize utility processes at our major lager brewery, in Dundalk, Ireland. RWE Solutions is currently engaged in set-up at our main stout brewery in Dublin, Ireland, the "home of Guinness".

I believe that it is essential to have a real business partner with whom one can work flexibly and reliably to create added value and drive out wasted effort/costs. Our intention is to achieve this position with RWE Solutions, a company which has demonstrated all the right behaviors to date. Benchmarking our five brewing sites within the UK & Ireland serves as an important tool as we proceed. We aim to cut total utility costs by between 11 and 20 percent at each location and to maintain a continuous improvement regime into the future.

\*Created subsequent to Guinness/UDV/GrandMet merger in 1997

such as paper and glass, can be recycled completely and reused as secondary raw materials. By using innovative techniques, we can

achieve reuse rates

of up to 100 percent.

Use of replacement fuels helps conserve

resources, but is con-

troversial.

investment in logistics and facilities need to be amortized. Our sophisticated sorting and recycling techniques allow companies to achieve high reuse rates of about 97 percent for paper, cardboard and cartons; nearly 100 percent for glass; and more than 90 percent for plastic, depending on the starting material and purpose of sorting. Building on this success is the fact that we increased revenue from marketing secondary raw materials in 2003 by 35 percent as compared with 2001.

This is all the more important since the high

The market for recyclable PET, which is used to manufacture new beverage bottles and in textile production, is only just budding, albeit at an increasing rate. Having recognized the trend towards lightweight bottles, RWE began early on to set up a closed-loop recycling system. Its recycling plant is currently being upgraded with the addition of a hot-wash process that is engineered to improve the quality of recycled items.

**Provision of substitute fuels** in metric tons (t) 2000 86,000 95.000 2001 85.000 2002 150.000 2003 185,000 planned 2004 2005 250.000 nlanner

#### Substitute fuels

We recycle some 300,000 tons of sewage sludge, 180,000 tons of paper sludge and 127,000 tons of other substitute fuels in six German coal-fired power plants every year. RWE Umwelt supplies an additional 150,000 tons primarily to the cement industry. Fuels obtained from highlycalorific waste, such as production-specific commercial waste and substitute waste, are marketed with the German RAL seal of quality. Using replacement fuels as co-combustion agents reduces the amount of standard fuel required to produce electricity and cement. It also reduces CO<sub>2</sub> emissions and provides relief for landfills. RWE is thus making an important contribution to utilizing these waste products in an environmentally sound, efficient manner.

Use of replacement fuels as co-generation agents is often a hotly-debated issue among residents. They criticize the increase in traffic caused by incoming shipments and fear that the power plants will emit more pollutants. However, these concerns are unfounded, because our power stations comply with the strictest waste incineration standards, as indicated by independent measurements made by the German Technical Inspection Agency. We schedule inbound and outbound traffic to disturb residents as little as possible. Furthermore, we provide citizens with detailed information on our measures and procedures, which ensure that co-generation has no negative impact on the environment or human health.

#### **Occupational safety**

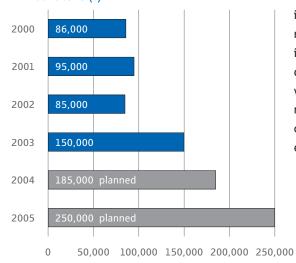
We dedicate our attention to occupational safety and health protection above all in the waste management sector. Since people working in this line of business are exposed to frequent changes in weather and manual labor, the waste management business has the highest work accident rate per 1,000 employees. Thanks to the targeted steps we took to improve occupational safety in 2003, we reduced the rate of reportable work-related incidents in the waste management business to 67.5 for every 1,000 employees. This follows an increase in 2002. In 2003, this ratio was 28.2 for the Group as a whole.

A Group task force that includes our German companies' chief safety engineers has also been working on systematizing industrial and occupational safety since 2001. RWE runs three medical competence centers for company health protection in Germany, which employ 13 physicians and 42 assistants. They conduct industrial medical screening tests and appraise safety conditions in our power stations and waste management plants. Advising cafeterias on matters regarding healthy nutrition is another item on their agenda.

#### Knowledge

The company's employee idea generation system offers an excellent opportunity to utilize the knowledge and experience of employees to optimize production processes. This program is particularly well-developed at RWE Power, but at RWE companies which are focused more on services, other methods of leveraging employee knowledge are also needed. RWE Thames Water, for example, relies on a structured, intranetbased knowledge management system.

04 www.rwe.com/academy



E-learning offers RWE the possibility of conveying knowledge at any place and at any time. In many cases, e-learning proves more efficient and more appealing to employees than conventional teaching methods. Limited subject matter can be optimally conveyed in a virtual classroom. It enables all students to share their opinions and edit documents collaboratively using a microphone and headphones.

Initial results show that the 1,000 people who participated in the virtual classroom pilot program gave the concept a positive rating across the board. This method is especially popular among young staff members, while other employees continue to prefer conventional seminars. The virtual classroom model will definitely establish itself as a key component of knowledge transfer as the RWE Group extends its international reach.

## Further examples of efficient and responsible action

RWE Power implements far-reaching, recultivation measures immediately after terminating its 👔 05 strip mining activities. More ...



05

In the Garzweiler II strip mine, RWE Power manages to protect groundwater and thus safeguard valuable surrounding wetlands, while keeping coal production profitable. More ...



# **Diversity crowned by success**

Just a few years ago, RWE was a domestic company. Today, we are a multi-business with worldwide operations. As we rapidly internationalize our company, we tap into new markets, which offer both opportunities and challenges.

By acquiring Thames Water and Innogy (UK), American Water (USA) and Transgas (Czech Republic), we have consistently oriented our business towards providing a full range of supply and disposal services, while delving into new, promising markets. Every one of these companies has molded its own unique culture and operates in a familiar environment. Having knowledge of the cultural values and customs prevalent in one's market is an invaluable advantage that we intend to keep. We have harnessed our regional strengths under the roof of the RWE Group and have been appearing under the RWE umbrella brand in all our markets since October 2003.

#### **Our general conditions**

Cultural, political and economic settings in which we do business have led to the creation of the most diverse companies. Integrating these businesses is now one of our most important tasks-a task that requires considerable attention and resolve, but also one that enables us to leverage synergies. Instead of adaptation and leveling, we are focusing on appreciating diversity-the variety represented by our employees. The better and more credible we are in accomplishing this, the more successful RWE will be wherever we do business, and the more attractive we will remain as an employer.

To achieve this, there is no way around change. And, in the spirit of change, we must recognize that it means embracing the new and-to a certain degree—respectfully letting go of the past. Each employee as well as the Group as a whole is afforded the opportunity to reposition themselves and further their development.

#### Our principles

For us to be successful in the international arena, it is paramount to know our customers' multifaceted needs in each of our markets, and make efficient use of the expertise we acquire locally. This is why our local companies remain in charge of operations in our regional markets. Regional management will be given a reinforced platform courtesy of our Group-wide guidelines and goals, as well as centralized controlling. Instead of being limited to key financials, our controlling system will also address quality issues, primarily in the field of personnel management, in order to assess efficiency.

Promoting experience and knowledge sharing among our staff members and nurturing their understanding of other cultures are key elements of our integration management. Our medium-term aim here is to obtain an internationally unmistakable corporate identity to which each and every one of our employees

commits. To ensure that integration management at RWE remains a living organism, we want to see to it that best processes are transferred throughout the Group. In other words, our companies should learn from each other.

#### Interchange

Some of our Group companies have set up integration teams made up of employees from the most diverse locations and countries. Together, they develop strategies for their respective areas, and seek to link and gradually align work and organizational methods.

Following our acquisition of the Czech gas utility, Transgas, in 2003, RWE Gas began offering cross-cultural training programs for engineering, marketing, accounting and finance and human resources experts. In class, German employees

### Statement: Diversity: a source of innovation



Prof. Martha Maznevski,

Management Develop-

ment (IMD), Lausanne

(Switzerland)

International Institute for

Experience shows that the best way to go about it is to sit employees at the same table and have them share experiences. This lets them figure out for themselves what is helpful and what is less useful. Companies that make a conscious choice to bank on a diversity perform better in the long term, because diversity is an important source of innovation. But there's even more to it: Anyone who is active in a complex international environment must act accordingly internally as well. Such companies are faster at detecting external change and reacting to it. Since they pay attention to what people really need locally, they are able to avoid misunderstanding and recruit superior staff.

A slew of mergers have taken place in recent years. Some have been crowned with success, while others have failed to live up to expectations. The outcome usually depended on costs. But mergers provide far more opportunities. They open the door to the transfer of knowledge, afford one the chance to re-position oneself with respect to the competition, and let you gain a different perspective. Of course none of this works unless people cooperate well. However, it is more difficult to reconcile cultures and approaches than many would have you believe.

learn how their Czech colleagues work, as well as what their expectations are, and vice-versa. This provides a basis for smooth cooperation in the future. The transfer seminar on environmental management (> page 12) is another example of how we exchange tried and tested standards, coordinate our approaches and develop common structures.

Staff mobility is a success factor in our Group and plays an increasingly important role. Seeking to create conditions amenable to turning work stints abroad into a successful professional and personal experience for everyone involved, we issued new guidelines for foreign assignments. To help people working abroad acclimate to their new settings and foster sensitivity to foreign cultures, employees and their partners attend cross-cultural seminars. The brochure

Cross-cultural training fosters understanding of other customs and working methods.

"Worldwide Mobility" and a comprehensive intranet site provide employees with significant information on foreign assignments. In 2003, close to 300 RWE employees worked in a country away from home.

Worldwide employee survey conducted in the water business.

Borderless, an interactive exhibition, was organized to arouse awareness for and interest in working in an international setting. Conceived as a traveling exhibition, touring the Group, Borderless conveys knowledge about other countries, bringing employees and diverse work cultures closer together.

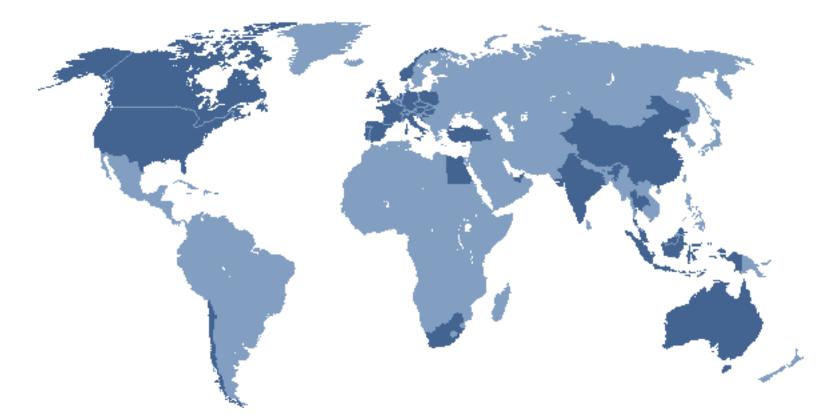
#### Communication

Our English and German newsletter "team" is an important tool for communicating across borders. It has been circulating with a print run of 100,000 in German and 30,000 in English since October 2000. The publication gives employees insight into their business area's activities as

well as into the Group's worldwide operations. RWE's intranet is indispensable when it comes to serving up inter-office memos and delivering up-to-date news on a daily basis. It is currently used by nearly 32,000 employees.

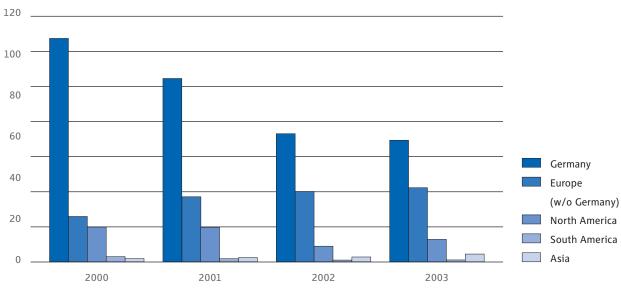
Two surveys conducted in 2003 in the water business, which has an especially long international reach, were designed to find out what employees feel and think around the world. The polls were crafted in seven different languages and mailed to more than 10,000 staff members. Results were released in December 2003 and showed that employee satisfaction rose from 51 percent to 55 percent in just one year. The Water Business Area intends to carry out a follow-up survey once a year, in order to keep its finger on the pulse of its workforce.

**RWE's countries of activity** 



#### RWE Group workforce by region (2000 - 2003)\*

in thousands of employees



\*Changes reflect the deconsolidation of Hochtief, the sale of RWE Dea's midstream and downstream business as well as the first consolidation of Thames Water (2001), Innogy (2003) and American Water (2003).

#### Work conditions

Our Group's internationalization faces us with new situations in dealing with our employees. Whereas Germany has a tightly knit web of social welfare regulations, ranging from mandatory social security insurance to statutory worker codetermination, such rules are often uncharted territory in other countries. Moreover, they are not transferable without modification.

RWE sees itself as a socially active company in an international environment. Work conditions must always be based on national laws and customs. Due to the large number of countries in which we are represented and the resulting considerable difference in work conditions, we are in support of the Core Conventions of the International Labor Organization (ILO).

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This also means that we respect the employees' basic right to unionize. When we acquired American Water in 2003, we made a clear commitment to fair cooperation with the Utility Workers Union of America. The agreement keeps union employees from being discriminated and union work from being hampered by company management.

In 2002, we created a European employee representative forum in the Water Business Area in order to ensure that our staff remains informed and our employees can be heard worldwide. They discuss with management representatives economic and personnel policy issues that are of relevance across national borders.

Commitment to fair cooperation with the trade union as part of the acquisition of American Water.

European employee representative forum created in the Water Business Area.

Measures to ensure socially acceptable workforce adjustments in the Group.

Environmentally responsible behavior

in the host country is

a key condition for

business success.

sion resulting from the refinement of our Group structure. RWE has always made sure that personnel downsizing was done in a socially acceptable manner. Operating layoffs subsequent to the organizational structure that was adopted on October 1, 2003, have to the greatest possible extent been banned until 2008. Employees who are impacted by the reorganization will receive attractive options in the form of severance arrangements or part-time work.

Workforce adjustments are a foregone conclu-

Furthermore, RWE created the Central Referral Center (CRC), an organizational unit that handles vacancy referrals throughout the Group. Staff members are offered options outside the Group if CRC is unable to place them internally. In addition, RWE works with external service providers such as transfer companies, in order to make use of as many socially acceptable adjustment measures as possible.

#### **Environmental management**

Every new acquisition or investment enlarges our network of environmental officers, promoting the transfer of know-how throughout our Group (> page 12). Environmental officers active in our management companies are responsible
 for meeting opping for meeting environmental management performance targets that are valid Group-wide. This entails introducing management systems and coordinating measures. They are given leeway in choosing the means by which they achieve the targets, be it via integrated management systems or the implementation of ISO 14001.

With its international management system for quality, environmental protection, occupational safety and data privacy, RWE Solutions has demonstrated how general performance targets can be transferred to numerous locations in many countries. The system spans 200 sites in 14 countries. Implementation is handled by the business and regional units' environmental officers. Willingness to introduce the system varied from one country to the next. In some cases, this disparity was substantial, confirming the differences in mentality and culture, as well as the varying degrees of sensitivity to quality and environmental issues. But this does not impede learning processes. French subsidiaries, for one, recognized that the system can yield substantial image benefits, visible to the customer.

#### Foreign investment

RWE's Egyptian operations have demonstrated how transferring high standards can help raise acceptance of trading. RWE Dea is presently the largest German investor in Egypt and has received a great deal of positive publicity due to its exploration activities. SUCO, a joint venture of RWE Dea Egypt and state-owned EGPC active in the Gulf of Suez, has been producing petroleum since 1983. In 2001, the company obtained ISO 14001 certification for its environmental management system for the first time. The occupational safety management system has been certified in accordance with OHSAS 18001 since 2003.

In its capacity as lead operator and partner to international oil and gas companies, RWE Dea develops natural gas and crude oil deposits off the coast of Alexandria in the Mediterranean

and in offshore concession areas. Environmentally sound plant management is an extremely important prerequisite for obtaining contracts. When awarding jobs, the Egyptian government naturally only considers companies that are capable of proving that they will "behave" in their host country. The same holds true when it comes to obtaining the federal guarantees necessary for conducting business abroad. Following detailed inspection, the first applications filed by RWE Dea in 2003 seeking to win the contracts were successful. Certified public auditors commissioned by the federal government had also considered environmental aspects when scrutinizing the Egyptian operations.

#### Social engagement

We assume social responsibility throughout our Group and on location. Our aim is to win acceptance for our entrepreneurial action from customers, authorities, opinion leaders and NGOs. We believe it is sensible to take into account that state social and cultural systems differ from country to country. Our goal is to take social initiative especially in areas where systems are not well developed or where there is a lack of promotion of socially disadvantaged groups.

Founded by us in 1998 on occasion of our centenary, the RWE Youth Foundation is an investment we made in the same spirit. It uses interest received on the foundation's 15 million euros in capital to fund projects for unemployed and disabled youths.

Our management companies are active, too. In the UK, RWE Innogy supports the "fuel poverty" program to improve low-income households' heat and energy supplies. RWE Thames Water employees demonstrate outstanding commitment in their support of WaterAid (> page 35).

04 www.rwe.com > RWE Welt > Engagement 05 www.rwe-dea.com 06 www.rweschottsolar.com 07 www.rwe.com > RWE Group > Responsibility > Social Responsibility

02 www.rwe.com > RWE Group > Responsibility > Environmental Protection 03 www.rwe-dea.de > Foreign > Egypt



## Further examples of integration and internationalization

RWE Dea, an exploration company with international operations, has already paid tribute to the diversity of its staff by adopting a corren <sup>05</sup> sponding role model in 2002. More ...

In Thailand, RWE Solutions will be finishing construction of the largest photovoltaic plant in South-East Asia by mid-2004, with a capacity of 500 KW. More ...

Our international program for budding executives, offered on the RWE Management Campus, 👔 07 helps network future managers. More ...



# Sticking to the rules

The main trait of a free market economy is that competitors all follow the same rules. Dubious business practices harm one's reputation and harbor economic risks.

The bigger the company, the more prominent it is in the public's eye. Since we are one of Europe's largest players in the energy and waste management sectors and the world's third-largest water utility, investors, the media and individuals ask us about the rules by which we abide and what we do to promote behavior that is suitable in the face of competition.

#### **Our principles**

Responsible behavior in a competitive setting is based on transparent management that implements both internal and external control and monitoring mechanisms. At RWE, this includes a comprehensive risk-management system that takes financial, ecological and image risks into consideration. We have made a clear commitment to the German Corporate Governance Code, which includes recommendations for the responsible control and management of listed stock corporations. Furthermore, we constantly report on related implementation measures in our annual reports.

> We extended our international reach considerably in the last few years. Our guidelines for sustainability apply throughout the Group. We intend to make them more suitable for daily behavior by 2006, as part of our sustainability strategy. Last updated in June 2000, the "Guide

lines for Multinational Companies," issued by the Organization for Economic Cooperation and Development (OECD), constitute a significant and helpful platform.

#### Corruption

Corruption can hamper competition and destroy a company's reputation. However, sensitivity to this issue differs from one country to the next. Global minimum standards are therefore necessary. RWE is pleased that the OECD, to which the world's top 30 industrial nations belong, initiated the "Convention on Combating Bribery of Foreign Public Officials in International Business Transactions" in the late 90s. This convention has since been translated into applicable law in most of the signatory countries. As part of our Corporate Governance policy, we will further develop our regulations and control mechanisms to prevent corruption.

To prevent hidden meddling in political processes, the Executive Board of the RWE Group banned donations to political parties as well as affiliated associations and foundations in a circular memorandum in May 2000.

We have drawn the logical conclusion from the incidents in our waste management business. Municipal officials in the state of North Rhine-Westphalia allegedly accepted bribes in connection with a major contract. Public discussion of these irregularities dealt a huge blow to our reputation in 2002. It is against this backdrop that we developed a mission statement that stipulates the basic tenets of our new responsible waste management business when we merged the three companies we own in the Environmental Services Business Area (Edelhoff, Trienekens and RWE Umwelt) in 2003. One of the key elements is the pledge we have made to transparent business processes and ethically unquestionable action.

#### Lobbying

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In certain countries, including Germany, corporate lobbying is a controversial issue. Large segments of the population are under the impression that companies inappropriately exercise their influence by becoming involved with associations and occupying seats on political committees. However, the parliament and the government consider the opinions of all players when forming the political conscience. It is in this light that we believe we have a legitimate right to contribute our technical expertise and years'-long experience on the market, especially when it comes to drafting bills. We are con-

### **RWE Group's share of turnover by countries and corrup** in compliance with Transparency International\*

	Very low risk of corruption	Low risk of corruption	Mediocre risk of corruption	High risk of corruption	Very high risk of corruption
Countries in which	Australia, Austria,	Belgium, Chile,	Hungary, Italy,	China, Croatia,	Indonesia
RWE is active	Canada, Luxembourg,	Germany, France,	Malaysia, South	the Czech Republic,	
	the Netherlands,	Portugal, Spain,	Africa, United	Egypt, India, Poland,	
	Norway, the UK,	USA	Arab Emirates	the Slovak Republic,	
	Switzerland			Thailand, Turkey	
Share of Group revenue	23.9%	65.3%	3.5%	7.2 %	0.1%

\* Transparency International's corruption index lists countries by degree of corruption risk, providing a rank as well as a grade for each country. We set up our own categories to indicate the points totals in linear quantities. The TI Corruption Index is available at http://www.transparency.org/pressreleases\_archive/2003/dnld/cpi2003.pressrelease.en.pdf

58

vinced that this is also in the public's best interest as we do this openly and transparently for everyone to see. In addition—and this should be obvious to the general public as well—non-government organizations such as environmental groups also use lobbying as a tool for promoting their interests.

### **Customer satisfaction**

A survey carried out among our stakeholders in the summer of 2003 (> page 9) painted a picture of the demands currently placed by various customer groups.

- Private customers call for fair pricing policies and fiercer competition. They want a high level of supply security along with high quality and environmental standards and, last but not least, transparent electricity bills.
- As far as corporate clients are concerned, fair pricing and contractual policies, supply security, climate protection and energy efficiency consulting are on top of the wish list. Respons-
- es received from industrial customers are pretty similar. In addition, they advocate cost
- transparency and customer-friendly transaction processing

Mission statement for our new responsible waste management business.

In-depth stakeholder survey provides insight into customers' needs.

ption	risk	2003

New Group structure

in line with EU plans.

Municipalities are primarily concerned about affordable prices with suitable returns for themselves as shareholders, a diversified mix of energy sources (including energy from renewables), support for regional economic cycles, and their involvement in entrepreneurial decision-making.

With the Group's reorganization in place since October 1, 2003, we have tailored our structure even more to meet customer needs. Moreover. the new structure already complies with future unbundling requirements. From 2007 onwards, the European Union's (EU) unbundling directive will force power utilities to have organizationally separate generation, grid and sales operations, in order to increase their transparency on the market.

The poll revealed that a surprising number of customers want their electricity bills to show 05 the source from which their power was generated. A new EU directive, which was passed in June 2003 and is to be implemented by all EU member states by July 1, 2004, has the same thrust. This allows our customers to see in their bill which sources of energy were used to generate the electricity, which portion of the fees is used for network maintenance and which part for power generation with primary energy sources.

In January 2003, RWE decided to expand its local customer service operations. We will double our number of service points for private customers in Germany from 16 to 32 by 2006. To do an even better job of fulfilling customer wishes, we will introduce a new customer satisfaction gauging system.

#### Grid access

At the beginning of 2003, RWE was criticized by the Federal Cartel Office for having allegedly charged small customers in Germany exorbitant fees for metering and settlement services (meter installation and maintenance). In December 2003, the Düsseldorf Higher Regional Court (HRC) confirmed our position. The HRC also found all of RWE's grid fees to be lower than those of the reference company admitted in the proceedings.

We will continue to do our best to see to it that the Association Agreements for Germany's electricity and gas industries negotiated by the industry form the basis for low access fees, improved handling, and increased transparency regarding grid fees. A new regulatory authority is to establish the modalities for grid access and pricing based on the legal requirements by the middle of 2004. In working with the regulator on these actions, it is important that we seek to ensure our grid operations remain profitable so that we can continue to afford making substantial investments in maintaining and servicing our grids. (For more information, refer to the German Energy Industry Association's key points on the design of the regulatory framework for access to electricity and gas grids in Germany that went into effect in 2004.)

### Further examples of responsible social behavior

RWE Group companies such as RWE Thames Water require that their suppliers adhere to minimum environmental standards and assist them o 07 in achieving this goal. More ...

In October 2003, RWE Power adopted a new code of conduct which became part of its man-08 agement values. More ...

#### Statement: Investing in one's reputation



As globalization becomes ever-prevalent, we are compelled to solve problems that can no longer be handled by national regulatory frameworks. New problems make it easy for one to lose one's orientation, thus giving rise to an appeal for morals and ethics. Since it would be too optimistic to expect a new world order to be in place anytime soon, it is up to big business to take matters into its own hands. But companies are cleaning up their own back yards, on a local basis, and without any kind of coordination amongst each other. But it is impossible to solve global problems in this manner. Therefore, businesses must engage in dialogue, in a quest to establish a new world order, assume regulatory responsibility, and enter into voluntary, collective commitments.

Prof. Karl Homann, Chair for Business Ethics, Ludwig-Maximilians-University Munich (Germany)

According to our Western tradition, ethical norms are tailored to the individual, making it impossible for organizations to act ethically—by definition. By consequence, any responsibility assumed by us as companies is cemented in our bylaws, guidelines and governance structures. Moreover, there is a strong trend in corporate groups to decentralize operations and shift decision-making competence. Thus, a company's hallmark, the glue that keeps its corporate fabric intact, is its culture and moral standards. And they must be applicable worldwide. After all, as a large multinational group, one cannot afford to have a fragmented morale, not least because employees are in constant contact with one another. I am convinced that otherwise, companies stand to lose their best employees and become uncapable of attracting outstanding budding professionals. It thus stands to reason that everything a company does under the label of "ethical responsibility" is an investment in its reputation and, in turn, in its long-term profit outlook, which is reflected in its share price every day.

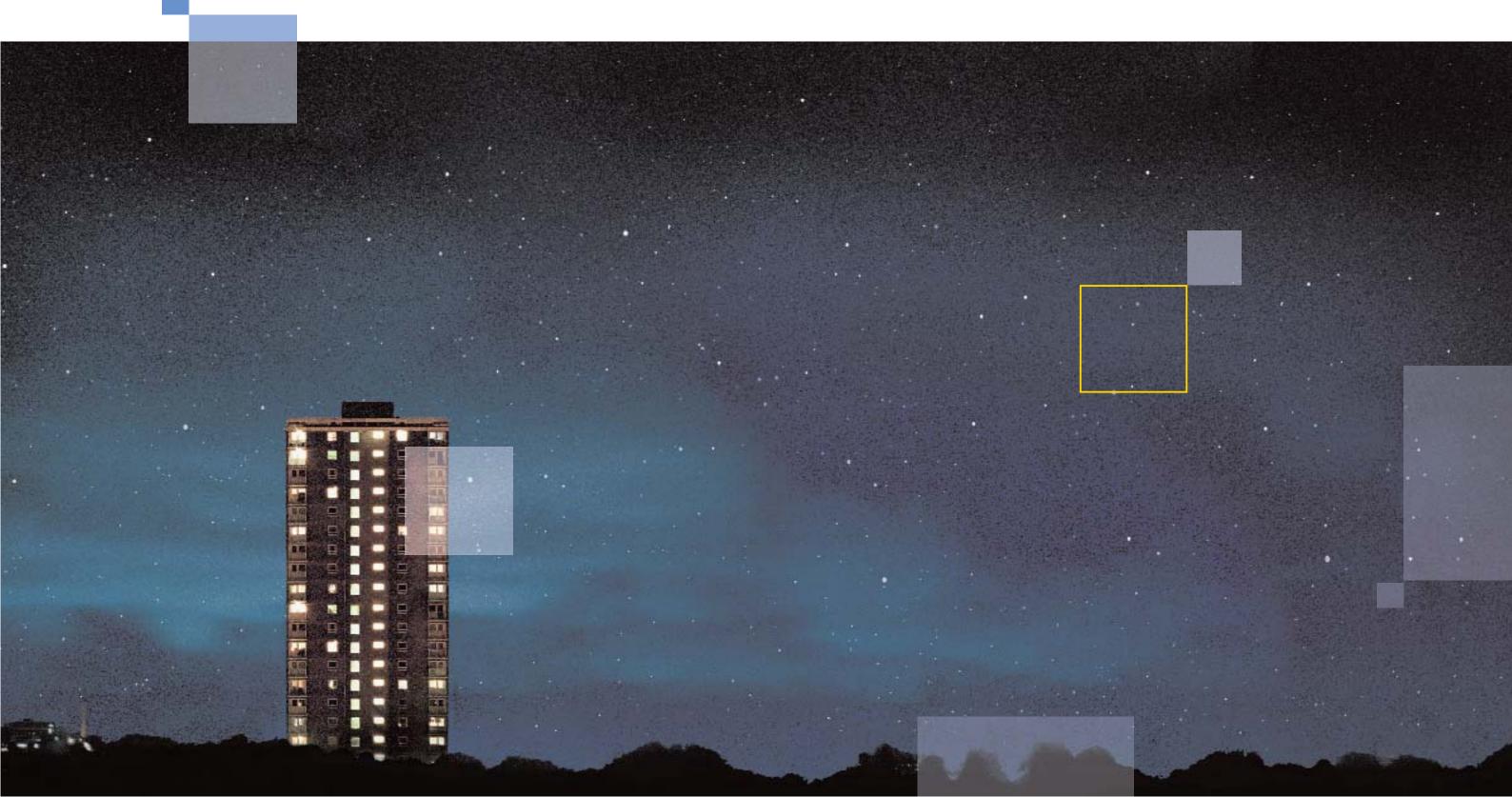
Developed in 1997 as a communications concept, the "Joint Relocation Arrangement" program aims to tailor all the steps of the relocation programs required time and again in lignite strip mining to accommodate residents' wishes. More ...

RWE Innogy promotes an extensive employee volunteering program to support community groups and charities. More ...

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RWE believes it has a social responsibility to create trainee positions for young people. With a traineeship rate of 5.4 to 5.5 percent in our German core businesses we cover more than our needs. More ...





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## **Electricity and gas business**

In providing electricity for 21 million customers across Europe and gas to 11 million customers, RWE is an active market participant at every stage of the value-added chainfrom exploration and production to distribution and consulting services.

Up until recently, RWE's electricity and gas activities were divided up among 10 different management companies: RWE Power, RWE Rheinbraun, RWE Innogy, RWE Plus, RWE Net, RWE Solutions, RWE Trading, RWE Gas, RWE Dea and Harpen (> Environmental Report 2001). As of October 1, 2003, we implemented our new corporate structure, thereby further enhancing our strong customer orientation. The electricity and gas business is now concentrated in four business sectors: RWE Power, RWE Energy, RWE Innogy und RWE Trading. Operating as a streamlined Group Center, RWE corporate headquarters will focus on Group management activities. The Group's environmental management guidelines will apply to all Group companies, including international investments.

As this new structure only has an impact on the last quarter of 2003, the input-output data on the Internet are presented for the old structure.

### **RWE Power: Germany's largest generator** of electricity

As of October 1, 2003, RWE Power and RWE 02 Rheinbraun operate as a part of RWE Power AG, which will also include Harpen AG and Dea AG. RWE Power is responsible for exploration and production of energy fuel sources and electricity generation in Germany and Continental Europe (2003 revenue: €4,100 million; workforce: 19,280). RWE Power's electricity generation is based on a wide range of energy fuel sources. For base load, we rely on lignite from RWE's own mines in Rhineland (Germany), as well as on nuclear power. Hard coal, gas and renewables (mainly hydro and wind) are used to satisfy intermediate and peak loads. RWE accounts for roughly 30 percent of German electricity generation, making it the largest producer in Germany.

Moreover, RWE Power is the world's largest producer of lignite, with annual production of approximately 100 million metric tons . Roughly 90 percent of this is used to generate electricity in our power plants, while the rest is used in the manufacture of briguettes and lignite coke. RWE Power applies stringent environmental protection measures both in its mining and generation activities, for example, by optimizing lignitefired plants with state-of-the-art technology (lignite-optimized plants, > page 25). RWE Power also has mining and power plant investments in Eastern Europe (Hungary, Croatia), Portugal and Luxembourg.

The core competencies of Harpen AG, which is listed on the stock exchange (2003 revenue: €264 million; workforce: 536) are energy contracting; local heating (heat, refrigeration, process steam); distributed energy supply using wind and hydropower primarily in Southern Europe (France, Spain, Italy and Portugal); and the installation and operation of photovoltaic units (commercial property is another business area). With a thermal output of some 1,600 megawatts (MW), Harpen is now Germany's leading supplier of local heating. In 2003, Harpen expanded its installed generating capacity based

### RWE Innogy: UK market leader in wind power exploitation

Our UK energy business is managed by RWE Innogy, one of the leading power producers in Great Britain (2003 revenue: €5,600 million; workforce: 9,357). RWE Innogy is able to react to changes in the market, thanks to its flexible portfolio of coal, gas and oil power plants. In addition, the company operates 15 gas-fired combined heat and power (CHP) plants for a range of industrial customers.

RWE Innogy's retail business "npower" is one of the UK's largest energy suppliers, supplying electricity to approximately four and a half million residential, commercial and industrial customers and gas to another two million. npower aims to deliver competitive solutions for its

#### RWE's capacity of plants 2003\*

Plant type	Number of sites	Installed capacity in MW (net)
Lignite	9	11,249
Hard coal	11	7,798
Nuclear	3	6,308
Natural gas	24	6,917
of which own CCGT plants	17	1,232
Petroleum	2	1,484
Hydro (w/o pumped reservoir)	96	712
Wind	18 Windparks	349
Biomass	2	20
Other (waste, district heat etc.)	> 636	3,057**

\* Plants of which RWE owns  $\geq$  50%, fully consolidated. \*\* Thermal capacity

on renewables to 344 MW (2002: 328 MW).

64

customers and to develop innovative products, which allow its customers to make sustainable energy choices. npower Juice is a domestic energy product, which enables customers to buy renewable energy at no additional cost.

RWE Innogy's operation and engineering division provides support to its own generation assets. In addition, RWE Power International, a collaboration between RWE Innogy and RE GmbH (Rheinbraun Engineering), provides support and specialist services to other power plant operators around the world.

RWE Innogy is one of the market leaders in renewables in the UK. The company operates 14 wind farms with an installed capacity of 183 MW. This accounts for an estimated 24 percent share of the UK market during 2003. The UK's first major offshore windpark, North Hoyle, started operation at the end of 2003 and will have a final capacity of 60 MW. RWE Innogy Hydro is a leader in small-scale hydroelectric generation with 9 stations in Scotland and Wales with a combined capacity of 50 MW.

## RWE Trading: Number one in European

Since 2000, RWE Trading has evolved into Europe's premiere energy trading company, and is represented on 12 international exchanges, with external revenue totaling €2,400 million in 2003. A workforce of 408 staff members was responsible for this subsidiary's dynamic business trend in 2003.

RWE Trading's core business consists of the trading of electricity (both physically and financially) and energy derivatives, which are used to hedge price risks. Other major traded products are gas, coal and petroleum. The company began operations in the promising environmental certificates market in mid-2002, and quickly achieved a premiere position in this field. This business involves trading in CO<sub>2</sub> certificates, as well as certificates for renewable energy and weather derivatives throughout Europe.

Customers and trading partners include energy trading firms and sales companies owned by energy-intensive industrial operations. Within the RWE Group, RWE Trading is responsible for energy risk management, including optimization of power plant dispatch and management of the pricing systems at RWE sales companies.

## RWE Energy: Third-largest electricity supplier in Europe

Since October 1, 2003, RWE Plus (sales) and RWE Net have been the core of RWE Energy AG, a new company, in which RWE Gas was integrated at the end of 2003. This new structure will make it possible to offer customers more efficient, integrated services from a one-stop shop.

RWE Energy supplies power to 13.4 million customers. The transmission network spans 185,000 kilometers, making it one of the largest, contiguous networks in Europe. In terms of electricity sales, RWE Energy is the third-largest electricity supplier in Europe (2003 revenue: €21,800 million; workforce: 42,655). Six regional management companies in Germany and six more management companies in Europe are responsible at the operating level. Electricity and gas transmission are handled by legally independent companies.

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Responsibility for industrial key accounts is shouldered by RWE Solutions, with a special emphasis on supplying this customer segment with electricity and gas. RWE Solutions ranks among Europe's leading providers of consulting, installation and management services for energy infrastructure.

#### Restructuring the gas business

We restructured the gas business with the adoption of our new Group structure in October 2003. In November 2003, RWE AG reached an agreement with municipal shareholders of RWE Gas AG regarding the future structure of the gas business. This paves the way to integrating RWE Gas into the transmission and sales concept spearheaded by RWE Energy.

RWE Energy is responsible for our gas operations in Continental Europe, while RWE Innogy plays the same role in the UK. Upstream activities (exploration and production of gas and oil) handled by RWE Dea have been placed under RWE Power.

#### Progress in internationalization

09 www.rwedea.com > English

RWE significantly stepped up its gas operations across the board in the last few years. For example, we are now the sole owner of Thyssengas GmbH. Founded in 1921, the enterprise is one of Germany's largest long-distance gas companies and focuses on gas imports and transportation. We substantially expanded our international business as well. RWE has held roughly 90 percent of the shares in Dutch-based Obragas since 2002. In addition, the company acquired the Czech-based Transgas along with its stakes in eight regional distributors (six of which are majority-owned by RWE) in 2002. This expansion allowed us to move up into the premiere league of gas utilities in Europe—a position we intend to fortify in coming years. Transgas and our regional distributors virtually serve the entire Czech gas market, giving RWE access to

05 www.rwetrading.com > English
06 www.rweenergy.com
07 www.rwetransportnetzstrom.de > English

08 www.rwesolutions.com > English

one of the most important transit lines between Russia and Western Europe. RWE consolidated the acquisition of Transgas for the first time in fiscal year 2002, just as it did the gas operations of RWE Innogy, the UK's third-largest gas utility.

One of the focal points in 2003 was to integrate the acquisitions into the Group and capitalize on potential synergies. Pooling the gas purchasing, transportation and storage activities in our gas businesses will result in substantial cost savings in the medium term, thus improving our competitive position in this sector.

#### Upstream business stepped up

RWE Dea AG specializes in the exploration and production of natural gas and petroleum (upstream sector). In Germany, the company concentrates on gas exploration and production in Lower Saxony between the Elbe and Weser rivers, as well as on the operation of subterranean natural gas caverns in Bavaria. In addition, RWE Dea does business in the UK, North Africa and Norway. In 2003, RWE increased gas production by nine percent to 2,584 million cubic meters (preliminary figures). In addition, RWE Dea is active in the field of oil E & P. Its production operations cover Mittelplate, Germany's biggest oilfield, off the shore of Schleswig-Holstein's North Sea coast, as well as Norway, Egypt, Kazakhstan, Denmark and Dubai.

### Water business area

We are the world's third-largest private water utility. In industrialized and newly developed countries, we are helping to improve water supply and wastewater treatment.

**RWE Thames Water**, our management company in the water business, is the world's third-largest private water utility, with some 70 million customers in more than 20 countries. A market leader in the UK, Germany and the US, in 2003, revenue totaled approximately €4,200 million, and we employed around 17,500 people. RWE Thames Water provides both water and wastewater services. In 2003, we supplied, on average, 15 million cubic meters of water every day through 550 water treatment plants and more than 150,000 kilometers of pipelines. At the same time, we treated an average of 5 million cubic meters of wastewater effluent, utilizing more than 650 wastewater treatment plants and a further 90,000 kilometers of pipeline.

#### International water market

During 2003, our business was focused on the United Kingdom/Ireland, the Americas, Germany, other Europe, Middle East and Asia/Pacific. Strategy, policy and service standards are laid down centrally by RWE Thames Water. The regions possess the necessary operational flexibility to maximize their competences and fulfill the requirements of the local markets at the highest possible level. Thames Water's primary regions, the UK and America generated about 9.7 percent of RWE's total external revenue in 2003. Over the last few years, Thames Water has gone to great lengths to implement the ambitious quality and environmental standards required by EU and national regulations, as well as to modernize its pipeline system in the London area in particular.

At the beginning of 2003, we completed the acquisition of the largest water utility in the United States, American Water (AW). This major acquisition has given us the lead in the world's largest national water market, and America has become our second-largest region. American Water supplies drinking water to more than 15 million people in 27 US States and four Canadian Provinces. Our business in South America focuses on Chile. Here, major investments have been made in water supply and wastewater management infrastructures. We are the second-largest company in that region with a share of about a quarter of the privatized market.

In Europe we were able to strengthen our market position thanks to new promising acquisitions in 2002 and 2003. We now hold a majority interest in Rheinisch-Westfälische Wasserwerksgesellschaft (RWW), which has one million customers in the Ruhr area (Germany). Furthermore, we have been able to expand our technical competence by acquiring a majority stake in the Spanish company PRIDESA in 2002. PRIDESA possesses market-leading knowledge in the field of sea water desalination based on the reverse-osmosis process.

Recognition that poor infrastructure hampers economic development is growing steadily throughout the Asia-Pacific region. This has led to an increasing interest in public-private partnerships in the water utility sector. We are now the largest private water utility operators in both Thailand and Indonesia, for example. In both countries we are working in partnership with the public authorities to provide new levels of service in a challenging operating environment.

### Environmental services business area

Recycling and waste disposal—more than a service and more important than a business deal. Clean cities, well-kept landscapes and an intact environment are sensitive issues in modern society. They play a significant role in our quality of life.

RWE Umwelt AG sees the Environmental Services Business Area as one of the Group's strategic management companies. It unites central functions and coordinates the activities of its investments in Germany and several European countries. RWE Umwelt's range of services covers the entire value-added chain, including the collection, transportation, sorting, processing, reuse and disposal of all kinds of waste, as well as the marketing of secondary raw materials.

In 2002, RWE Umwelt AG implemented a farreaching realignment program and streamlined its management structures to strengthen its market and competitive positions on the hotly contested waste management market. The company resolutely focused on its core business, harmonized all its business processes and information systems, and created a thoroughly functional organizational structure. Fiscal Year 2003 saw RWE Umwelt AG generate nearly €2,000 million in revenue. Some 96 percent of the total revenue was attributable to regions and specialized companies in Germany. The international sector accounted for roughly four percent. We employ 12,578 people, 11,614 of which are in Germany, with another 964 located in other European countries. As a result of the realignment, the workforce was downsized by 719 positions in 2003. In its quest to conduct its business with focus and profitably, RWE Umwelt will concentrate on its core businesses in the fields of waste management and recycling in its home market, Germany.

#### Germany's market leader

In 2003, RWE Umwelt extended its market leadership in Germany. It serves some 150 municipalities that are home to 10 million residents and 240,000 industrial and commercial operations. Its customer base in the commercial waste sector includes renowned players, including Metro C&C outlets, Praktiker DIY stores and the Schätzlein Group. Each of these enterprises has environmental policies that are extremely demanding when it comes to ensuring efficient waste management and disposal. RWE Umwelt has been handling the disposal of paper, cardboard and cartons for a central storage facility of the Plus supermarket chain in Hamm.

We operate Europe's most modern paper sorting plant in Cologne, which extracts valuable secondary raw materials for the production of paper. Also exemplary of the company's top position is the high-energy waste processing and conditioning plant in Erftstadt. It was the first German company to be awarded the German RAL seal of quality for secondary fuels, which it received in 2002. We showcased our Essenbased cutting-edge sorting facility for lightweight packaging to demonstrate that highquality valuables can be directly extracted from residential waste, while complying with the quota mandated by the German Packaging Directive.

The advantages of the Group's integrated structure are evidenced by the cooperation among Group companies from various fields of business. RWE Umwelt started handling the disposal of new RWE Gas customers' oil tanks in the spring of 2002. n 12

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## Consolidated environmental data

For the first time, this report presents environmental data consolidated for the entire RWE Group. These data were calculated on the basis of the input-output data provided by the management companies, which are compiled in RWE's Environmental Reporting and Information System (ERIS) and are published on the Internet every year.

The RWE Group's main impact on the environment stems from its activities in the field of power generation. This applies both to energy use and emissions. On the other hand, the Water and Environmental Services Business Areas account for a relatively small portion (less than one percent each) of the Group's environmental impact.

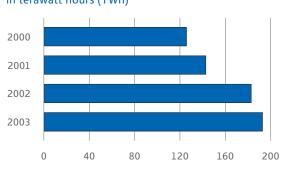
This overview is restricted to the most important environmental aspects and activities of the RWE Group. Specific indicators which are useful for reviewing the environmental impact of the individual business areas can be found in the following sections.

#### **Group environmental impact**

2002	2003	
149,814	155,787	in thousands of metric tons
172	170	in thousands of metric tons
145	158	in thousands of metric tons
300,042	308,655	in thousands of cubic meters
7,291	7,533	in thousands of metric tons
	149,814 172 145 300,042	149,814         155,787           172         170           145         158           300,042         308,655

# Environmental data: Electricity and gas

**Electricity volumes generated by RWE power plants** in terawatt hours (TWh)



#### Power generation

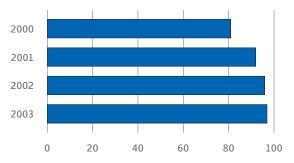
RWE plants located outside of Germany have been included in the data since 2001. In the field of electricity generation, this mainly applies to the three power plants in Hungary, Croatia and Portugal, in which RWE has ownership interests. The increase in electricity generation and fuel use in 2002 was primarily due to the integration of RWE Innogy, which operates coal and natural gas-fired power plants for the most part.

A new lignite-optimized power station unit (BoA) in Niederaussem (North Rhine-Westphalia) with an installed capacity of 1,000 megawatts commenced operations in September 2002. The plant underwent testing and trials during most of 2003.

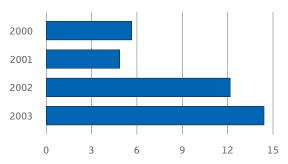
Above and beyond this, there were no other significant changes in RWE's power plant portfolio.

ń 13 Input-output data of all companies can be found on the Internet.

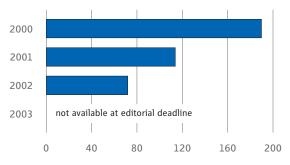
Use of lignite in RWE power plants in millions of metric tons



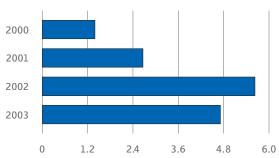
Use of hard coal in RWE power plants in millions of metric tons



Use of nuclear fuel in RWE power plants in metric tons



Use of natural gas in RWE power plants in 1,000 millions of cubic meters

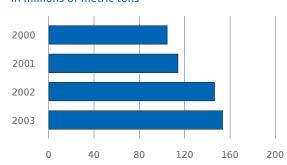


#### Emissions

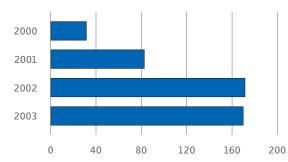
The increase in emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) in 2001 was due to the inclusion of the power plants in Hungary, Croatia and Portugal. The increase in 2002 reflects the integration of RWE Innogy.

CO<sub>2</sub> emissions from power generation activities at fossil fuelfired power plants rose considerably less, due to the increasing use of natural gas. Emissions of CO<sub>2</sub> from RWE's gas storage facilities, however, grew by more than one-third, due to fluctuations in demand.

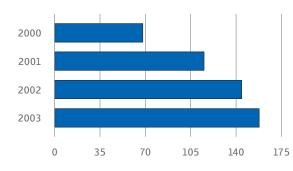
#### **CO<sub>2</sub> emissions from RWE power plants** in millions of metric tons



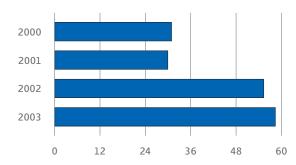
SO<sub>2</sub> emissions from RWE power plants in thousands of metric tons



**NO<sub>x</sub> emissions from RWE power plants** in thousands of metric tons

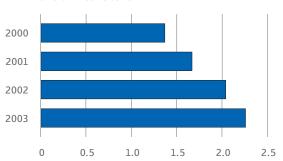


CO<sub>2</sub> emissions from gas storage facilities in thousands of metric tons



#### **Crude oil production**

in millions of metric tons



#### Exploration

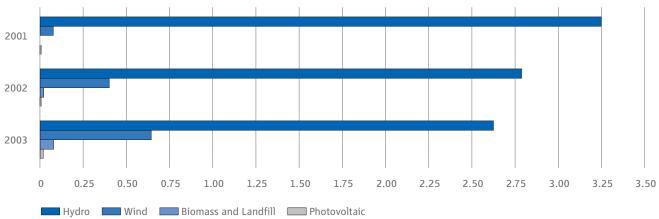
Crude oil and natural gas production has risen consistently over recent years. Waste volumes from exploration activities declined significantly, not only due to targeted waste separation, but because a large amount of the waste produced in 2002 resulted from the dismantling of the two Lake Schwedeneck platforms, which was fully completed in 2003.

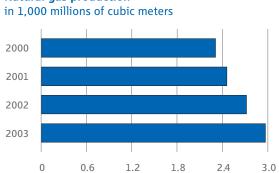
#### Renewables

Hydroelectric plants continue to be the dominant source of renewable energy, but the performance of such plants is strongly dependent on the weather. This was illustrated clearly by the impact of the dry summer in 2003, whereas in 2002, it was the floods in Germany which led to a drop in generation.

#### Annual generation from renewables

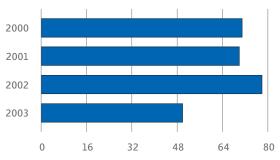






Natural gas production





The increase in generation from wind power is due to the consolidation of RWE Innogy and Harpen's activities in Spain. Plans currently call for a strong expansion of generation using biomass and landfill gas.

# Environmental program: Electricity and gas

Program	Time frame	Responsible	Implementation
Climate protection and energy efficiency			
Utilize previously burned-off furnace gases for generation.	06/2003	RWE Power	System modifications completed in 2002. Approval for continuous operation received.
Improve efficiency rates of 10 hydroelectric plants though modification of process control technology.	12/2003	RWE Power	Modifications completed.
Develop strategies for off-shore utilization of wind energy.	12/2004	RWE Power	Analysis of project opportunities.
Receive approval for the construction of wind power plants with a capacity of 84 MW and hydroelectric plants with a capacity of 8 MW.	12/2004	RWE Innogy	
Reduce energy consumption in administrative buildings by 4 percent.	12/2004	RWE Innogy	
Increase the efficiency rate of lignite-fired plants by 5 percent by testing procedures for lignite drying and developing dry lignite combustion technology to reduce $CO_2$ emissions.	12/2006	RWE Power	Trial operations of PTA are completed. Further development to be carried out using WTA fine grain drying. New pilot facility is planned for a BoA block.
Replace all existing lignite-fired blocks with new optimized facilities leading to a reduction in spe- cific CO <sub>2</sub> emissions of approximately 30 percent.	12/2030	RWE Power	Construction of BoA1 in Niederaussem is complete. Provision of areas (alteration of the LEP and GEP) for up to 4 BoA blocks at Neurath has taken place. Applications for approval for BoA2 and 3 in Neurath are ready for submission.
Reduction of emissions			
Install stationary and mobile vacuum cleaners in the power plants.	12/2003	RWE Power	10 of 13 planned facilities already con- structed.
Construct a 520-meter noise abatement dam in the Inden open-pit mine.	12/2003	RWE Power	Construction completed. Planting to begin in 2004.
Construct a noise abatement dam in Jackerath and create a compensation area for the Garzweiler II open-pit mine.	12/2009	RWE Power	Planting has occurred on the areas avail- able.
Construct a noise abatement wall in Wanlo. Create a compensation area for the Garzweiler II open-pit mine.	12/2011	RWE Power	Special operating plans have been approved. Planting has occurred on the areas available.
Replace coal-fired furnaces with NTK furnaces or furnaces using HEL or gas.	12/2004	Harpen	Depends on the term of the heat supply agreement and the investment.
Install low-noise transformers at enviaM, ELMÜ and ÈMÀSZ.	12/2004	RWE Energy	
Protection of soil, ground and surface water			
Enhance marketing activities related to the uti- lization of sludge from additional water treat- ment as lime fertilizer for agriculture.	12/2002	RWE Power	Measure implemented successfully. Full utilization of the recyclable sludge as fer- tilizer implemented.
Thermal treatment of drill cuttings and reuse of	12/2003	RWE Dea	Trials performed.
base oils.			

Program	Time frame	Responsible	Implementation
Landscape and nature conservation			
Bird protection measures on ÈMÀSZ, LEW, and enviaM powerlines and pylons.	12/2004	RWE Energy	
Devise and carry out measures for irrigation/con- servation of wetlands in the Rur area through surface water infiltration.	12/2005	RWE Power	Planning and approval phase in 2003/2004. Short-term, step-by-step implementation.
Certification of forest conservation practices according to PEFC.	11/2006	RWE Power	
Monitor the molting stock of the northwest European shelducks.	ongoing	RWE Dea	Stock counted in 2003.
Reduction of waste volume			
Reduce paper use in administration by 10 per- cent.	12/2004	RWE Innogy	
Development of environmental management			
Create an intranet-based training program.	12/2003	RWE Power	The strategy has been available on the intranet since early 2002.
Certification of the environmental management system at the Biblis nuclear power plant accord- ing to ISO 14001.	12/2003	RWE Power	ISO 14001 certification should be obtained.
Implement a Company Integrated Management Systems (CIMS).	12/2003	RWE Dea	CIMS launched, certification planned by 12/2004.
Implement QUAD Management System (Quality, Environmental Protection, Occupational Safety and Data Protection) at all BUs.	12/2002	RWE Solutions	75 percent implemented.
Set benchmarks for all areas involved in QUAD.	12/2004	RWE Solutions	50 percent implemented.
Continuous improvement of QUAD management at all sites in Germany and abroad.	12/2004	RWE Solutions	ISO 14001-compliant external audits, internal QUAD audits using the checklists (random sampling).
Environmental operations review to prepare for registration as per EMAS I has been completed.	12/2008	Harpen	First report by Det Norske Veritas with subsequent establishment of an IT usage plan has been completed.
Compilation of a hazardous materials catalogue.	12/2008	Harpen	Already achieved at HEC GmbH.
Development and introduction of an environ- mental protection manual, covering basic princi- ples and the structural and procedural organiza- tion, similar to DIN ISO 14001.	06/2004	RWE Energy	
Performance of environmental audits at ELMÜ and ÈMÀSZ.	06/2004	RWE Energy	
Development and introduction of a comprehen- sive training strategy in conjunction with major subsidiaries (with a focus on prevention).	12/2004	RWE Energy	
Review of the supply chain at the coal subsidiary SSM (Rotterdam).	12/2004	RWE Trading	
Review of environmental management in accor- dance with Group guidelines.	12/2004	RWE Innogy	

14 The Group companies' environmental programs are available on the Internet.

### **Environmental data: Water**

RWE Thames Water's environmental data reflect RWE's growth in the water business. Data reported here are for business units serving a population rising from 30.1 million in 2001 to 58.8 million in 2003. The volume of drinking water RWE Thames Water supplies has doubled since 2001. Water losses had less of a relative impact in 2003, compared with 2001. The data presented here includes losses incurred during the treatment process, leakage from water pipes, and water taken illegally or supplied without charge. In 2003 losses accounted for around 18 percent of water inputs. This means that 82 percent was successfully supplied to customers.

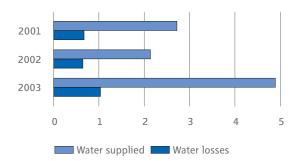
The volume of wastewater treated also increased by almost 50 percent since 2001. This reflects growth of the business and the important growth of our wastewater coverage in Chile. In just three years, our Chilean operations have increased substantially the proportion of wastewater from local communities now receiving treatment.

Most of the energy consumed by the water industry is used to pump and to treat water and wastewater. This demand for energy increases as quality standards for water and wastewater get progressively tighter. Reducing CO2 emissions is, therefore, an important issue in the water business. By generating renewable electricity and heat from our processes (utilizing biogas and sewage sludge), we off-set the amount of CO<sub>2</sub> emissions attributable to our business: in 2003 we generated 222,000 MWh of renewable electricity and 130,000 MWh of heat energy.

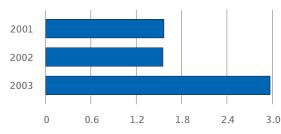
Sewage sludge residuals are a key byproduct of wastewater treatment processes. RWE Thames Water works to maximize beneficial reuse opportunities for sewage sludge, including its use as a fertilizer and as an energy source. The decrease in the proportion of our sewage sludge residuals put to beneficial use in 2003 reflects new business areas, such as in Chile and Spain, where we currently have less control over the choice of the residuals' final destination.

15 Input-output data of RWE Thames Water can be found on the Internet.

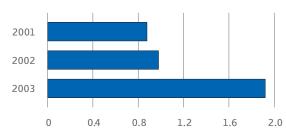
#### Water supplied and water losses in 1,000 millions of cubic meters



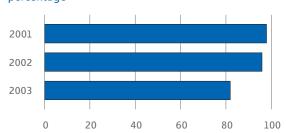




#### CO<sub>2</sub> emissions through use of energy and fuel in millions of metric tons



#### Sewage sludge reuse percentage



### **Environmental program: Water**

1 5	
Program	Time
Climate protection and energy efficiency	
Develop plan to reduce electricity demand through con- servation and efficient motors (Elizabethtown Water, USA).	12/20
Promote possibilities for the use of renewable energies (Thames Water Utilities, UK).	12/20
Reduction in emissions	
Quantify air emissions resulting from all aspects of business activities.	12/20
Protection of soil, groundwater and surface waters	
Introduce new environmental standards in 168 sewage treatment plants to contribute to improved water quality in 15 rivers (Thames Water Utilities, UK).	2000
Increase the proportion of wastewater receiving treat- ment in Chile.	2001
Landscape and nature conservation	
Complete Part 1 of Biodiversity Action Plan by 2005 (Thames Water Utilities, UK).	12/20
Screen relevant engineering schemes for conservation and heritage impacts (Thames Water Utilities, UK).	ongoi
Reduction in resource consumption	
Reduce non-revenue water (including leakage from pipes) in Thailand (Pathum Thani/Rangsit) by 30%.	1999
Reduce non-revenue water (including leakage from pipes) in Indonesia (Pam Jaya) to 41% by 2004 and by 2% per year to 33% by 2008.	12/20
Reduction in waste volumes	
Reduce our use of landfill by 15% compared to 1998 (Thames Water Utilities, UK).	12/20
Put 100% of sewage sludge to beneficial use (Thames Water Utilities, UK).	ongoi
Ensure sludge is disposed of appropriately in Chile.	ongoi
Development of environmental management	
Identify sustainability indicators (Thames Water Utilities, UK).	12/20
Develop a procedure for environmental evaluation of suppliers (Thames Water Utilities, UK).	12/20
Ensure husiness units are meeting corporate policy expec-	ongoi

Ensure business units are meeting corporate policy expec- ongoi tations

frame	Implementation
003	An Energy Audit was completed. Currently evaluating the 36 Energy Conservation Opportunities identified. Ozone System Energy Conservation program ongoing.
004	2 new combined heat and power (CHP) units installed at Long Reach STW. Further CHP, wind and hydropower opportunities identified.
005	$\rm CO_2$ equivalents from energy and transport calculated for RWE TW and also from process emissions for Thames Water Utilities.
- 2005	New standards achieved at 95 sites by end of 2003.
- 2005	Wastewater treated increased between 2001 and 2003: VI. Region 37.9% to 78.4%; VII. Region 22.9% to 33.4%; VIII. Region 32.5% to 71.9%.
005	Work continued on biodiversity surveys and developing strat- egy. Habitat maps have been digitized for 723 sites, with a further 178 sites assessed as not needing habitat maps.
ing	477 schemes screened in 2003.
- 2005	Non-revenue water reduced from 1999 baseline of 62 % to losses of 22 % by the end of 2003. This is a reduction of 40 %.
008	Non-revenue water reduced to 42.1% in 2003.
005	Target achieved with landfill use reduced in 2002 and 2003 to less than 85% of 1998 baseline.
ing	100% of sewage sludge in 2002 and 2003 was recycled to agricultural land, land restoration, composting or incinerated with energy recovery.
ing	Research trial underway for application of sludge in forestry in Cordilerra region. Applied for beneficial reuse authorization in Costa region.
003	Sustainability indicators developed with industry body, Water UK, taking account of stakeholder views.
003	Environmental evaluation criteria included in supplier assessment.
ing	New ISO 14001/EMAS certifications during 2002 and 2003 for Berliner Wasserbetriebe and RWW (Germany), PRIDESA (Spain), Elizabethtown Water (USA), Engenica, Target Alliance and TWU Engineering (UK).

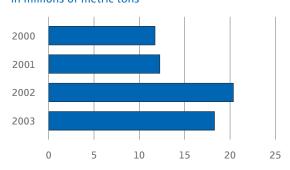
## Environmental data: Environmental services

RWE Umwelt's companies collected over 18 million metric tons of waste in 2003. The increase during the last two years resulted primarily from the inclusion of RWE Umwelt Mineralstoffrecycling. This increase occurred mainly in the fields of mixed construction waste, construction debris and excavated earth, which accounted for 33 percent of the total amount. Household garbage and similar commercial refuse accounted for 14 percent. Paper, packaging and glass accounted for 16 percent, and waste requiring special monitoring accounted for 12 percent.

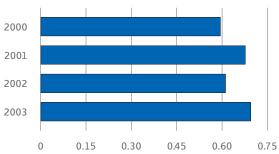
RWE Umwelt companies are involved in glass recycling at four locations. The recyclable glass comes mainly from its own collection activities, with other disposal companies also supplying a part of the raw materials. Both output and quantities remain high, with fluctuations driven by changes in market demand. Output of processed paper, card stock and cardboard continued to rise in the last two years. The share of high-guality recycled materials was further increased through the constant optimization of our sorting technology.

Electricity generation declined slightly in both of the last two years. Generation activities at the Brunsbüttel hazardous waste incinerator and the wood-fired thermal power station in Zapfendorf depend on the calorific value of the waste used as fuel. For power plants at landfills, it depends on the occurrence and quality of the landfill gas.

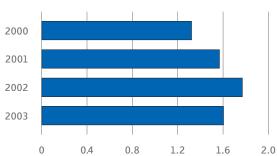
#### Volume of waste collected in millions of metric tons





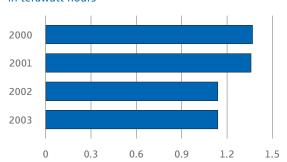


#### Paper, card stock and cardboard recycling in millions of metric tons



#### **Company-generated electricity**

in terawatt hours



# Environmental program: Environmental services

Program	Time fra
Climate protection and energy efficiency	
Reduce diesel fuel use by trucks.	12/2004
Continue shift to uniform company software in order to optimize processes, with a focus on logistics.	12/2005
Reduce emissions from trucks.	12/2005
Landscape and nature conservation	
Utilize resources for landscape conservation.	12/2005
Reduction in the consumption of resources	
Improve sorting and recycling technology in the fields of glass, paper and lightweight packaging materials, where this is ecologically and economically expedient.	12/2005
Boost company production of secondary fuels to 150,000 metric tons p.a. and increase the amount marketed to 250,000 metric tons p.a.	12/2005
Development of environmental management	
Optimize processes at RWE Umwelt AG corporate headquarters.	12/2004
Reduce risks involved in the handling of hazardous materials.	12/2004
Reduce work accidents resulting in time away from work by 5 percent compared to 2003.	12/2004
Adapt the environmental management system (EfbV/DIN EN 14001) to the various structures in the regional and specialized companies.	12/2005
Evaluate and select environmental aspects and com- pile a catalogue of benchmarks oriented towards practical, day-to-day operations.	12/2005
Ensure and substantiate compliance with legal regulations in the field of waste management.	12/2005
Regular information, training and advanced training for employees working in environmental protection, quality management, occupational health and safety.	12/2005
Define minimum standards for procedures, processes and frameworks for action guidelines for all compa- nies.	12/2005
Translate global environmental, quality and safety guidelines into regional goals, programs and mea- sures.	12/2005
Require suppliers and external companies to ensure integrated environmental protection.	12/2005

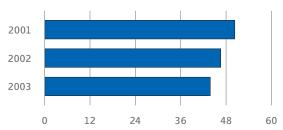
16 Input-output data of RWE Umwelt can be found on the Internet

me	Implementation
	Train drivers in economical, environmentally-friendly dri- ving techniques, participate in the driver training program.
	Formulate strategy for RWE Umwelt AG's regional and specialized companies.
	Require forwarders to use trucks compliant with the EURO 3 standard and make this a contractual require- ment for new forwarding partners.
	Expand existing activities.
	Prototype facility has been realized; further projects are being carried out.
	150.000 metric tons p.a.
	Certification.
	Optimization of hazardous material management; compi- lation of a hazardous material catalogue by region and specialized company.
	Develop a safety program for each region and specialized company.
	Complete management guidelines for RWE Umwelt AG; certify level of implementation.
	Refine environmental benchmarks.
	Establishment of the Group-wide Certification Coordina- tors Task Force; continuous standardization of require- ments in the legal field of waste management/certifica- tion.
	Constant development.
	The management guidelines were implemented per the Executive Board's request; continuous adaptation of the standards.
	Principles implemented per the Executive Board's request; continuous process.
	Voluntary information from suppliers, return of packaging materials, review of environmental performance and behavior (continuous).

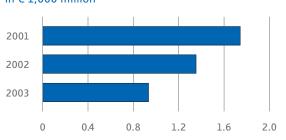
## **Development of business**

In 2003, the RWE Group generated €936 million in income after tax on the back of €43,875 million in external revenue. With its three main core businesses, electricity, gas and water, in four core regions comprising Germany, the UK, Central and Eastern Europe and North America, RWE has a sharp business focus with a very broad foundation. Today, more than half of the earnings generated by the core business areas are contributed by activities outside of Germany. Accordingly, the development of RWE's results is considerably less dependent on the traditionally highly important European single market than it was just a few years ago. The Group's portfolio offers a combination of stability and growth in another way as well: RWE now earns half of its revenue in regulated markets. This sector typically has the advantage of long-term stability, being far less susceptible to cyclical ups and downs in the economy.

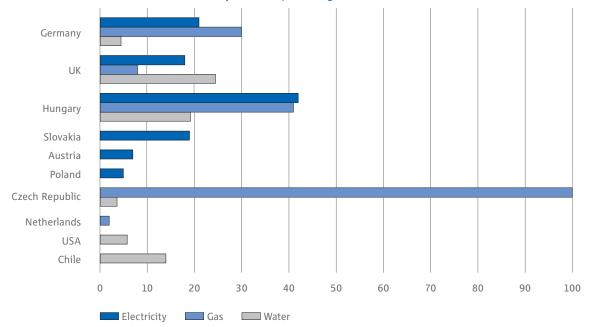
#### **External revenue of the RWE Group** in € 1,000 million







National market shares of the RWE Group in 2003 percentage



Information on corporate governance, risk management, etc. can be found in the RWE Annual Report 2003 (available as a PDF download).

17

# Distribution of added value

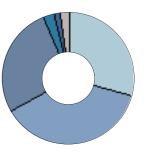
After deducting the cost of materials and taxes amounting to €1,104 million, which RWE pays directly to the state, the added value achieved on the sales revenues in fiscal year 2003 amounted to €19,844 million. This added value was distributed as follows:

## **Environmental expenses**

For the RWE Group as a whole, expenses for the operation of environmental protection facilities, staff involved in environmental protection and outside services and fees in the reporting period (2002 and 2003 financial years) amounted to €416 million and €376 million, respectively.

In the same period, investment in new environmental protection facilities, i.e. retrofitted technology, accounted for €52 million in 2002 and just under €56 million in 2003 (excluding RWE Thames Water). Expenses for facilities which are used to integrate environmental measures are not included in these

#### **Investments in environmental protection** by area in 2003 in € million



Air-pollution prevention	16.3
Landscape conservation	21.0
Water conservation	14.9
Waste disposal	1.6
Noise abatement	0.7
Restoration of contaminated sites	1.3
	Landscape conservation Water conservation Waste disposal Noise abatement

www.rwe.com > RWE Group > Press > Mediacenter

	2002	2003
Salaries and other staff costs	7,527	7,530
Depreciation, amortization, impairment losses	4,044	4,511
Taxes on income	1,367	1,187
Net interest payments	2,632	2,878
Dividends	619	703*

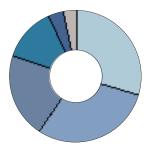
#### **Distribution of added value** in € million

\*Subject to approval by the Annual General Meeting on April 15, 2004.

figures. Nevertheless, for some time now the focal point of investments has been shifting away from retrofitting and more towards designing facilities with integrated environmental protection systems. The share of such investments, which is related exclusively to environmental protection, is impossible to calculate.

It is also difficult to determine the savings resulting from environmental protection measures, as these can often only be calculated for specific cases and cannot be presented at the Group level.

#### Expenses for environmental protection by area in 2003 in € million



Air-pollution prevention	110.9
Landscape conservation	112.8
Water conservation	76.1
Waste disposal	49.9
Noise abatement	13.7
Restoration of contaminated sites	11.8

## **Employment and equality**

The RWE Group's workforce shrank from 131,765 to 127,028 last year. Staff changes due to consolidation effects were balanced, on the whole, while restructuring measures led to a decline in the employee headcount in Germany.

RWE adheres to the principle of equal treatment for men and women. Despite this commitment, the share of women in middle and top management has increased only minimally. In total, women accounted for 21.8 percent of the workforce in 2003. The share of female employees is particularly high at RWE Innogy, where women account for 40.6 percent of the labor force.

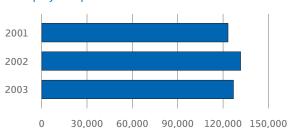
### Internationalization

All employees in Europe, the United States and Canada generally have basic health insurance and retirement benefits. The level of this basic insurance varies markedly from country to country, according to the prevailing legal framework. In the regions noted above, employees are free to unionize and conduct wage negotiations. In other countries, where a small number of RWE employees are active, these fundamental conditions are not so advanced.

### Supplier relations

More than 75 percent of material costs in 2003 (totaling €22,923 million) were allocable to the supply of electricity and gas, as well as external services such as electricity transit and fuels. RWE makes these purchases either directly from other power generators in Germany, the UK, or from other international partners. Other material costs amounted to

Workforce in RWE core businesses in employee equivalent



Workforce in RWE core businesses by region percentage

	2001	2002	2003
Germany	73	57.9	56.7
Other European countries	18	31.9	32.6
USA and Canada	5	7.2	8.3
Other	4	3	2.4

€5,430 million (roughly 13 percent of revenue), mainly comprising technical investment goods and trading commodities. For the most part, RWE makes these purchases from OECD countries, in respect of which one can assume that a minimum of ecological and social standards are complied with.

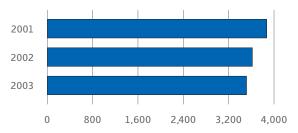
# Social contribution

Rising unemployment among today's youth is a problem in Germany. Companies can contribute to solving this problem by offering vocational training programs to more young people than they need to fulfill their own operational needs. As such, training provides young people with valuable qualifications for their entire lives. The number of training positions can only be presented for the RWE Group's German operations, as most countries covered by RWE's core businesses do not offer formal basic training comparable with Germany's dual vocational training system. Due to deconsolidation and restructuring measures, the number of vocational training positions at RWE declined since 2001 from 3,873 to 3,519. The ratio of trainees to total staff was stable at 5.4 percent to 5.5 percent from 2001 to 2003.

Persons with disabilities must also be offered the opportunity to develop their talents and skills in working life. In line with this view, companies in Germany, including RWE, are required to staff 5 percent of their positions with persons with disabilities. Companies that fail to achieve this goal must pay a contribution. At 3.4 percent on average, German companies overall substantially fall short of this goal. Due to the fact that in the UK, it is up to the employees themselves to indicate to the employer that they have a disability, this goal only applies to RWE's German businesses. Employees with disabilities accounted for 3.7 percent of RWE's workforce in 2003.

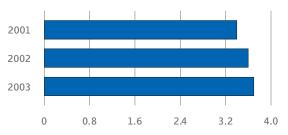
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More information on occupational health and safety, work time models and measures to enhance integration can be found in RWE's Personnel Report 2003 (available as a PDF download).



# Number of trainees in RWE core businesses in Germany

# Ratio of employees with disabilities in RWE core businesses in Germany percentage



### Companies included in this report\*

(At December 31, 2003; Staff coverage: 76 percent)

#### RWE Power Aktiengesellschaft, Essen/Germany

Kernkraftwerk Gundremmingen GmbH, Gundremmingen/ Germany Kernkraftwerk Lippe-Ems GmbH, Lingen/Germany Kraftwerk Ibbenbüren Betriebgesellschaft mbH, Ibbenbüren/Germany Mátrai Erömü Részvénytársaság (MÁTRA), Visonta/Hungary STEAG und RWE Power Gemeinschaftskraftwerk Bergkamen OHG, Bergkamen/Germany TE Plomin, d.o.o., Plomin/Croatia\*\* Turbogas Produtora Energietica S.A., Lisbon/Portugal VEW-Harpen Kraftwerk Werne OHG, Werne/Germany Harpen Aktiengesellschaft, Dortmund/Germany Agrupacion de Energias Renovables S.A., Barcelona/Spain EKT GmbH. Berlin/Germany Energies France SAS, Paris/France Harpen CR s.r.o., Prague/Czech Republic Harpen Italia Sp.A., Milan/Italy Harpen Polska z.o.o., Wroclaw/Poland Harpener Portuguesa SGPS, Lda, Estoril/Portugal HEC GmbH, Dortmund/Germany RWE Dea Aktiengesellschaft, Hamburg/Germany

#### RWE Energy Aktiengesellschaft, Dortmund/Germany

Budapest Elektromos Müvek Rt. (ELMÜ), Budapest/Hungary Emscher Lippe Energie GmbH, Gelsenkirchen/Germany Észak-Magyarországi Àramszolgáltató Rt. (ÈMÀSZ), Miskolc/Hungary

Koblenzer Elektrizitätswerk und Verkehrs-AG, Koblenz/ Germany

Lechwerke Aktiengesellschaft, Augsburg/Germany RWE Transportnetz Strom GmbH, Dortmund/Germany Süwag Energie AG, Frankfurt am Main/Germany VSE Aktiengesellschaft, Saarbrücken/Germany

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#### RWE Trading Aktiengesellschaft, Essen/Germany

RWE Innogy Holdings Plc, Swindon/UK

\* Investments of more than 50 percent are fully consolidated.

\*\* Only 50 percent included.

RWE Thames Water Plc, London/UK American Water Works Company Inc., Wilmington/USA Ashbrook Corporation, Houston/USA Elizabethtown Corporation Inc., Westfield/USA Engenica Ltd, London/UK FB Leopold Company Inc., Zelienpole/USA IzmitSu AS, Izmit/Turkey Ondagua S.A., Madrid/Spain PRIDESA S.A., Madrid/Spain RWW Rheinisch-Westfälische Wasserwerksgesellschaft mbH, Mülheim an der Ruhr/Germany Shanghai Da Chang Waterworks Company Ltd, Shanghai/China Stirling Water, Edinburgh/UK Thames Water Chile Limitada, Santiago/Chile Thames Pam Java, Jakarta/Indonesia Thames Water International (Thailand) Ltd, Bangkok/Thailand Thames Water Utilities Ltd, Reading/UK

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### Imprint

#### Published by

RWE Aktiengesellschaft

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T +49(0)201/12-00 F +49(0)201/12-1 51 99 I www.rwe.com

Concept, text, layout and typesetting akzente Kommunikationsberatung, Munich/Germany

Photography Andreas Teichmann, Essen

Coordination NETWØRK GmbH, Hamburg

Printing and lithography Lonnemann GmbH, Selm

Paper Made from chlorine-free pulp.

Editorial deadline: February 29, 2004

RWE's Annual Report 2003, Personnel Report 2003 and additional information are available on the Internet at: www.rwe.com > RWE Group > Press > Mediacenter www.rwe.com > RWE Group > Responsibility > Reports and Brochures

This report is also available in German.

# Index according to GRI (Global Reporting Initiative)

GRI	Report content (key indicators)	Page	GRI
1.1	Vision and strategy	8-9	EC6
1.2	Statement by the CEO	2–3	EC7
Orgai	nizational profile		EC8
2.1	Name of the company	4	EC9
2.2	Major products and services	4, 64-69	EC10
2.3	Operational structure	4	Envi
2.4	Major business areas	4, 64-69	EN1
2.5	Countries in which the company has operation	is 5, 53, 59	EN2
2.6	Ownership structure	5	EN3
2.7	Markets served	8, 64–69, 80	EN4
2.8	Scale of the company	4-5, 64-69	EN5
2.9	List of stakeholders	9	EN6
2.10	Contact person for the report	86	EN7
2.11	Reporting period	exterior of front flap	EN8
2.12	Date of most recent report	exterior of front flap	EN9
2.13	Boundaries of the report	exterior of front flap	EN1(
	Significant changes	exterior of front flap, 5	EN1:
	Joint ventures, subsidiaries, etc. in the report	84-85	EN1
	Restatements of information	64–69	EN1
	Decisions not to apply GRI principles	not applicable	EN1
	Criteria/definitions for costs and benefits*	13, 81	EN1
	Changes in measurement methods	no changes	EN1
	Accuracy and completeness of the report	exterior of front flap	Soci
	Independent assurance of the report	exterior of rear flap	LA1
	Access to additional information	entire document	LA1
	rnance structure and management system		LA2
	· ·		LAS
3.1	Governance structure, including responsibilitie for sustainability	s 10, 58, AR 180–183	LA4
3.2	Independence of the Supervisory Board	AR 12–15, AR 180–182	LA5
3.3	Expertise of the Executive Board in terms of su		LAG
3.4	Board-level processes for monitoring environm		LA7
5.4	economic and social risks and opportunities	9–10	LAT
3.5	Linkage between executive compensation and		
5.5	achievement of the company's sustainability of		LA9
3.6	Organizational structure for sustainability poli	· · · · · ·	LA1
3.7	Corporate mission and values	11, 17	LA1
3.8	Shareholder recommendations to the Executiv		Soci
3.9	Identification of stakeholders	exterior of front flap, 9	
3.10	Consideration of stakeholder interests	9, 15	HR1
3.11	Stakeholder feedback	9, 10	HR2
	Use of feedback from stakeholders	10, 17, 59	HR3
3.12			HR4
3.14	Participation in external initiatives	9, 14, 17, 38	HR5
	1		HR6
3.15			HR7
3.16	Management of upstream and downstream im (e.g. supply chain management)	pacts 17, 47, 60–61, 75, 82	Soci
3.17	Management of indirect impacts	36, 61	SO1
3.18	Changes involving locations of operations or a		SO2
3.19	Sustainability programs and procedures	9, 12–13, 17, 52, 54	SO3
3.20	Certification status pertaining sustainability m	anagement systems 12	Soc
	omic performance indicators		PR1
EC1	Net revenue	5, 80	PR2
EC2	Geographic breakdown of markets	5, 80	PR3
EC3 EC4	Costs of all goods, materials and services purc Contracts paid on-time in percent	hased 82 not specified	

Report content (key indicators)	Page
Distributions to providers of capital	81
Changes in retained earnings	AR 146
Total sum of all tax payments by country*	81
State subsidies/grants by country	not specified
Donations to community and civil associations	35, 55, 58, 61
onmental performance indicators	
Total materials use other than water, by type	71
Utilization of waste materials	44-46, 78
Direct energy use (broken down by primary source)	21, 70-71
	rame of survey
Water use	70, 76
Land areas used in biodiversity-rich habitats*	35, 36
Major impacts on biodiversity	35, 36, 38, 39
Greenhouse gas emissions	21, 70, 72, 76
Ozone-depleting substances	not applicable
$NO_x$ , $SO_x$ , and other significant air emissions	70, 72
Waste volume by type and method of disposal	70, 73, 76
Significant discharges to water by type*	39
Significant spills of chemicals, oils, etc.	not specified
	, 35–39, 43–47
Recycling of products	not applicable
Fines for non-compliance with legal environmental regul	
l performance indicators: Working conditions	
	52, 82, PR 47
Workforce fluctuation and job creation by region*	PR 45, 48, 51
Percentage of employees represented by trade unions	11(15, 10, 51
	3, 82, PR 38–39
Consultation with employees in operational decisions	53, PR 38-39
Documentation of occupational accidents and diseases	47, PR 52
Formal committees on health and safety issues	47, PR 29-30
Injuries, absentee rates and work-related fatalities*	PR 48, 52
Principles and policies on HIV/AIDS*	14
Training hours by employee category*	PR 28-29
Principles and policies on equal opportunity*	82
Composition of Senior Management and the Executive B	loard
(gender/culture)*	AR 4–7
l performance indicators: Human rights	
Principles and policies on monitoring human rights*	14, 53
Consideration pertaining to investments/procurement	not specified
Principles/policies in respect of the supply chain	not specified
Principles and policies for preventing discrimination*	11, 50-53
Assurance of freedom of association within the company	y 53
Principles/measures related to the prevention of child la	bor* 14
Principles/measures related to the prevention of forced	labor* 14
l performance indicators: Society	
Policy on managing impacts on areas affected by	
activities 11, 28, 38	, 39, 46, 47, 61
Principles/measures related to the prevention of corrupt	tion* 58–59
Principles/measures rel. to political lobbying & contribu	tions 58–59
I performance indicators: Responsibility for products and services	
Principles related to health and safety of customers	28–29, 37
Principles/measures related to product information and	labeling 60
Principles/measures related to consumer privacy	not specified

#### Annual Report 2003

#### Personnel Report 2003

\* No complete presentation as per GRI criteria or only examples.



### Auditor's report by PwC Deutsche Revision AG

On January 15, 2004, PwC Deutsche Revision AG was commissioned by RWE AG, Essen to review the accuracy, completeness and fair presentation of the information stated in the sections "Strategy and management" and "Sustainable energy supply" of the report "RWE Corporate Responsibility Report 2003" by RWE AG.

We conducted our audit in accordance with the auditing standard "Principles for the Proper Execution of Environmental Report Audits" (IDW PS 820) of the German Institute of Certified Public Accountants. Above and beyond this, for defining the auditing procedures we considered the standards of the Global Reporting Initiative (2002, pp 76 - 79). In order to evaluate the inclusion of stakeholders' interests, we applied parts of the standard AA 1000 AS (2003), as applicable.

Responsibility for the proper performance of environmental management in the Group and the Group's sustainability strategy, as well as for preparation of the report lies solely with the Executive Board of RWE AG. We reviewed the process of preparing the aforementioned two chapters in terms of whether the procedures were suitable for ensuring the accuracy, completeness and fair presentation of data collection and processing. Our findings were then substantiated by reviewing specific subject areas. Furthermore, we audited the process used for considering stakeholder interests in the development of the company's sustainability strategy and reviewed the fairness of such. In accordance with the scope of the audit the following opinion refers solely to the printed German version of the report. Our audit found that the information presented in the chapters "Strategy and management" and "Sustainable energy supply" is, on the whole, correct and does not contradict other statements and reports of the company. The information presents a complete and fair picture of RWE's activities related to environmental protection and sustainability issues. Stakeholder interests are taken into consideration in the development of the sustainability strategy in a comprehensive, systematic manner.

PwC Deutsche Revision Aktiengesellschaft Wirtschaftsprüfungsgesellschaft



Bernd Saitz Wirtschaftsprüfer (German Certified Public Accountant)

Frankfurt am Main, March 26, 2004

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