Annual Report 2006

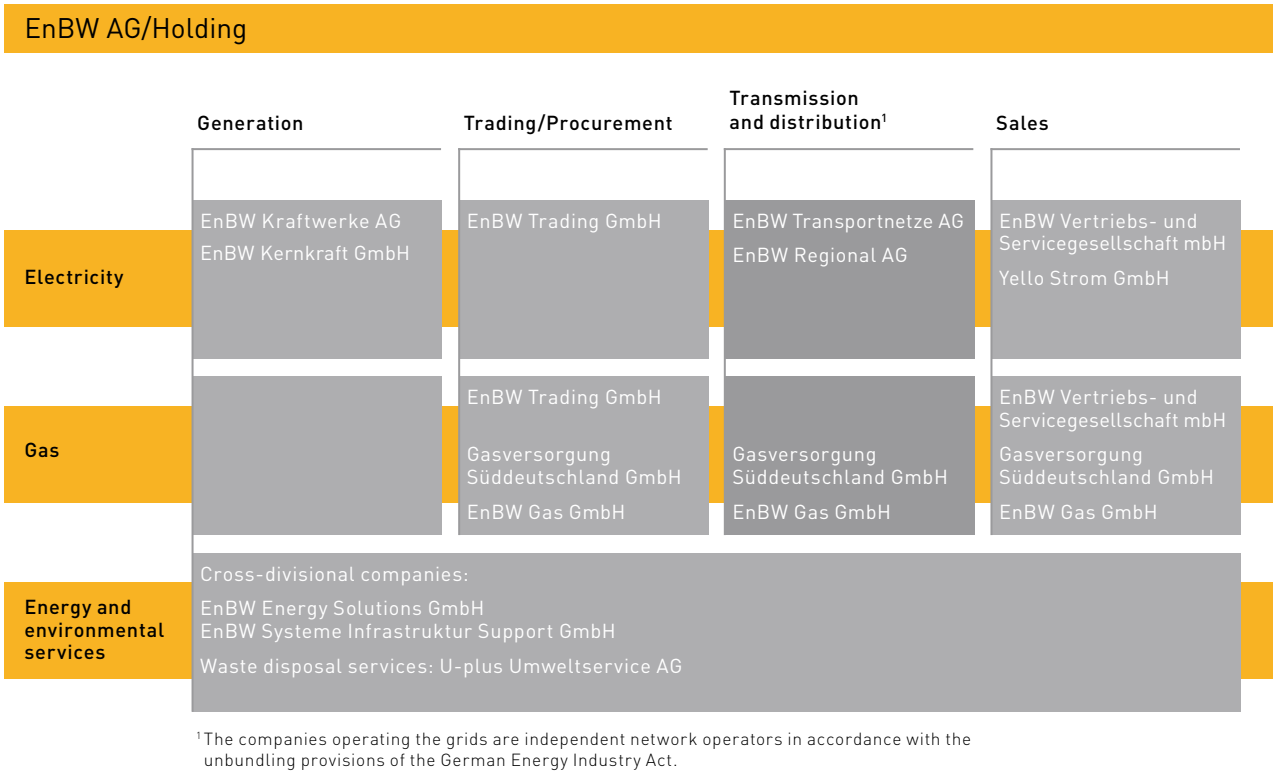
Adding values with energy

Company report

EnBW

EnBW Energie
Baden-Württemberg AG

Value added chain



[1] The companies operating the grids are independent network operators in accordance with the unbundling provisions of the German Energy Industry Act.

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Important note

No offer or investment recommendation
This report has been prepared for information purposes only. It does not constitute an offer, an invitation or a recommendation to purchase or sell securities issued by EnBW Energie Baden-Württemberg AG (EnBW), a company of the EnBW group or any other company. This report does not constitute a request, instruction or recommendation to vote or give consent. All descriptions, examples and calculations are included in this report for illustration purposes only.

Future-oriented statements
This report contains future-oriented statements that are based on current assumptions, plans, estimates and forecasts of the management of EnBW. Such future-oriented statements are therefore only valid at the time at which they are published for the first time. Future-oriented statements are indicated by the context, but may also be identified by the use of the words "may", "will", "should", "plans", "intends", "expects", "believes", "assumes", "forecasts", "potentially" or "continued" and similar expressions.

By nature, future-oriented statements are subject to risks and uncertainties that cannot be controlled or accurately predicted by EnBW. Actual events, future results, the financial position, development or performance of EnBW and the companies of the EnBW group may therefore diverge considerably from the future-oriented statements made in this report. Therefore it cannot be guaranteed, nor can any liability be assumed otherwise, that these future-oriented statements will prove complete, correct or precise or that expected and forecast results will actually occur in the future.

No obligation to update the information
EnBW assumes no obligation of any kind to update the information contained in this report or to adjust or update future-oriented statements to match future events or developments. This annual report can also be downloaded from the Internet in German, English or French. In case of doubt the German version shall prevail.



Contents

The value added chain of the EnBW group

EnBW's core activities focus on three segments: Electricity, gas, and energy and environmental services.

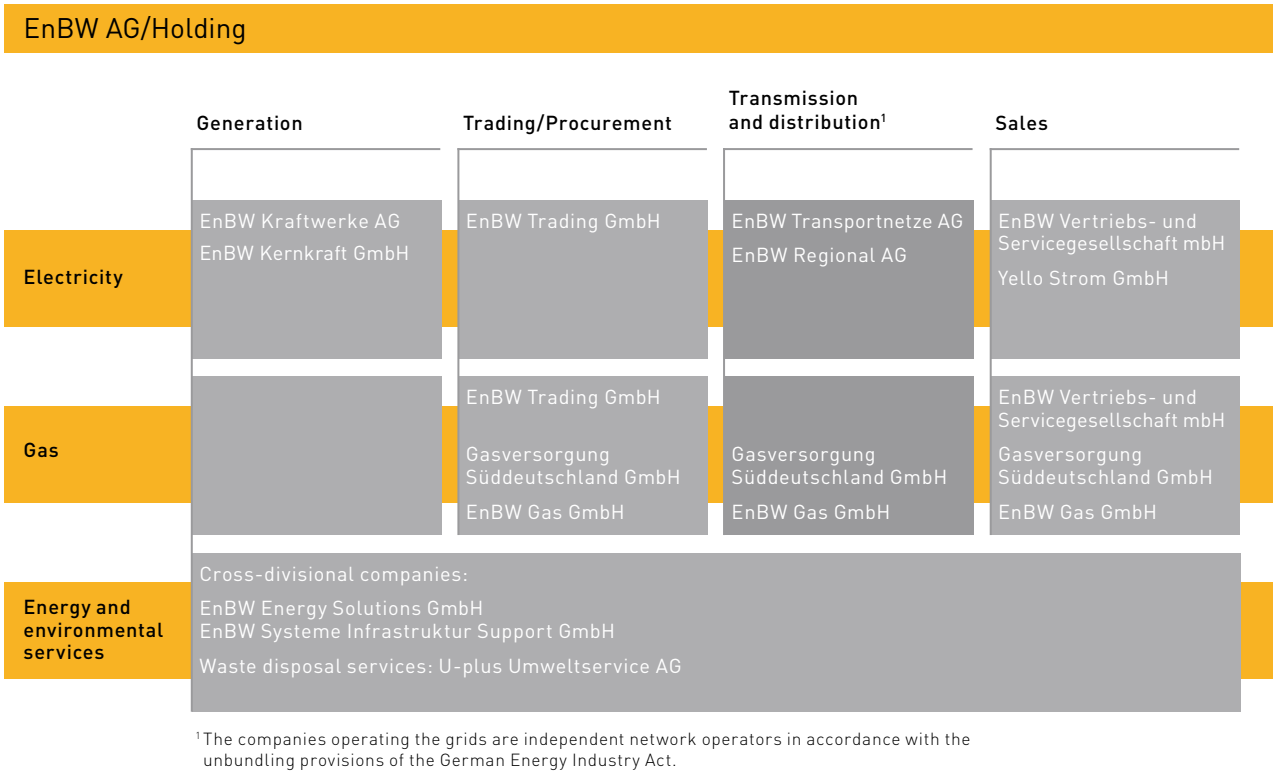
In the electricity segment, we cover all stages of the value added chain from the generation of electricity through to electricity sales via electricity trading, transmission and distribution. The gas segment comprises the gas procurement stage, including the functions gas import, transmission, storage and trading/procurement, and the distribution stage, including gas grid operation, marketing and sales. In the electricity and gas segments, the companies operating the grids are independent network operators in accordance with the unbundling provisions of the German Energy Industry Act. The energy and environmental services segment comprises internal support functions as contracting services, thermal and non-thermal disposal as well as water supply.

To set ourselves apart from the competition, we make the most of the advantages of a vertically integrated company by optimising interfaces between the stages of the value added chain comprising generation, trading and sales. In the electricity segment, the management of generation, trading and sales stages is combined in a single integrated risk management system.

The power plants and grids of EnBW stand for secure energy supply.

Structure

Value added chain



[1] The companies operating the grids are independent network operators in accordance with the unbundling provisions of the German Energy Industry Act.

Our diagram shows EnBW's core companies along the whole value added chain and allocated to our business segments electricity, gas as well as energy and environmental services.

For detailed information about our main companies and shareholdings we refer to page 182 onwards of our financial report.

As the operative holding company, **EnBW Energie Baden-Württemberg AG** exercises the management function in the EnBW group.

Electricity segment

EnBW Kraftwerke AG operates the majority of EnBW's power stations. With its fully and partly owned power stations, investments and long-term power station procurement agreements it has a well-balanced generating portfolio of nuclear energy, coal, gas, water and other renewable energy sources.

EnBW Kernkraft GmbH operates the nuclear power plants in Neckarwestheim, Philippsburg and Obrigheim.

EnBW Trading GmbH is responsible for trading with commodities and financial products, for electricity and supply agreements with trading partners, and for the risk management of the energy value added chain (generation, trading, sales).

EnBW Transportnetze AG operates the transmission network and ensures transparency and equality of market access for all participants to EnBW's extra-high voltage network (220 kV and 380 kV).

EnBW Regional AG operates EnBW's high, medium and low voltage networks (110 kV, 20 kV, 0.4 kV). It ensures that natural gas is transported safely through the pipelines to the customer and supplies drinking water to a population of about 600,000 in the state capital Stuttgart. It is responsible for relations with municipalities and public utilities in Baden-Württemberg and provides network-related and municipal services in the area of electricity, gas, water, heat and telecommunications.

EnBW Vertriebs- und Servicegesellschaft mbH sells energy (electricity, gas and district heating), water as well as energy-related and other services for industrial, commercial and retail customers, public utilities and municipalities.

Yello Strom GmbH sells energy to retail and commercial customers throughout Germany as well as the Yello Tel telecommunications product.

Gas segment

EnBW Trading GmbH is engaged in proprietary trading with gas at a national and international level.

With a 1,892 km long high-pressure grid, **Gasversorgung Süddeutschland GmbH** GmbH is one of the largest German regional grid gas companies. Its trading activities serve to procure and optimise the gas volume necessary to supply its customers. The company supplies some 750 towns and municipalities in Baden-Württemberg directly and indirectly as well as customers in Vorarlberg, Liechtenstein and eastern Switzerland.

EnBW Gas GmbH is the largest retail gas distribution company in Baden-Württemberg. Its main sales area is the Greater Stuttgart region. To satisfy the demand from its redistributors and end customers, it engages in trade with natural gas and additionally operates a 4,326 km pipeline network and storage facilities (LNG and LPG).

In its function as a service provider for EnBW Gas GmbH, **EnBW Vertriebs- und Servicegesellschaft mbH** contributes significantly to the sales activities aimed at retail and industrial customers as well as redistributors.

Energy and environmental services segment

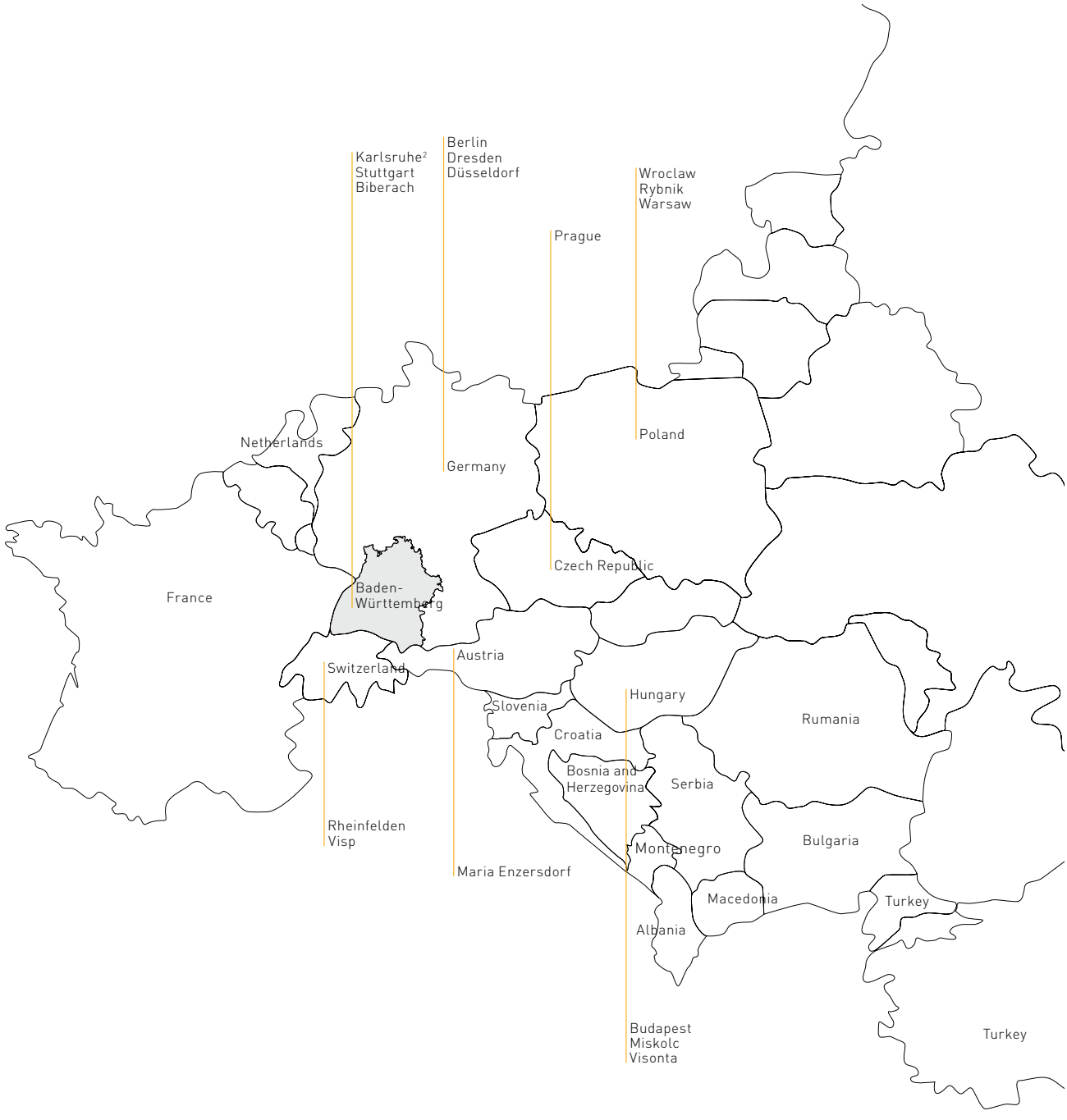
EnBW Energy Solutions GmbH provides energy-related services on the basis of contracting models. As a partner to industry, it finances and operates power generating plants and media infrastructures besides supplying its customers with usable energy such as steam, cooling, compressed air and the electricity it generates itself.

EnBW Systeme Infrastruktur Support GmbH provides internal support services within the EnBW group with extensive consulting and service functions.

U-plus Umweltservice AG is an association of medium-sized waste disposal companies. It combines the service functions disposal logistics, recycling and removal for municipalities, commerce, trade and industry in Baden-Württemberg.

Locations


Hanover
Berlin
Düsseldorf
Frankfurt
Dresden
Lippendorf
Main
Itter
Cattenom
(France)
Bexbach
(Saarland)
Mannheim
Philippsburg
Obrigheim[1]
Jagst
Kocher
Nuremberg
Heilbronn
Neckarwestheim
Neckar power stations
Karlsruhe
Karlsruhe
France
Walheim
Ettlingen
Stuttgart-
Münster
Marbach
Ludwigsburg
Gaisburg
Rhine power stations
(CERGA/RKI)
Murg
Enz
Nagold
Forbach
Stuttgart
Altbach/Deizisau
Fils
Kirchheim/Teck
Glatt
Neckar
Glems
Ulm
Upper Danube power stations
Rhine/Main/Danube power stations
Rhine
Rheinhausen
Danube
Elz
Tuttlingen
Biberach
Iller power stations
Freiburg
Aach
Iller
Fessenheim
(France)
Schluchsee
power stations
Ravensburg
Argen
Upper Rhine
power stations
EnAlpin
Switzerland
Sellrain-Silz
Vorarlberger
Illwerke
Austria



Conventional power station operated by EnBW

Nuclear power plant operated by EnBW

Hydro-electric power station operated by EnBW

Conventional power station (investments, purchase or supply agreements)

Nuclear power plant (investments, purchase or supply agreements)

Hydro-electric power station (investments, purchase or supply agreements)

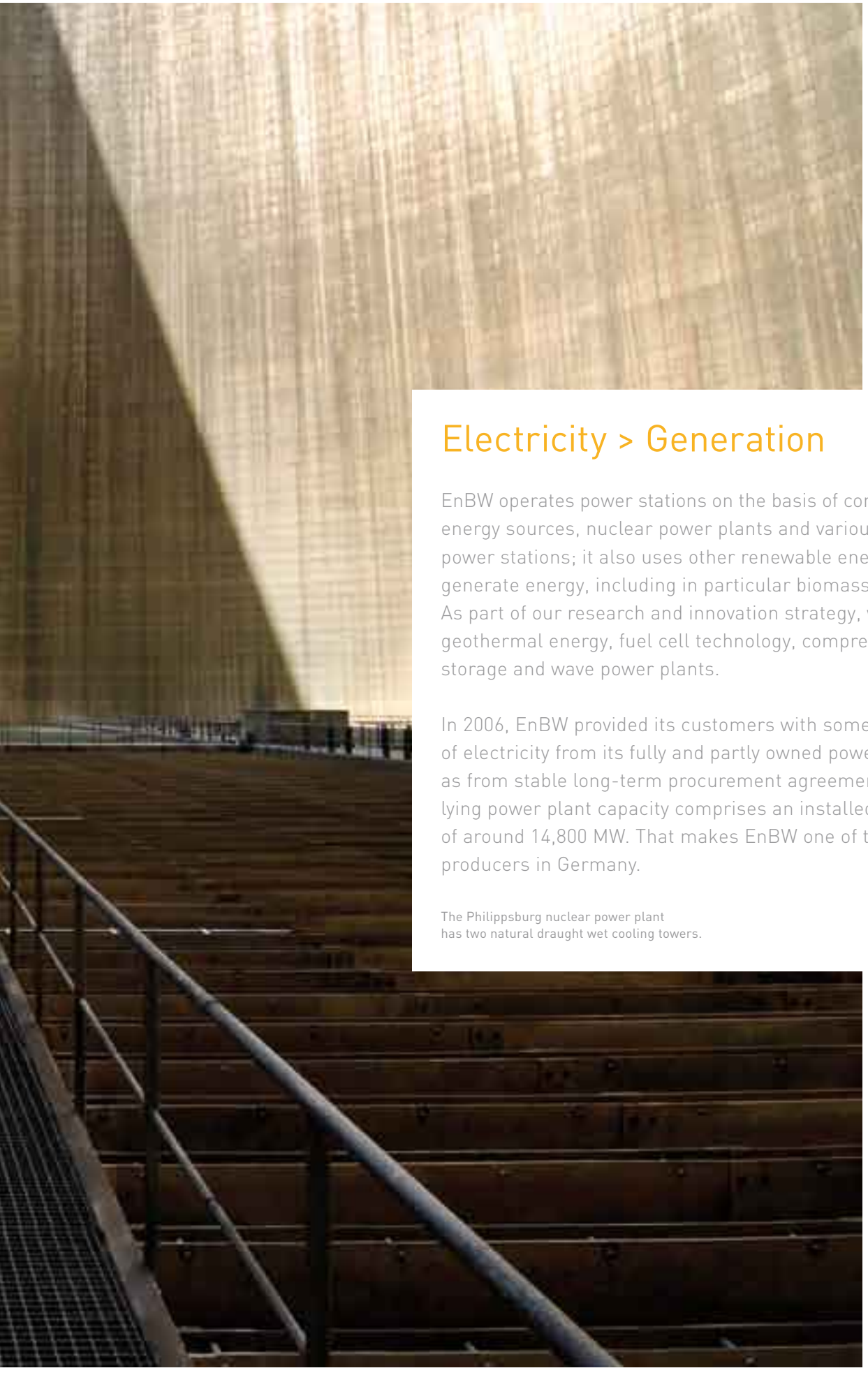
Regional centre

Sales office

Regional centre and sales office

[1] Operations ceased on May 11, 2005 as a result of the nuclear energy consensus.

[2] The headquarters of all major shareholdings of EnBW Energie Baden-Württemberg AG are presented in the financial report from page 182 onwards.



Electricity > Generation

EnBW operates power stations on the basis of conventional primary energy sources, nuclear power plants and various hydro-electric power stations; it also uses other renewable energy sources to generate energy, including in particular biomass and wind power. As part of our research and innovation strategy, we also invest in geothermal energy, fuel cell technology, compressed air energy storage and wave power plants.

In 2006, EnBW provided its customers with some 74.9 billion kWh of electricity from its fully and partly owned power stations as well as from stable long-term procurement agreements. The underlying power plant capacity comprises an installed electrical output of around 14,800 MW. That makes EnBW one of the major energy producers in Germany.

The Philippsburg nuclear power plant has two natural draught wet cooling towers.

Provision of electricity in the EnBW group

EnBW provided some 74.9 billion kWh of electricity in 2006. We generated this volume either in our fully and partly owned power stations or purchased it on the basis of stable long-term electricity procurement agreements. The electricity we provide is generated using power stations with an installed electrical output of around 14,800 MW. That makes EnBW one of the largest energy producers in Germany.

Accounting for 34.0% of the electricity supplied by the EnBW group, nuclear power plants generated the largest share of electricity in 2006. Fossil-fired power stations and those operated using other energies – i.e. not only coal-, oil- and gas-fired power stations, but also pumped storage stations – made up 19.3%. The stations that use renewable energies – run-of-the-river power stations, for example, or storage power stations using the natural flow of water, photovoltaic plants, wind turbines and biomass plants – accounted for a share of approximately 16.3%. The remaining 30.4% is electricity of unknown origin; we mainly purchase these quantities via electricity trading.

EnBW uses a balanced mix of different primary energy sources. An efficient and environmentally friendly energy mix as well as high supply reliability is ensured by using nuclear power, coal, gas, oil and renewable energy sources simultaneously. Around 70% of the electricity generated in our fully and partly owned power stations or purchased under long-term supply agreements and provided to our customers was generated CO_2-free from nuclear and hydro-electric power. This is an important contribution that we are making towards climate protection, and we have a clear lead on our competitors in this respect: In line with the comparatively low share of fossil energy sources used to generate the electricity we provide, the specific CO_2 emissions of electricity provided by EnBW are far below the average of 514 g/kWh determined by the German Electricity Association VDEW for the German energy industry.

The majority of generation capacities within the EnBW group lies with EnBW Kraftwerke AG (KWG). KWG is responsible for the planning, construction, operation, maintenance and optimisation of our power stations. It is one of our largest subsidiaries. Apart from electricity, KWG also generates district heat, among other things from thermal waste treatment.

Philippsburg nuclear power plant: Inspection includes main cooling pumps and low-pressure turbines.

Our electricity generation mix must be structured in such a way that it will also remain compatible with different social, economic, ecological and operational requirements in the future. The foremost concerns in this regard are always supply reliability, economic viability and environmental protection. EnBW advocates a balanced energy mix within these parameters. For us, expanding the use of renewable energies in an economically feasible manner and raising energy efficiency are the most pressing issues. We are campaigning to modernise the nuclear consensus, not least because it would give the German energy industry extra time for the research and development that is needed to identify and better utilise the potential of renewable energies. By investing billions, EnBW will continue to secure the supply of energy in Baden-Württemberg, reinforcing its market position as a major energy producer.

Electricity provision by the EnBW group by primary source of energy (%)

	2006
Nuclear power	34.0
Fossil and other energies	19.3
Renewable energies[1]	16.3
Primary energy source unknown	30.4

[1] Corresponding to the disclosure pursuant to Sec. 42 German Energy Industry Act (EnWG)

Generation mix in the EnBW group Electrical output in MW

	12/31/2006
Nuclear power plants (incl. EDF contracts)	4,843
Conventional power stations	6,579
Run-of-the-river and storage power stations	3,354
Other renewable energies	35
Total	14,811

Nuclear power plants

EnBW has three nuclear power plants. It operates one boiling water reactor and one pressurised water reactor in Philippsburg and two pressurised water reactors in Neckarwestheim. Pursuant to the nuclear energy agreement, the pressurised water reactor in Obrigheim went offline on May 11, 2005 and is now in the post-closure phase.

With more than 34 billion kWh, our nuclear power plants in Neckarwestheim and Philippsburg provided almost half of the electricity needed in Baden-Württemberg in 2006. Their installed electrical output of 4,443 MW accounts for 30% of the total output of EnBW group's generation portfolio of 14,811 MW. 55.3% of the total volume of 74.9 billion kWh of electricity which we provided from our fully or partly owned plants or from long-term supply agreements stems from nuclear energy. Aside from their high rate of availability, nuclear power plants produce reliable electricity output for the base load around the clock and consequently play an extremely important role in the generation of electricity.

At the same time, by operating our nuclear power plants, we saved the environment some 32.8 million t CO_2. This figure is based on the specific CO_2 emissions of the present portfolio of hard coal and brown coal power stations (source: ISI 2005). Our plants thus made a considerable contribution to meeting environmental and climate protection targets.

EnBW Kernkraft GmbH
As of January 1, 2007, EnBW Kernkraft GmbH (EnKK) assumed the operation of the nuclear power plants in Neckarwestheim, Philippsburg and Obrigheim. The permits required by the German Atomic Power Act were issued by the Baden-Württemberg Ministry for the Environment at the end of November 2006.

The nuclear power expertise for all Baden-Württemberg nuclear power plants is thus bundled in a single company. This way, the successful collaboration of past years between the three locations is continued and enhanced.

Transfer of residual electricity volumes
EnBW Kernkraft GmbH (EnKK) filed an application with the Federal Ministry for the Environment to transfer residual electricity volumes to unit I of the Neckarwestheim nuclear power plant on December 21, 2006. The application was for a total of 46.9 TWh from the residual electricity volume allocated to unit II of the Neckarwestheim power plant. With its application, EnBW is making use of the legal possibilities allowed by the German Atomic Power Act to optimise the term of its nuclear power plants and adjust them to operational requirements. This transfer of electricity volumes will extend the calculated life of the two units, Neckarwestheim I and Neckarwestheim II, until 2017. This way, the current double-unit configuration at the Neckarwestheim power plant will be retained as long as possible to allow the best possible use of the resulting synergies for safety and efficiency throughout all operating phases.



For the region, this step safeguards 400 jobs in Neckarwestheim in the long term while at the same time preserving a key economic factor. Thanks to this transfer, Baden-Württemberg will be able to keep its reliable, climate-friendly and safe electricity supply and Germany will retain an internationally competitive energy industry.

Interim storage for fuel rods

The interim storage locations for spent fuel rods at the Neckarwestheim and Philippsburg power plants were handed over to the operator in autumn 2006. The requisite interim storage capacity has thus been created at both locations.

Safety culture

Safety standards and the nuclear safety culture in Germany meet the highest international standards. Like all other German plants, EnBW's nuclear power plants are subject to permanent, independent inspections in accordance with the rule of law. We actively participate in knowledge sharing at a national and international level and regularly invest in the safety of our plants and in training our staff.

Decommissioning the Obrigheim nuclear power plant

The Obrigheim nuclear power plant went offline on May 11, 2005 as a result of the nuclear consensus. The power plant is now in the post-operating phase, during which we prepare the decommissioning of the power plant. This includes establishing a knowledge management system to structure the know-how required for decommissioning and retain the specific expertise gained during decommissioning for future closures.

Nuclear power: The EnBW power plants in Philippsburg and Neckarwestheim stand for reliable, efficient and CO_2-free energy generation.

Conventional: In its seven conventional power stations and in three partly owned power stations EnBW uses brown coal, hard coal, gas and oil to generate energy.

Conventional power stations

Our main conventional power stations are the combined heat and power (CHP) station in Altbach/Deizisau, the Heilbronn CHP station, the Rheinhafen thermal power station in Karlsruhe and the Stuttgart CHP station. The smaller power stations in Marbach and Walheim are allocated to the Heilbronn power station, while the CHP stations in Stuttgart-Münster and Stuttgart-Gaisburg are allocated to the Stuttgart power station. We can generate electricity and district heat simultaneously at all of these power stations (combined heat and power). EnBW also holds shares in the conventional power stations in Bexbach, Mannheim and Lippendorf.

EnBW is planning to build new power stations in the medium and long term. The planning focus is initially on Karlsruhe, but also the whole of Baden-Württemberg. Our home region naturally comes first, but this does not rule out construction projects at other locations in Germany and Europe. In a first step, EnBW decided in December 2006 to build a state-of-the-art hard coal unit at the Rheinhafen thermal power station in Karlsruhe for an investment volume of over € 1 billion. EnBW is also investigating the possibility of constructing a gas and steam power station on that site. The further planning and decisions are largely dependent on the developments on the markets for primary energy sources and the European emission trading system.




Renewable energies

Around 16% of the electricity we provide is based on renewable energies. With the high share of energy generated from hydropower, we make an effective contribution towards climate protection. EnBW has 37 run-of-the-river power stations and two pumped storage power stations in Baden-Württemberg. These are complemented by shareholdings in six run-of-the-river power stations on the upper Danube, the power stations on the Rhine in Gambsheim and Iffezheim as well as in four pumped storage power stations in the Black Forest. In addition, we have a majority holding in Neckar AG, which operates 26 hydro-electric power stations along the river Neckar.

The Swiss company EnAlpin AG and its hydro-electric power stations are a wholly owned subsidiary of the EnBW group. We also hold shares in a chain of hydro-electric power stations along the High Rhine, one example of which is Energiedienst Holding AG, in which we have the majority of shares. Apart from that, long-term procurement agreements are in place with Vorarlberger Illwerke AG and with Tiroler Wasserkraft AG. In total, EnBW has an installed output of more than 3,000 MW generated from hydropower.

The construction of the new run-of-the-river power station in Rheinfelden is proof of EnBW's commitment to hydro-electric power. This plant is Germany's largest construction project in the area of renewable energies. Four tubular turbines with an output of 25 MW each are expected to produce some 600 million kWh of electricity a year as of mid-2010, which would increase the annual production in Rheinfelden more than threefold compared to today's capacity. Assuming an average consumption of 3,550 kWh/a per household, around 170,000 households could then be supplied with electricity that is generated emission-free. Energiedienst Holding AG is the operator and the builder-owner of the station.

EnBW plans to build a compressed air energy storage plant in a joint project with the state of Lower Saxony. Compressed air energy storage plants allow electricity to be stored in order to balance fluctuating quantities generated by wind turbines, for example.

Together with Voith Siemens Hydro Power Generation GmbH & Co. KG and in alliance with the state of Lower Saxony, we are seeking to develop the first German wave power plant on the German North Sea coast. Such plants use wave energy to generate electricity. For more details on these two innovations, please turn to the section "Innovation at EnBW" on pages 75–83.

In addition, we invest both in biomass fermentation and in thermal utilisation of waste wood. And last but not least, our range of activities includes promoting geothermal energy and expanding fuel cell technology. For further information, please see the section "Research and development" in the financial report on pages 88–90.

Hydro-electric power: The new weir in Rheinfelden is already in operation, the powerhouse is still under construction. The run-of-the-river power plant is integrated into the natural environment in an environmentally friendly fashion.

Electricity > Trading

Since the liberalisation of the electricity market in 1998, a wholesale sector for electricity has emerged in Germany. It can be split into a spot and a forward market. Transactions are made via the over-the-counter market, which is characterised by bilateral contracts, or via an exchange on which the electricity is traded. In Germany, trading takes place on the European Energy Exchange (EEX) and covers not only electricity but also the energy source coal, CO_2 allowances and financial products.

EnBW Trading GmbH acts as an interface between the energy generation sector and the wholesale market as well as between the wholesale market and the sales function. It combines the management of these stages of the value added chain in an integrated risk management system.

EnBW trades on the Leipzig-based European Energy Exchange EEX.

EnBW Trading GmbH

EnBW Trading GmbH (ETG) was founded in late 1997 under the name EnBW Gesellschaft für Stromhandel mbH and started its trading activities – with electricity – in 1998. Today, the wholly owned EnBW subsidiary is in charge of the risk management of the entire value added chain for energy, integrating trade with energy (electricity), energy sources (gas, coal, oil), emission allowances and related financial products (derivatives) as well as power station deployment planning and dispatching in one overall process.

The wholesale market for electricity

The wholesale market came into existence in Germany with the liberalisation in 1998. Electricity is traded on the wholesale market either directly between two dealers or their brokers (over the counter – OTC) or on an exchange. The over-the-counter electricity trade is largely standardised, but does also allow personal transactions between two contracting parties. Trade on the exchange is generally standardised and guarantees anonymity; one party to the contract is the exchange itself in this case, which acts as a hub bringing together supply and demand for the individual market participants. With the support of banks, the exchange also assumes the risk that a market participant may not be able to meet the obligations it has entered into. Credit risks therefore do not arise from exchange trading.

In Germany, trading activities are very buoyant, especially for electricity as a product, but a trading platform has now also emerged for other products such as CO_2 allowances and coal. 152 participants from 19 countries currently use the European Energy Exchange (EEX) in Leipzig. More than half of the market participants registered on the Leipzig-based exchange come from European countries outside Germany.

The International Commodity Exchange (ICE) in London or the European Climate Exchange (ECX) in Amsterdam focus on trade with oil, oil products or emission allowances. These exchanges are also of relevance for the business of EnBW Trading GmbH.

The electricity exchange is mainly split into the spot and forward market. Whereas trading on the spot market is immediate, i.e. for the next day, the forward market relates to long-term contracts to be fulfilled at a future date in up to several years' time.

The spot market allows participants to cover their load in a highly cost-effective way by buying or selling physical electricity deliveries. If the marginal costs of an energy producer are higher than the market price, it will purchase energy to avoid having to use an expensive power plant. In the reverse case, it sells additional energy to allow another market participant to switch off an over-expensive plant. Even consumers can trade excess capacity and shortfalls directly on the electricity exchange.

On the spot market, electricity is generally traded for each individual hour of a day (single-hour contracts) so that the daily load line can be fine-tuned very precisely. However, it is also possible to combine single hours in what are referred to as block contracts. Base load blocks cover the base load for a day. Electrical power is supplied with a constant output between 0:00 hours and 24:00 hours. To take account of the stronger demand during the day (peak load) compared to night-time, peak load blocks are offered between 8:00 hours and 20:00 hours.

Future transactions on the forward market are used primarily for risk management purposes. Large customers, for example, can secure a stable basic supply and price stability over a longer period of time, while electricity producers want to fix the income from future production volumes. The forward market is characterised by market assessments and the expectations of the different market participants concerning future price developments. Consequently, speculation also plays a role on the forward market. For instance, private and institutional investors (e.g. banks and funds) chose to enter transactions that will be cancelled out at a later date by a corresponding counter-transaction. Depending on the development of prices in the meantime, they then either make a gain or a loss. By means of what is referred to as proprietary trading activities, the investors thus increase liquidity on the market, at times even assuming the risks of other market participants without actually being interested in a physical delivery of electricity.

Trading: EnBW's electricity traders trade with energy, fuels, emission allowances and derivatives.

Power plant deployment: EnBW's dispatchers ensure optimum deployment and management of the power plants.

Trade with derivatives

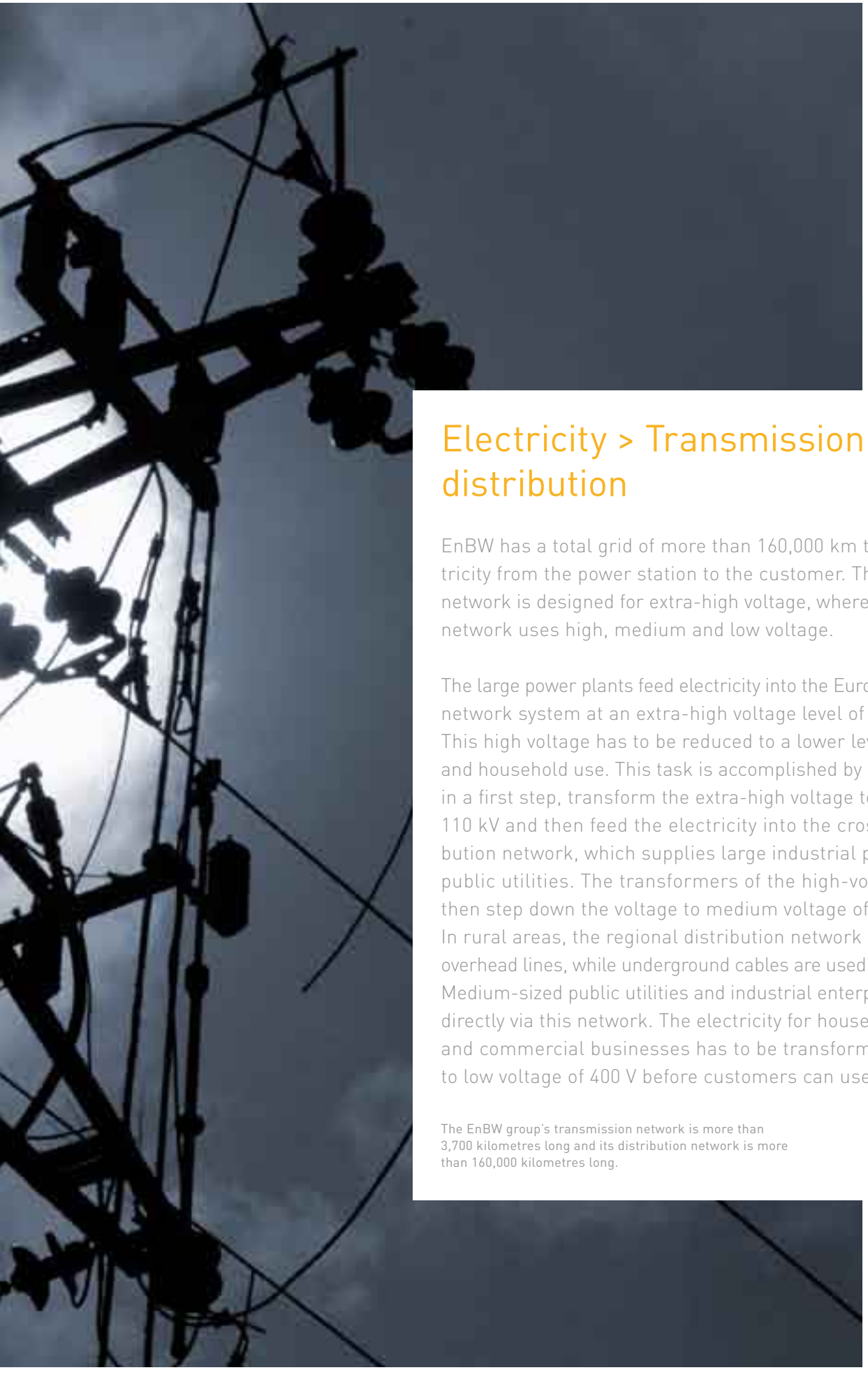
Derivatives are negotiable financial products such as swaps, options or futures. These products generally relate to other underlying transactions such as loans, stocks and bonds on the financial market. On the energy market, the underlyings are electricity and fuel products. These derivatives can be used to manage price risks.

When trading with derivatives, the electricity or fuel is usually not delivered or purchased physically. Instead, financial compensation is paid at the agreed delivery date, which equals the present value of the underlying product. This reduces transaction costs substantially, especially when the transactions are only made for the purpose of hedging temporary price risks.

Derivatives are also used by EnBW Trading GmbH for risk management purposes. They help to manage the price and quantitative risks of the group's position from generation and sales in a targeted manner.

Trading volume in 2006

The trading volume on the European Energy Exchange (EEX) rose by 88% to 1,133 billion kWh in 2006 compared to the prior year. In other words, the volume of electricity traded on the Leipzig exchange was twice the volume consumed in Germany the same year. Add the electricity volume traded over the counter to that, and the trading volume is roughly seven times as high as the electricity consumption in Germany.



Electricity > Transmission and distribution

EnBW has a total grid of more than 160,000 km to transport electricity from the power station to the customer. The transmission network is designed for extra-high voltage, whereas the distribution network uses high, medium and low voltage.

The large power plants feed electricity into the European transmission network system at an extra-high voltage level of 380 or 220 kV. This high voltage has to be reduced to a lower level for industrial and household use. This task is accomplished by substations which, in a first step, transform the extra-high voltage to high voltage of 110 kV and then feed the electricity into the cross-regional distribution network, which supplies large industrial plants and large public utilities. The transformers of the high-voltage substations then step down the voltage to medium voltage of 30, 20 or 10 kV. In rural areas, the regional distribution network largely consists of overhead lines, while underground cables are used in urban regions. Medium-sized public utilities and industrial enterprises are supplied directly via this network. The electricity for households, agriculture and commercial businesses has to be transformed at substations to low voltage of 400 V before customers can use it at the mains.

The EnBW group's transmission network is more than 3,700 kilometres long and its distribution network is more than 160,000 kilometres long.

The German transmission network

There are four transmission system operators in Germany: EnBW Transportnetze AG, E.ON Netz GmbH, RWE Transportnetz Strom GmbH and Vattenfall Europe Transmission GmbH. They operate the 380 kV and 220 kV grids in their balancing zones, in which they are responsible for ensuring safe network operation and a balance between generation and consumption. The transmission system operators' extra-high voltage networks make up the national transmission network, which is an integral part of the European transmission network system. Apart from these four transmission system operators, there are some 900 distribution system operators acting at a regional and municipal level and supplying end customers with electricity.

The network operators are responsible for providing and maintaining the networks. They receive a network user charge from the network users.

Circuit length of the transmission network of the EnBW group[1] in km	**2006**
Extra-high voltage 380 kV	1,958
Extra-high voltage 220 kV	1,787

[1] Companies included: TNG and ED

Transmission network: EnBW's extra-high voltage network transports electricity efficiently over long distances.

EnBW Transportnetze AG

EnBW Transportnetze AG (TNG) was founded as a separate entity back in 1997. It guarantees safe and stable operation of EnBW's 380/220 kV extra-high voltage network and ensures that in its balancing zone electricity generation and consumption are in balance.

To maintain a stable network frequency of 50 Hz, the fluctuation between electricity fed into the grid and the quantities used needs to be balanced at all times, as does the power loss that occurs during electricity transmission. EnBW Transportnetze AG fulfils this task by using balancing energy from the balancing power stations.

The company makes its network available for electricity transmission to all market players (electricity dealers, power plant operators and distribution system operators) at transparent and non-discriminatory terms and conditions. This way, it creates a platform together with other national and European transmission system operators for the liberalised electricity market in Europe.

EnBW Transportnetze AG's balancing zone primarily comprises the state of Baden-Württemberg and covers an area of 34,600 km^2. It has lines of a length of approximately 3,600 km; 1,936 km thereof are part of the 380 kV and 1,674 km of the 220 kV extra-high voltage network.

The two transmission network levels are connected by eight coupling transformers. A total of 55 substations transmit the electricity from the transmission network to the 110 kV distribution networks with the help of transformers.

The transmission network of EnBW Transportnetze AG is connected to the European transmission network system at more than 36 points of connection. One of the most modern control centres in Europe is located in Wendlingen. From here, the staff monitor and control the EnBW transmission network around the clock with the help of powerful process computer systems. They monitor network safety, balance capacity fluctuations and stand by to intervene in the event of any disruption.

Control centre: One of Europe's most modern control centres is located in Wendlingen.

Electricity trading via the EnBW transmission network

Dealers use electronic energy exchange schedules to notify the control centre in Wendlingen of the transactions that they want to effect via the EnBW balancing zone. The computer system checks and compares the individual schedules with each other.

The physical exchange of energy between the EnBW balancing zone and adjoining balancing zones in Germany and other countries is the sum of all transactions. By balancing the energy frequency, the centre ensures that the energy exchange with other balancing zones proceeds according to the trading schedule. Once the transactions have been physically performed, the dealers' individual schedules are transferred to a settlement system. Together with the meter reading, they are the basis for invoicing at a later date.

In accordance with Sec. 13 of the German Energy Industry Act (EnWG), EnBW Transportnetze AG is responsible for systems security and integrity in its balancing zone. As soon as there is any indication of a security risk, the staff in the control centre intervene in the operation of the system, taking the network or market measures necessary to maintain supply quality in the balancing zone and ensure that the planned electricity transmissions are processed.

Current situation at EnBW Transportnetze AG

Network charges

At the end of July 2006, the Federal Network Agency issued its decision on the application filed by EnBW Transportnetze AG at the end of October 2005 concerning the network user charges. The charges for use of the 380/220 kV transmission network were set around 8% lower than the amount for 2006 for which the company had applied. The pricing notice is valid until the end of 2007. TNG considers the Federal Network Agency's decision to cut the charges to be inappropriate and legally disputable. It has therefore filed a complaint against the Federal Network Agency's decision with the Düsseldorf Higher Regional Court.

Bottleneck auctions

The bottleneck management established at short notice in 2005 by EnBW Transportnetze AG and RWE Transportnetz Strom GmbH at the borders to Switzerland and France has been replaced since January 1, 2006 with regular bottleneck auctions. These were refined in the course of 2006 together with the transmission system operators concerned, the German regulators and the regulatory authorities in neighbouring countries.

Compensation of loss
Network operators are required by the German Energy Industry Act to compensate for electrical losses incurred when transmitting electrical power via lines or transformers. EnBW Transportnetze AG was the first network operator in Germany to purchase the forecast annual demand needed to cover the distribution losses in 2007 by way of an open invitation to tender in June 2006.

Conversion of the very high voltage networks
Since the mid-1990s, EnBW Transportnetze AG has gradually converted its extra-high voltage network from 220 kV to 380 kV. In 2006, it commissioned measures in the regions eastern Württemberg, the central Neckar region (Greater Stuttgart region), Rhine-Neckar-North Baden and northern Black Forest. The complete package was placed on the market via a functional request for proposals. The contract was awarded to an industrial partner as a complete package. It was the first time in the industry that contracts of this volume were awarded in this way. With this approach, EnBW does not stipulate a technical solution, but lets the providers find an optimum solution using their own engineering expertise. This approach holds advantages for both sides: The provider can optimise its solution and use its own technical standards, while we receive the best, state-of-the-art technology at a favourable price.

Connecting power stations to the grid
The liberalisation of the energy markets in Germany is making further progress. One example are the enquiries received from operators of large power plants who would like to connect their plants up to EnBW Transportnetze AG's network. A structured procedure that is communicated to all parties involved guarantees the non-discriminatory and cost-efficient connection of the power stations. Within the space of just four months, EnBW Transportnetze AG prepared specific detailed studies containing information on the technical and commercial requirements for grid connection. They provide the parties involved with a basis for sound, long-term investment planning and decisions.



Infrastructure: EnBW employees make sure the masts are in good condition. New masts are carefully adjusted.

EnBW Regional AG

EnBW Regional AG (REG) is the largest distribution network operator in Baden-Württemberg. Together with EnBW Ostwürttemberg DonauRies AG (ODR), ZEAG Energie AG (ZEAG) and Energiedienst AG (ED) – an investee of EnBW's – it is in charge of access to the company's own electricity distribution networks in our home market. The networks of the regional suppliers Stadtwerke Düsseldorf AG (SWD) and ENSO Energie Sachsen Ost GmbH (ENSO) as well as the Prague-based energy supplier Pražská energetika a.s. (PRE), all of which are EnBW investments, are also part of the EnBW group's distribution network.

REG manages relations with municipalities and public utilities in Baden-Württemberg. It has direct, long-term franchise agreements with about 730 municipalities. The company's investment network comprises just under 40 partners – from single-service public utilities to combination utilities. Municipalities and public utilities purchase network-related services for electricity, gas, water, heat and telecommunications.

EnBW Regional AG's distribution network

The distribution network territory of EnBW Regional AG extends across 19,500 km² covering large parts of the state of Baden-Württemberg. REG is present on customer premises with system control centres, control stations, regional and district centres at close to 100 locations.

Around three million households as well as commercial and industrial businesses purchase their electrical energy via the high-, medium- and low-voltage network of EnBW Regional AG.

About 100 municipal utilities and regional energy suppliers who distribute electricity via their own networks are connected with the high- or medium-voltage network of REG.

The distribution network of EnBW Regional AG has a total length of more than 100,000 km; 7,607 km are part of the 110 kV high-voltage network, 28,743 km belong to the 30/20/10 kV medium-voltage network and 64,633 km to the 0.4 kV low-voltage network.

Besides its activities within its own distribution network, EnBW Regional AG is also responsible for the construction and maintenance of the transmission networks of EnBW Transportnetze AG. The leading distribution system operator in Baden-Württemberg, it ensures a stable and high level of supply reliability. It grants other energy suppliers and dealers non-discriminatory access to its electricity distribution networks within Baden-Württemberg, sets standards for network access and use and calculates network user charges.

Transformer substation: There are several thousand transformer substations like this in Baden-Württemberg. This is where electricity is transformed into low voltage.

Circuit length of the distribution network of the EnBW group[1] in km	2006
High voltage 110 kV	9,810
Medium voltage 30/20/10 kV	48,237
Low voltage 0.4 kV	102.334

[1] Companies included: REG, ODR, ZEAG, ED, SWD, ENSO, PRE

Energy consumption: Electricity and gas meters provide information about the energy consumption of our customers.

Current situation at EnBW Regional AG

Reduction of network user charges
By decision issued on August 31, 2006, the Federal Network Agency approved the charges for use of our distribution networks in Baden-Württemberg. The network user charges were calculated in accordance with the statutory provisions (electricity network user charges decree) applicable since July 2005. The rules for calculation used as a basis were interpreted differently by the Federal Network Agency. It cut the network user charges by an average of approximately 14%. EnBW Regional AG and EnBW Transportnetze AG have therefore appealed against the decision of the Federal Network Agency. However, we have stayed proceedings because the issue is similar to that of TNG.

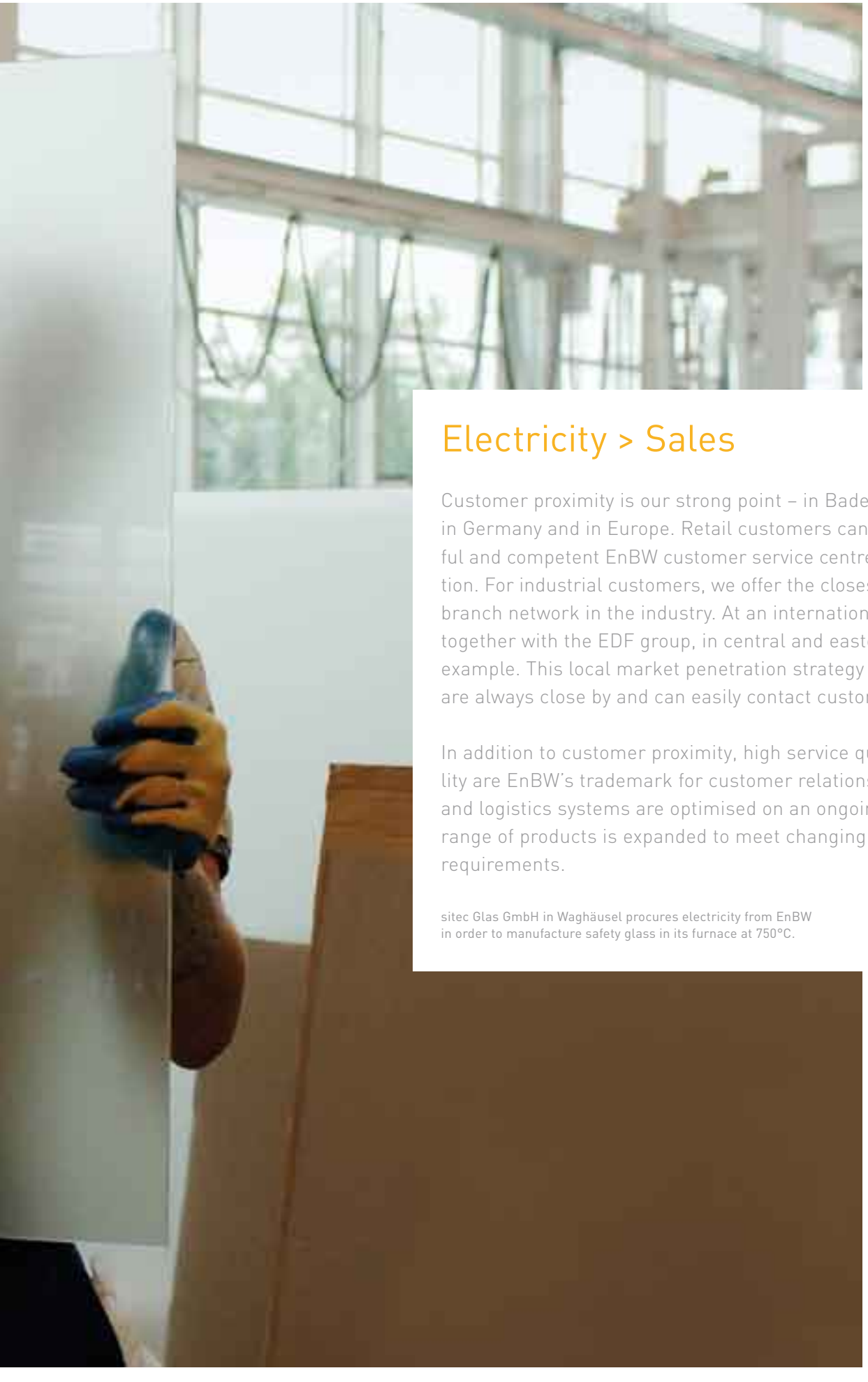
Spending on the electricity network
In 2006, EnBW Regional AG made further progress with its comprehensive restructuring programme and defined measures for maintaining a high-performance infrastructure. Expenditures on the electricity network alone are expected to come to € 1 billion between 2005 and 2010.

Reliable and safe network operation
Organisation, decision paths, planning projects and documentation as well as industrial safety and dangerous-goods regulations at EnBW Regional AG are in compliance with the applicable laws and directives. This is the conclusion reached by the German Technical and Scientific Association for Gas and Water (DVGW) and the Association of German network operators (VDN) on the basis of their audit conducted from 2004 to 2006 and the certification of all operating segments of REG in accordance with the technical safety management (TSM) provisions. This result underpins REG's competence as operator of reliable and safe electricity, gas, water and heat network systems.

Safety: Several hundred electronics installers and electricians look after EnBW's distribution network. When working with live current, protective clothing is vital.

Regional development
In 2006, EnBW Regional AG counted numerous new regions that were added to its supply territory as well as requests to be connected with its network, and recorded capacity increases with industrial and commercial customers. We attribute this to the favourable development of the economy as a whole in our network territory and also to the changed legal framework including the discontinuation in 2006 of subsidies for home buyers.

Control centres combined
Upon conclusion of the first phase of the control centre consolidation in 2006, the medium-voltage control centres Stuttgart, Metzingen, Ludwigsburg, Altbach and Herrenberg were combined at the Esslingen location. The second phase, which has already started, will see the combination of the Tuttlingen and Ravensburg control centres on one site in a first step.



Electricity > Sales

Customer proximity is our strong point – in Baden-Württemberg, in Germany and in Europe. Retail customers can contact our helpful and competent EnBW customer service centres for information. For industrial customers, we offer the closest-knit nationwide branch network in the industry. At an international level, we work together with the EDF group, in central and eastern Europe for example. This local market penetration strategy means that we are always close by and can easily contact customers personally.

In addition to customer proximity, high service quality and reliability are EnBW's trademark for customer relationships. Our sales and logistics systems are optimised on an ongoing basis and our range of products is expanded to meet changing customer requirements.

sitec Glas GmbH in Waghäusel procures electricity from EnBW in order to manufacture safety glass in its furnace at 750°C.

At freephone 0800 3629000, EnBW customers can ask their questions on all topics relating to energy. One-stop solutions – friendly, fast and direct.

The customers of EnBW

At EnBW, all customer groups find a variety of electricity products tailored to their individual needs as well as comprehensive customer service. Useful services and additional options round off the energy supplies. Through differentiated marketing, we ensure that products and extra benefits achieve the best effect in each customer segment.

Our retail customers benefit from a reliable and convenient electricity supply with the highest service standards. As a result, TÜV SÜD gave our retail customer service the seal of approval in 2006. Specialised offers relating to energy, construction or leisure topics create personal added value and raise customer satisfaction.

For industrial customers, we offer the closest-knit nationwide branch network in the industry. Our industrial and commercial customers find a range of electricity products to fit their individual procurement strategy in the best possible way – from the traditional all-round service through to complex sales and trade solutions. They are assisted by our account managers, who have expert knowledge of the industry concerned. Energy efficiency is accorded a special place in EnBW's consulting and information offerings. This helps companies to optimise their energy consumption to save costs and emissions. A range of other services – e.g. load, compressed-air or reactive-electricity analyses – round off our portfolio.

Our cooperation with public utilities and municipalities is characterised by many years of experience and mutual respect. We welcome feedback from customers and use it to develop marketable products. The "virtual slice of a power station" is one example of the new products developed specifically for the current procurement situation of public utilities. EnBW has energy-supply, franchise or service relations with more than 90% of the municipalities in Baden-Württemberg.

Trigema in Burladingen is Germany's largest T-shirt and tennis-wear manufacturer. The company's employees manufacture everything – from cotton material to the finished T-shirt. EnBW supplies the electricity for Germany's last four-stage textile production.

EnBW's multi-brand strategy

EnBW has a consistently synergetic multi-brand strategy. Every one of the group's national brands has a clearly defined role and its own look. The brand strategies are closely aligned.

The market leader in our home market Baden-Württemberg, we supply electricity, gas, energy and environmental services, district and local heat as well as water to retail, commercial and industrial customers as well as municipalities and public utilities. With our in-depth knowledge of the customer industries, we are the energy partner for industrial customers nationwide.

With the other brands of the group, we offer electricity supplies nationwide, tailored to the various customer groups. Small and medium-sized companies and chains are supplied under the Watt brand. We supply retail and commercial customers with low-price electricity under Yello, Germany's best known electricity brand. By choosing the NaturEnergie brand, ecologically minded customers receive electricity generated from hydro-electric power and support renewable energies.

The EnBW sales companies

EnBW Vertriebs- und Servicegesellschaft mbH is the key sales organisation within the EnBW group. It sells energy products and energy-related services in Baden-Württemberg and in Germany.

Yello Strom GmbH, a wholly-owned subsidiary of EnBW, has been selling electricity across Germany under this brand since 1999.

Watt Deutschland GmbH has supplied industrial enterprises, commercial and service companies as well as chains with electricity throughout Germany since 1998.

NaturEnergie AG was founded on October 1, 1998 as the first green electricity dealer on the German market for electricity and sells green Natur-Energie electricity nationwide. Ecologically minded commercial, industrial and service customers as well as household customers can opt for the NaturEnergie brand to support the generation of electricity from hydro-electric power and also the expansion of solar power plants and wind energy.

A range of investments at federal level (e.g. ENSO Strom AG) and state level (e.g. Energiedienst Holding AG) complement our sales organisation.

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At "Brauhaus zum Ritter" in Schwetzingen, the brewing master makes sure that he always has enough beer in the cellar for his guests. EnBW supplies the electricity which makes sure that the beer is nice and cool.

At the Karl Casper KG foundry in Remchingen, an induction melting plant is used to melt cast iron at a temperature of 1,550°C as well as aluminium and cast bronze. This requires a lot of energy.

One of our customer advisors on location at IMO Ingo Müller Oberflächentechnik in Königsbach-Stein. A leader in reel-to-reel and single-part plating technology, the company mainly uses electricity to heat vats as well as for control purposes and to electroplate materials.

Sales and marketing

Expansion of sales structures
EnBW systematically geared its sales structures further towards customer orientation and cost optimisation in 2006. By intensifying integrated marketing and developing new, innovative products, we managed to increase EnBW's earnings power once again.

Net price guarantee
Rising purchase costs made it necessary for us to adjust the pricing for retail and industrial customers in the course of 2006. We made a net price guarantee in October to our retail customers with the standard rate in Baden-Württemberg until March 2008.

Successful marketing campaigns
In the retail customer segment, EnBW reinforced its strong position in Baden-Württemberg with numerous customer loyalty and marketing measures.

The success of these campaigns is reflected, for example, in the positive response to the regional leisure planner or the "ProfiPlus" advantage scheme for commercial customers.

Success for Yello
Thanks to rigorous efforts to optimise processes, costs and yields, Yello Strom GmbH achieved a positive result again in 2006, reaching the largest number of customers since the formation of the company. Image perception and customer loyalty of the Yello Strom brand remain stable at a very high level. Brand awareness is also higher than the competition. For top service and fair conditions, Yello won the big electricity provider test at Focus Money and in a comparison with the top 100 electricity companies by Verivox came out top in terms of prices, service and customer friendliness.

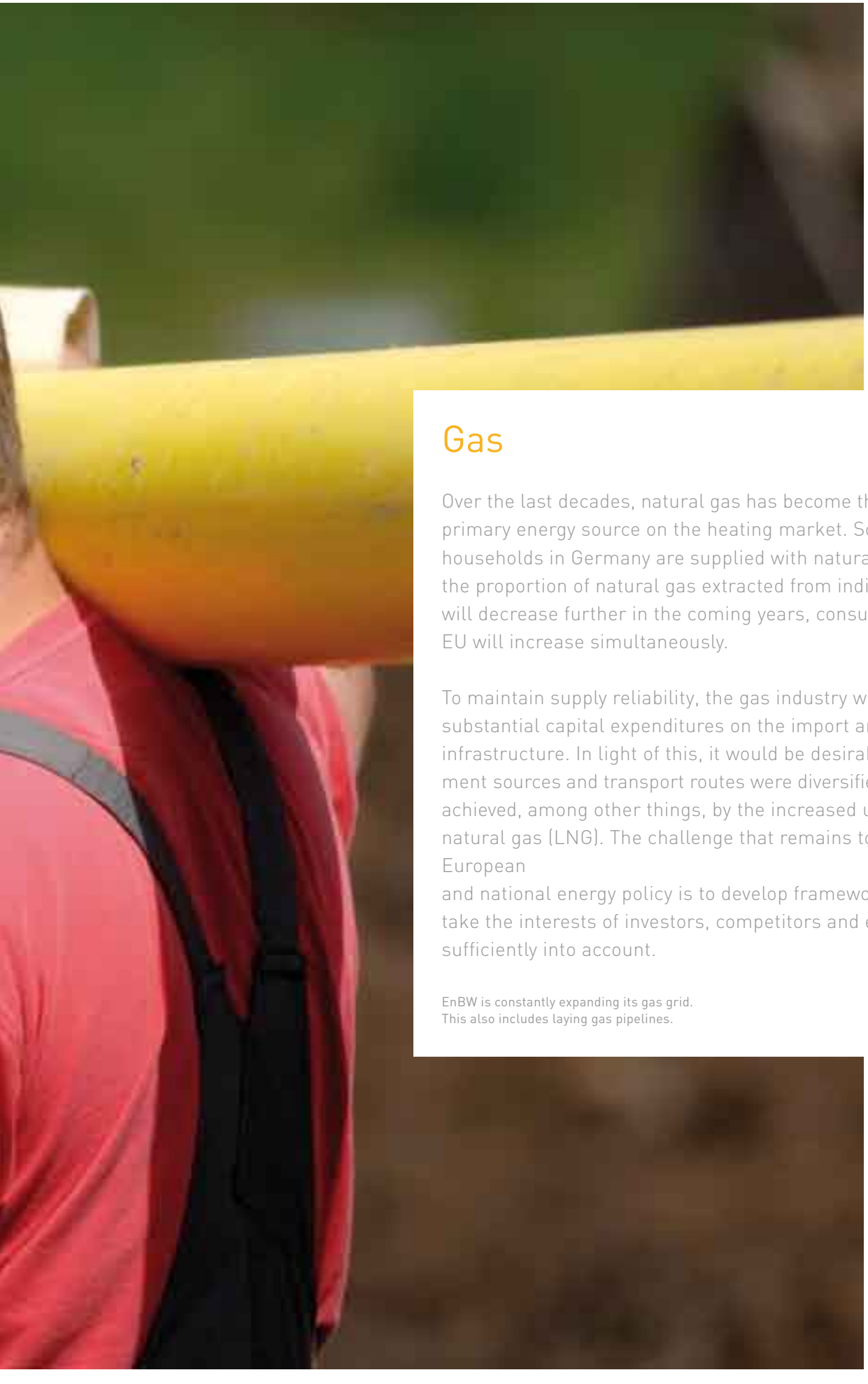
With its increased interventionism, the Federal Network Agency increased the network competition. This also had a positive impact on Yello's growth potential.

Rise in electricity sales
Despite keen competition in the industrial customer segment, EnBW successfully increased electricity sales again in the state of Baden-Württemberg and beyond. The cooperation with public utilities and redistributors in Baden-Württemberg was highly satisfactory.

Customer growth
Both in the retail and industrial customer segment, EnBW still has more customers outside its own network territory than any other German energy supply company.



Alb-Gold Teigwaren GmbH in Trochtelfingen makes egg pasta. 150,000 to 200,000 eggs are beaten automatically every day using electricity supplied by EnBW.



Gas

Over the last decades, natural gas has become the most important primary energy source on the heating market. Some 20 million households in Germany are supplied with natural gas today. While the proportion of natural gas extracted from indigenous sources will decrease further in the coming years, consumption within the EU will increase simultaneously.

To maintain supply reliability, the gas industry will need to make substantial capital expenditures on the import and transit infrastructure. In light of this, it would be desirable if the procurement sources and transport routes were diversified; this can be achieved, among other things, by the increased use of liquefied natural gas (LNG). The challenge that remains to be met for the European
and national energy policy is to develop framework conditions that take the interests of investors, competitors and end customers sufficiently into account.

EnBW is constantly expanding its gas grid.
This also includes laying gas pipelines.

Procurement stage

The gas procurement stage comprises the functions gas import, transmission, storage and trading/purchasing. The companies active at the gas procurement stage within the EnBW group are Gasversorgung Süddeutschland GmbH and EnBW Trading GmbH.

Gasversorgung Süddeutschland GmbH (GVS) – a 50:50 joint venture of EnBW and the Italian Eni S.p.A., one of the largest oil and gas explorers and gas importers worldwide – purchases natural gas from a number of importers. It transports the gas through its 1,892 km long modern, nationwide network of high-pressure pipelines. Its compressor stations make sure that gas pressure is sufficient throughout the entire grid; two large underground storage facilities manage seasonal fluctuations in consumption. GVS, one of the largest German regional grid gas companies, supplies some 750 towns and municipalities in Baden-Württemberg as well as in Vorarlberg, Liechtenstein and eastern Switzerland directly and indirectly.

Despite keen competition among redistributors and industrial customers, GVS managed to keep almost all of its customers in the current gas business year. Since it has become easier to gain access to the grid, competition can only rise in the years to come. GVS is facing this new challenge and actively shaping this development. Together with Eni Gas & Power S.p.A., it is the operator of one of 19 market territories set up to implement the new grid access model.

In the past year, EnBW Trading GmbH (ETG) expanded its proprietary trading portfolio further with physical gas quantities in Germany and the neighbouring countries. It buys gas not only as part of a structured sale of import quantities (gas release), but increasingly also via national and international trading hubs. As a member of the European Energy Exchange (EEX) in Leipzig, ETG supports the project to establish a functioning German wholesale market for gas.

Compressor station: Before the gas is transmitted, it has to be compressed first, like here in Blankenloch.

Maintenance: Mechanics servicing machines and the control system of the compressor station.

Distribution stage

The distribution stage comprises the operation of the gas grid as well as the marketing and sale of natural gas. The EnBW group principally covers this field in its home market Baden-Württemberg via EnBW Gas GmbH, Erdgas Südwest GmbH and EnBW Ostwürttemberg DonauRies AG.

With more than 245,000 customers, EnBW Gas GmbH is the largest retail distribution company for natural gas in Baden-Württemberg. The Greater Stuttgart region with a high concentration of business and industry is its main sales area. The direct supply territory extends into the Black Forest, to the Swabian Alb and Hohenlohe. But the company also supplies its customers in many other regions of Baden-Württemberg indirectly via its efficient subsidiaries.

Around 260 municipalities and districts as well as 13 public utilities and redistributors are served via EnBW Gas GmbH's natural gas grid. The pipeline dimensions are up to 500 mm in diameter, with pressure levels ranging from low pressure of < 100 mbar to high pressure of 70 bar. The local distribution grid is 3,239 km long, and the local transmission grid with high pressure has a length of 1,088 km. With regard to contracting technical services, EnBW Regional AG is responsible for the planning, construction and operation of the pipeline network of EnBW Gas GmbH.

An important goal of EnBW Gas GmbH is to intensify its selling activities. With regard to industrial customers and redistributors, it aims to reinforce its customer retention efforts; and in the retail and commercial customers segment, it wants to enhance utilisation of growth potential. The establishment of a gas grid in the Heckengäu region marked a major milestone in 2006. In its function as a service provider for EnBW Gas GmbH, EnBW Vertriebs- und Servicegesellschaft mbH contributes significantly to the sales activities aimed at retail and industrial customers as well as redistributors.

Erdgas Südwest GmbH – a subsidiary in which EnBW Gas GmbH holds a share of 51% – supplies natural gas to 54,000 households as well as renowned corporations and redistributors in 89 towns and cities. The supply territory extends into the regions North Baden, Oberschwaben, Swabian Alb, Reichenau and the Allensbach municipality including Hegne am Bodensee. In total, the company has a network of 3,347 km of pipelines. The company's responsibilities include gas sales, customer service and the expansion and operation of the regional transmission and distribution grids.

Erdgas Südwest GmbH utilises the synergy potential from its association with EnBW and concentrates on its core business. Its objective is to continue to increase the number of customers in its home territory with its efficient sales organisation and to improve customer loyalty.

Erdgas Südwest GmbH also makes its contribution to renewable energies: It supports farmers who want to generate and feed biogas into the public grid. The intention is to increase the share of biogas in natural gas consumption in future. To this end, it initiated the first biogas pilot project in 2006.

In the eastern Württemberg region and neighbouring parts of the state of Bavaria, EnBW Ostwürttemberg DonauRies AG (ODR) supplies its customers with electricity and natural gas. In the gas business, ODR solely serves the end customer business and achieves average annual growth rates of up to 10% (adjusted for temperature effects).

Gas tank: EnBW has several natural gas tanks to balance load fluctuations and for storage. It also operates filling stations for natural gas.

Service pipe: When developing new residential areas, EnBW employees take care of the gas connection.



ODR experienced dynamic growth in the last six years in the area of grid development. It provided 38 new municipalities – above all in rural areas – with access to the gas grid. This was made possible by an innovative construction technology and the new multi-division technology which cut development costs by half. Today, ODR supplies 63 municipalities with gas. In addition, it has offered its customers a fixed-price product since 2005.

Outside its home territory Baden-Württemberg, EnBW operates in the gas segment via its subsidiaries ENSO Erdgas GmbH and Stadtwerke Düsseldorf AG.

In eastern Germany we are represented by ENSO Erdgas GmbH (ENSO). The company buys and sells natural gas to supply its customers in eastern Saxony through its own pipelines. Due to rising world market prices for oil and natural gas, many gas suppliers have raised their gas prices across the entire value added chain. This caused a negative response from the public, including ENSO customers. ENSO was nevertheless able to defend its market position. To satisfy customer requests, a new range of products was launched in autumn 2006. It is the first time that customers have been offered the possibility to choose between different pricing models according to their preference. The majority of customers had opted for one of the new offers by the end of 2006.

Stadtwerke Düsseldorf AG supplies some 120,000 retail customers and 600 large-scale customers with natural gas. This makes the company one of the largest municipal gas supply companies in North Rhine-Westphalia. The company also has 17,000 lighting points and thus one of the largest public gas lighting networks in Germany.

Energy and environmental services

The energy and environmental services segment comprises several areas.

Energy services include not only internal support functions but also contracting services in the area of energy and media supply for industrial partners. Our services cover all stages of the value added chain in this area – from the first requirement analysis and planning to financing and implementation, and right through to the operation, maintenance and repair of generation facilities located at the customer.

Environmental services include the areas non-thermal and thermal waste disposal and water supply.

Untreated water is purified into drinking water in the rapid sand filter hall of Zweckverband Bodensee-Wasserversorgung in Sipplingen.

Energy services

EnBW Systeme Infrastruktur Support GmbH

EnBW Systeme Infrastruktur Support GmbH (SIS) provides internal support services within the EnBW group with extensive consulting and service functions.

With a highly qualified staff of around 1,400 employees, SIS assumes the consulting and service functions relating to the following aspects:

- Procurement and logistics
- Accounting and tax
- Law and insurance
- Payroll accounting and training
- Occupational health service
- Industrial safety
- Information processing
- Real estate
- Administration/infrastructure

With its expertise in these fields, SIS also makes a significant contribution to the decision-making process within the EnBW group.

EnBW Energy Solutions GmbH

EnBW Energy Solutions GmbH (ESG) provides energy-related services on the basis of contracting models and is one of the leading contracting companies in Germany in the industrial sector. As a partner to industry, it plans, builds, funds and operates decentralised plants for energy and media supply (e.g. steam, compressed air and cooling supplies). ESG supports its customers from the first requirement analysis and design right through to the future operation of the generating facilities. It makes the necessary capital expenditures and develops tailored operating models in agreement with the customer.

ESG focuses on larger steam and combined heat and power projects (CHP) such as the efficient generation of electricity and steam in industrial power stations. The company also realises overall concepts taking all media into account in the course of spin-offs into separate local operator companies. The supply of useful energy in the form of heat, cooling and compressed air rounds off its portfolio. ESG is certified in accordance with the DIN EN ISO 9001 standard. This guarantees its customers high quality standards.

Based on the good operating results of recent years, ESG plans to expand its market position further and continue to grow.

Contracting

The demands made on the complex energy and media supply for the core processes of industrial customers are extremely high in terms of availability and efficiency. An optimised, long-term energy supply concept has become a decisive competitive factor for the industry today. Management resources and capital tend to be increasingly focused on the core business. That is why many companies like to assign the responsible task of energy and media supply to an external specialist like EnBW Energy Solutions GmbH. ESG seeks the best solution from a technical and economic perspective to perform this task reliably in the long term. With state-of-the-art and efficient technology, contracting also helps to identify sustainable ecological potential.

Over the past year, ESG realised contracting solutions in projects on various scales and with customers from a wide range of industries. To illustrate the wide range of contracting projects, some examples of ESG's projects are given below.

Projects

EnBW Energy Solutions GmbH's operating company, Energiedienstleistungen Rhein-Neckar GmbH, commenced operation of a highly efficient CHP station based on natural gas on January 1, 2006. This has opened up further energetic and ecological potential for the customer Roche Diagnostics GmbH. Energy supply is ensured because the energy plants are operable on a stand-alone basis. The new decentralised gas and steam turbine plant with a total electrical output of 13 MW replaces the hard coal-fired boiler. Changing the fuel used will help to reduce annual CO_2 emissions considerably.

In the Rhine-Neckar region, ESG's operating company Energiedienstleistungen Rhein-Neckar GmbH was awarded a contract in July 2006 for operational responsibility for heat supply over the next ten years by Metzeler Automotive Profile Systems GmbH, a leading company worldwide for the manufacture of car bodywork sealing systems. Operation and monitoring of the contracting facilities as well as of all other projects in the region is managed centrally by the company's own control centre in Mannheim.

Since February 1, 2006 ESG has been in charge of operation of a CHP unit with an electrical output of around 240 kW and thermal energy output of approx. 400 kW for a major global chucking tool manufacturer, Röhm GmbH. Beforehand, ESG had carried out the planning, investment, construction and introduction of a new operating concept. By changing its fuel from oil to gas, Röhm GmbH achieved a sustainable, significant reduction of its annual energy costs and was able to reduce CO_2 emissions substantially. The term of the contact is 15 years.

ESG cemented its alliance of many years with the market leader Gambro Dialysatoren GmbH by concluding another contracting agreement on cooling supply in 2006. Rising production figures had made it necessary to expand the existing cooling system. By increasing the cooling capacity using state-of-the-art and efficient technology, ESG was able to reduce costs significantly for Gambro. The new cooling system went into operation on October 1, 2006 as planned. A new cooling water supply is currently under construction. Here, too, ESG is Gambros' contracting partner.

Cooling: At Gambro Dialysatoren GmbH in Hechingen, ESG increased cooling capacity by installing new air coolers.

Combined heat and power: Two bivalent-fueled gas turbines went into commercial operation at Roche Diagnostics GmbH in Mannheim.

Environmental services

Non-thermal waste disposal

The Act Governing the Sale, Return and Environmentally Sound Disposal of Electrical and Electronic Equipment (ElektroG) took effect on March 24, 2006. It transposes the European Directive on Waste Electrical and Electronic Equipment (WEEE) into German law. Seasoned disposal companies like R-plus Recycling GmbH in the U-plus group have proved their capability to solve problems and their flexibility and have shown that they are able to meet the new requirements from an organisational and a logistic perspective. R-plus uses its own recycling equipment and the necessary know-how to help manufacturers to fulfil the new legal requirements. R-plus sells a large percentage of recyclable materials such as aluminium, copper, glass or plastic granulate as sorted secondary raw materials, thus meeting the legally prescribed recycling quotas.

Following its implementation in Germany, the WEEE directive is now also being transposed into national law in France. France currently is the most important international market for U-plus for electronic waste recycling. Back in 2003, U-plus Umweltservice AG acquired the French electronic recycling company Valdelec S.A. In July 2006, U-plus accorded Paprec S.A., the French market leader for waste recycling including in particular industrial and domestic waste, a 50% shareholding in Valdelec. This Franco-German joint venture enables U-plus to expand its international activities in electronic waste recycling – and not least its presence and activities on the French market.

In Paprec, U-plus has found an experienced partner with a strong logistics function. The bundled market understanding and logistic resources from Paprec as well as the company's own expertise and available technologies are a solid basis for a successful joint performance of U-plus and Paprec on the French market.

In the course of EnBW's consistent portfolio grooming policy, U-plus spun off its shares in MAS Fahrzeugrecycling GmbH retroactively as of January 1, 2006. Since then, U-plus has focused its attention on its core business again: Collecting, sorting, recycling and disposing of residential and industrial waste.

Residual waste CHP station: Two new waste incineration boilers were commissioned at the Stuttgart-Münster station in early 2007.

Due to continuing technical issues at the mechanical-biological waste treatment plant in Heilbronn and insufficient profitability, the plant has been scheduled for closure in the first quarter of 2007. The EnBW group will continue to fulfil its contractual duties under waste disposal contracts previously performed by these facilities.

Thermal waste disposal

Good progress was made on the construction of a new replacement waste incineration boiler at the residual waste heating power station in Stuttgart-Münster. Once the main assembly had been completed, EnBW Kraftwerke AG commenced "hot" operations with its first waste incineration in late summer 2006. The new waste incineration boilers look set to start regular waste operations on schedule in early 2007. With the new plant, treatment capacity of the waste heating power station will rise from approximately 250,000 t/a to 420,000 t/a. The waste disposal agreement provides for the city of Stuttgart and the Esslingen and Rems-Murr districts to deliver at least 225,000 t/a to Münster. Another 185,000 t are reserved for T-plus GmbH. This capacity which is reserved for T-plus on a long-term basis will enable it to satisfy the existing residual waste contracts of the Reutlingen, Tübingen, Zollernalb and Constance areas as well as the Lake Constance district.

Waste incineration boilers: With the new boilers, treatment capacity of the residual waste CHP station will rise to approximately 420,000 t/a.

Water supplied by EnBW Regional AG

With a market share of around 11% EnBW is the largest water supplier in Baden-Württemberg in terms of sales volume, including pro-rata public utility holdings. With a volume of approximately 40.5 million m^3 sold, revenue from water supply came to € 79.7 million in 2006. The water loss rate was around 7%.

Water consumption in Germany declined again. As a result, in 2006 about 1.3 million m^3 less of water (-3.1%) were sold than in the prior year. The considerably higher average temperatures and the major sports event, the 2006 FIFA World Cup™, did nothing to change this trend.

EnBW Regional AG (REG) is EnBW's services provider in the field of water supply, both for final customers and municipalities. It expanded its activities again in 2006, concluding several operating contracts with municipalities and water districts.

Water supply: Thanks to the outstanding quality of the untreated water from Lake Constance it only takes three purification steps to transform it into top quality drinking water.

Among other things, REG commissioned the new Seelach water tank with a volume of 5,000 m^3 in 2006. The building costs totalled about € 2.3 million. Renovation and construction work has started on the overhead storage basin at Jahnstrasse in Stuttgart-Degerloch; the costs are estimated at around € 5.8 million. The new water storage basin has a volume of 15,000 m^3. During the summer, REG also started building the new overhead storage basin in Mühlbachhof with a capacity of 22,000 m^3. The costs for this major project that is scheduled for completion in 2010 are estimated at around € 8.9 million.

REG also made substantial investments in Stuttgart's water distribution network. These construction measures are an important contribution of the company to ensure that the state capital Stuttgart is supplied with drinking water safely and without disruption. In the course of the "US Army Water supply" operator project launched in Stuttgart in 2004, REG renewed several kilometres of water pipes in 2006 in the object networks of the Kelley and the Patch barracks and installed new metering plants for chlorine and fluorine. The modernisation measures for around € 5.5 million will be completed in 2007.

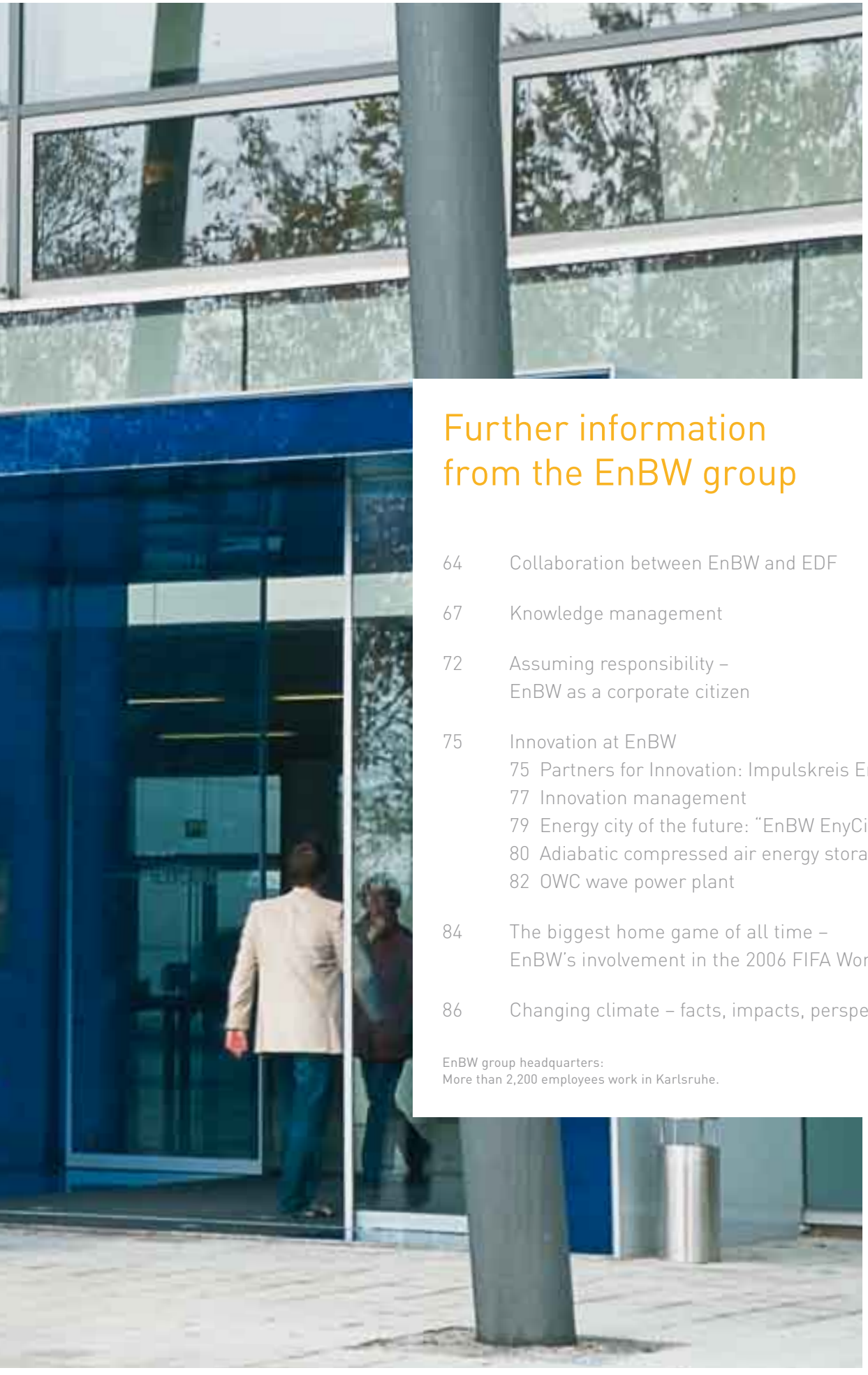
By realigning the REG subsidiary RBS wave GmbH to engineering services, REG successfully raised its profile as an operator and manager in the field of water and wastewater. As one of the largest providers of engineering services in Baden-Württemberg, RBS wave GmbH covers the entire range of water supply services from water procurement to treatment and storage right through to distribution. More than 80 employees work for RBS wave GmbH, providing services not only relating to water supply, but also for construction, energy and environmental technology as well as cathodic protection and gas leak detection. Its service spectrum is principally geared towards municipalities, water districts and public utilities in Baden-Württemberg and neighbouring regions.

Water supplied by Stadtwerke Düsseldorf AG

Stadtwerke Düsseldorf AG – the majority-owned EnBW company based in North Rhine-Westphalia – treats close to 50 million m^3 of drinking water a year. It is therefore one of the largest water suppliers in Germany. It supplies more than 600,000 people with drinking water in Düsseldorf and the surrounding area. In addition, the specialists at Stadtwerke Düsseldorf AG share their knowledge with India in an Economic Cross Cultural Programme of the European Union.

Water quality: In the waterworks and the laboratory of EnBW, employees constantly monitor the quality of the water.


EnBW



Further information from the EnBW group

EnBW group headquarters:
More than 2,200 employees work in Karlsruhe.

Collaboration between EnBW and EDF

Comex: Prof. Dr. Utz Claassen welcomes Pierre Gadonneix and Dr. Daniel Camus, President and CFO of EDF, to the Comex meeting in Stuttgart.

Investment in eastern Europe: OEW members visit PRE in Prague.

Shareholder composition

The shareholder composition of EnBW has not changed since April 8, 2005. Both large shareholders, Electricité de France (EDF) and Zweckverband Oberschwäbische Elektrizitätswerke (OEW), each hold 45.01% of the EnBW shares. For us, this stable shareholder composition is a valuable foundation on which we can build a successful, growth-driven future.

Appointment of Prof. Dr. Utz Claassen to EDF's Comité Exécutif

As part of EDF's European development strategy, Prof. Dr. Utz Claassen was appointed to EDF's Comité Exécutif – Comex for short – on March 20, 2006. The purpose of the committee is to facilitate an exchange of ideas on strategic issues. OEW and EDF therefore expressly welcomed the involvement of EnBW's CEO in this committee and the opportunity to hear EnBW's perspective.

Cooperation

EnBW and EDF intensified their cooperation in many areas with the common goal of further strengthening their lead in Europe. As part of the group-wide realignment of the reporting system, for example, the treasury functions of the two companies worked together to introduce a new computerised reporting system.

Regional cross-border collaboration

In collaboration with Electricité de Strasbourg (ES) and the regional branch EDF Alsace, EnBW expanded the cross-border network further in 2006 which had been established the year before. The partner companies joined forces in four working groups dealing with the following topics: The "Energy Route" project aims to attract more municipal representatives and the general public to plants on either side of the Rhine. A working group is currently investigating the possibilities of collaboration in the field of renewable energies. An analysis of the common ground and differences between franchise agreements is the objective of the "Franchises" project. By encouraging an exchange on activities at a political and business level, the aim is to achieve a common plan of action for cooperation with municipalities.

Joint focus of EnBW and EDF on Europe

EDF has turned the focus of its international activities towards Europe. The relationship between EnBW and EDF has thus been intensified further. In a constructive dialogue, the two companies agreed on the first cornerstones of an arrangement that includes a definition of the regional leadership responsibilities for certain markets. We see the activities of the two companies in Europe as an excellent basis for a successful development of EnBW. The coordinated management of the investments in central Europe – Poland, Slovakia, the Czech Republic and Hungary – is working well and has been developed further. EnBW and EDF will use the opportunities arising above all in south-eastern Europe from the opening of the market and liberalisation of the energy markets as well as further privatisations and further expand their alliance. A European key account management function allows specialists from EDF, EnBW and other group companies to successfully use the synergies of joint marketing in the key customer segment.

Synergies

EnBW and EDF intensified and enhanced their cooperation by entering into new fields. For the third time in a row, they thus succeeded in increasing the cost savings achieved in the course of the synergy project launched in 2004. Since then, the project has resulted in financial savings of several millions.

The companies have continued their search for financial and knowledge-based synergy potential. In 2006, for instance, additional areas of the conventional generation of electricity were incorporated in the joint synergy project as a result.

Synergies will remain an important topic for EnBW; by continually optimising and intensifying their cooperation, EnBW and EDF will generate considerable value added for both companies.

Exchange of personnel

The cooperation between EnBW and EDF is supported to a large extent by the employees of the two companies, many of whom have worked for several years in the partner company or a subsidiary abroad. Some 15 EnBW employees are at EDF in France permanently, with around 20 at other international EnBW or EDF locations (Poland, Hungary, Czech Republic, Slovakia, Belgium, UK, Vietnam and the United Arab Emirates); 25 EDF colleagues are currently working at EnBW. We will continue to encourage and promote international mobility in the two companies in 2007.

In the personnel area, EnBW and EDF also work together and hold numerous joint events and seminars. The annual Human Resources Convention of the EDF group, for instance, took place in Paris in January 2006. This gave executives and staff from HR the opportunity to exchange views on specific current events and the strategy of the EDF group.

The Leadership Twinning Programme, which won the EDF award "Victoire du Commerce" in March 2006, was relaunched in September 2006. A similar group-wide exchange between employees from the purchasing departments of EnBW, EDF, EDF Energy and Edison is to be introduced in 2007. The pilot project was launched in October 2006.

European Institute for Energy Research

EnBW used the year 2006 to intensify collaboration with the European Institute for Energy Research (ElfER), initiating several new joint projects. EDF and the University of Karlsruhe founded the Institute in 2001. A project in the area of technology and innovation management deals with the simulation of roadmaps for the development of energy systems in new cities. Together with ElfER, the EnBW research and development division conducts research on new technologies to optimise the use of geothermal energy close to the surface. They also deal with issues relating to the use of small CHP plants on-site at customers or the effects of climate change on the energy industry and possible adaptation strategies. Another project is aimed at establishing a network between municipalities in Baden-Württemberg and Alsace. The network is intended to provide municipalities with up-to-date information to ensure innovative and sustainable energy supply. Other projects round off the broad range of joint research topics of EnBW and ElfER.

Knowledge management

We see knowledge management as an important factor for the control of strategic and operative complexity and thus as a basis for the success of our company. We have set ourselves the target of becoming number one in knowledge management and ensuring the best possible support for and development of the potential of our people. The goal is to gear the existing know-how and potential of our employees to future requirements today and thus to pave the way at an early stage for sustainable success. This is also reflected in the head note on knowledge management which was developed by EnBW staff during the mission development process: "We share our knowledge and advance through continuous learning."

It is vital that we keep our resource "knowledge" up to date and continue advancing it. The developments in our market environment and the increasingly intensive debates about topics such as intellectual capital, copyrights, education and training in industry and society show just how important this is.

Know-how: EnBW encourages efficient knowledge sharing.

Management of our intellectual capital

We prepared a consolidated "knowledge balance sheet" for the electricity segment for the first time in the fiscal year 2005. In 2006, we supplemented it with company-specific knowledge balance sheets for the key operating companies in the gas segment as well as those with central functions in the energy and environmental services segment. In this context, we determined the factors which play a major role in our reaching the corporate targets, and derived a knowledge management action plan on that basis. The aggregated results of all company-specific knowledge balance sheets confirmed that we have identified the relevant focal areas for action and are on the right track with the measures initiated.

Management and social competence

We have supplemented our range of development courses offered with Job Family Programmes with the aim of specifically fostering employees with management potential. These programmes have been devised to prepare employees for the possibility of assuming a managerial function within the value added chain. Having completed the Job Family Programme "Networks/distribution", 13 employees are currently participating in the "Marketing/sales" programme. In spring 2007, the "Central functions" programme will be launched, followed by the "Generation" programme.

The factors influencing the intellectual capital of EnBW

Human capital	Structural capital	Relationship capital
HC1. Technical competence	**SC1. Corporate culture**	**RC1. Relations with customers**
Technical competence combines all specialist knowledge, abilities and skills of the employees for the successful implementation of business processes.	The corporate culture comprises all shared values and standards which characterise dealings with one another, the exchange of know-how and the way of working.	Relations with customers are all business relationships with industrial and retail customers.
HC2. Management and social competence	**SC2. Communication and organisation**	**RC2. Relations with cooperation partners**
We understand management and social competence to be the ability to tackle complex issues and tasks that go beyond one's own sphere of responsibility in a determined and rigorous way and to cooperate constructively with the functions concerned in order to find the best solution for the company. It also includes the ability to lead people and to create a motivating environment.	Communication and organisation combines all structures and processes which ensure and manage the division of work and the need to coordinate work.	Relations with cooperation partners are relationships with suppliers, research and development institutes and other business associates.
HC3. Employee motivation	**SC3. Innovation**	**RC3. Relations with stakeholders**
We understand employee motivation to be both the willingness to perform and to show commitment and also the identification of the employees with their job and their company.	Innovation comprises the structures and processes which support the development of new products and services as well as procedural and process improvements.	Relations with stakeholders are relationships with external stakeholders such as investors, authorities, ministries, municipalities, political parties, the world of politics, trade unions, professional associations, environmental and nature protection associations, the general public and the press.

Motivation

In conjunction with the market research institute TNS Infratest, we have developed a concept for an employee survey as a tool for the systematic management of employee commitment.

Communication and organisation

The objective of a project implemented in 2006 was to optimise the flow of information between the companies operating in the electricity segment. The actions identified for the critical interfaces are now being implemented or have already been implemented and established in practice.

Corporate culture

The values as formulated in the corporate philosophy of EnBW reflect EnBW's corporate culture. In corporate philosophy meetings, employees had the opportunity to reflect on the importance of the corporate philosophy for their area and make suggestions for improvement in their working environments. This way, we successfully raised the awareness of our employees for the corporate philosophy.

Following the introduction of the knowledge balance sheet in 2005, we established a continuous follow-up procedure for the measures derived from the company-specific knowledge balance sheets in 2006.

The experience that we have gained in preparing knowledge balance sheets has also benefited one of our sponsors: The Karlsruhe Sport Club (KSC). Thanks to our traditional close ties with the KSC, we were able to share our know-how in the professional management of intellectual capital when the KSC prepared its knowledge balance sheet.

The response to our results from the consolidated knowledge balance sheet published in the 2005 annual report and our knowledge balance sheet activities was highly positive. It confirms that we are on the right track with our internal measurement process for intellectual capital.

Human capital:

General data	**2006**
Headcount[1] as of December 31, 2006	21,148
Technical competence	
Salaried employees with university, university of applied sciences or vocational college degree	17%
Salaried employees with technical school training or apprenticeship	72%
Employees with school-leaving certificates without further formal training	11%
Average years of service	15.4
Training days per employee internal[2]	3.3
Job rotation in 2006[2]	3.6%
Management and social competence	
Number of managers (upper, middle management) appraised in internal management review[2]	91%
Motivation	
Employee turnover (all exits without internal transfers)	6.1%

[1] Number of employees without apprentices/trainees and without inactive employees
[2] As a percentage of the main EnBW companies

Safeguarding expert knowledge

For us, systematically accompanying specialists and executives when they change job is one of the core activities of professional knowledge management: This way, we can reduce the loss of expertise, shorten learning periods and ensure continuity when tasks are passed on to other employees.

That is why we developed a concept in 2006 to safeguard expert knowledge that is specifically tailored to our needs. The experience gained with the initial implementation has already been integrated in the concept which we are planning to offer as an internal service throughout the group.

Knowledge sharing

A key component of our knowledge management is to support effective knowledge sharing. Within the EnBW group, knowledge sharing is systematically put into practice in Communities of Practice and the specialist working groups outside the group in which we are represented.

Since 2006, EnBW has had a group-wide Community of Practice on the topic of knowledge management. It is the forerunner of other practice groups aimed at making the activities of EnBW more transparent in strategically relevant competence areas and encouraging the employees in those areas to work more closely together and intensifying cross-segment knowledge sharing.

Our commitment in external specialist working groups offers an opportunity to glean new information and to share experiences.

Knowledge sharing naturally also involves training measures. Some 100 specialists who, besides line or staff responsibilities, work as trainers or speakers for the EnBW Academy make a fundamental contribution to knowledge management. They account for more than a quarter of the internal training courses and seminars, passing on their EnBW-specific expertise to colleagues within the group.

Apart from the traditional forms of training which we have practiced for many years, we have also introduced new, innovative learning methods with success. With the EnBW Knowledge Cup 2006, a quiz on the intranet that follows the game-based learning methodology, we were able to pass on specialist know-how to our employees in a targeted manner. The fun factor and the motivating competitive nature of the quiz enhanced the learning effect.

We also implement knowledge sharing by supporting and taking an active part in specialist events and by publishing articles in specialist journals. The resulting contacts and responses give us valuable feedback and suggestions for improving our measures; they also help us to see where we are now in terms of knowledge management. The response to these activities visible to the public was highly positive and encourages us to continue along this path and consistently refine our knowledge management.

Outlook

Following the successful introduction of the knowledge balance sheets, we want to use the tool to assess the measures taken at regular intervals and identify and exploit further potential for optimisation. In addition, we plan to identify those competence areas on the basis of the knowledge balance sheet that are of such key importance for the future of EnBW that they deserve to be developed systematically from a knowledge management perspective. We also plan to expand our training programme to enable our executives to analyse their own performance processes better with respect to the competences required and the information and knowledge flows, thus helping them to draw conclusions more easily about the steps needed to achieve improvements.

Communication: Employees network with one another in practice groups.

Assuming responsibility
EnBW as a corporate citizen

EnBW is more than an economic player. As a supplier, we have a duty to take precautions. As energy is increasingly being seen as a kind of "basic need", we also have a duty to take care of others. This basic understanding means that the company has a special responsibility for its employees, customers and business partners and also to its whole social environment: EnBW sees itself as a corporate citizen.

Responsibility for society

Corporate citizenship describes a general social responsibility of companies. EnBW fulfils this responsibility by organising and sponsoring activities and events in the areas of sport, art and culture as well as health and social affairs. In 2006, for example, we supported the FIFA World Cup™ as national sponsor, making sure that this major event would be a big success for the environment: We provided the electricity needed in the stadiums and in the media and hospitality areas – some 13 million kWh – from renewable energy sources, thus making a contribution to climate protection.

Moreover, we support the Bundesliga football clubs Karlsruher SC and VfB Stuttgart. Our support also extends to sport for talented young athletes and mass sports, supporting as we do the Schwäbische Turnerbund and local clubs. The region's annual "Tour de Ländle" is fun and encourages people to do sport; EnBW has been a co-organiser of this event for five years, which is the largest recreational cycling tour in Germany with some 30,000 participants.

In the areas art and culture our activities are equally varied: We are the partner of one of the most important cultural institutions in Germany, the Center for Art and Media (ZKM) in Karlsruhe. And "Ateliereinblicke", the series of exhibitions initiated and sponsored by us, promotes talented young artists from Baden-Württemberg, while the "Showroom" in our representative office in the capital also offers space for international art. On a civic note we support "Echt gut! Ehrenamt in Baden-Württemberg", the campaign to support voluntary work in the region, by awarding the special prize "EnBW-Ehrenamt-Impuls".

EnBW rain forest foundation: EnBW gets involved in central Vietnam.

Our responsibility as an energy supplier

As an energy group, we have a duty to develop innovative approaches for the energy supply of tomorrow. This specific responsibility – our corporate social responsibility – is expressed in our commitment to the environment, technology and knowledge. The emphasis here is on energy efficiency and climate protection. Our philosophy here is sustainability as part of our economic, ecological and social responsibility; our aim is to enable future generations to enjoy the same – or better – living conditions. That is why our corporate philosophy is: "We act with foresight, conscious at all times of our special responsibility for the environment and society."

Research and development activities (see pages 88–90 of the financial report) and the development of innovations are the driving forces for progress and a guarantee when it comes to securing the future, not only for EnBW. That is why we take part in nationwide initiatives whose key topics are innovation and energy efficiency. For example, the CEO of EnBW chaired the "Impulskreis Energie" as part of the initiative "Partners for Innovation". In addition, Prof. Dr. Utz Claassen launched the initiative "Innovation strategies and knowledge management" together with the President of the Federation of German Industries (BDI) Jürgen Thumann.

We also take part in the industry and science research union and the research and energy efficiency working group which emerged from the first energy summit convened by the federal government.

By creating energy efficiency networks, we also make our knowledge regarding energy-saving potential available to other companies. And with competitions such as "EnBW Energy Impetus 2025" and prizes like the innovation prize of German industry for start-up companies we encourage promising developments for the future. As the regional sponsor of the nationwide initiative "Jugend denkt Zukunft" (youth thinks future) we promote the decision-makers of tomorrow. School children from all types of schools can spend five days going through an exemplary innovative process at our company based on a strategy game, actively get to grips with the topic energy of the future and finally develop their own products and marketing strategies.

We support research and knowledge sharing with our involvement at the International University of Bruchsal, our Baden-Württemberg Energy Research Foundation and the EnBW Foundation. The latter awards the Heinrich Hertz prize and supports future-oriented work of outstanding scientists. We also support the Phaeno Science Center in Wolfsburg and the Science House in Rust where visitors of all ages can learn about interesting phenomena of natural science. The EnBW rain forest foundation is our contribution towards the protection and preservation of rain forests, and we sponsor related research projects.

We want to enter into discourse about economic and social policy and make our own suggestions. By holding conferences, we look at topics in depth and create regional, national and international forums. We held the 1st German climate congress "Changing Climate – Facts, Impacts, Perspectives" in Berlin, thus bringing together international experts and decision-makers. Our aim was to develop joint perspectives for the challenges posed by climate change. The congress was the first time that a business enterprise made this topic its own and formulated a closing document – the "Berlin Declaration" – together with politicians and scientists. Planning for the 2nd German climate congress is already underway (see pages 86–87).

Climate change will also be the topic of our latest volume in the series of publications "Ethik, Energie, Ästhetik" (ethics, energy, aesthetics). This series covers topics of social debates. The first volume entitled "Das Helle und das Dunkle" focuses on the light and the dark, and even won a design award. The second volume, "Das neue Denken – Das Neue denken" (The New Thinking – Thinking the New), investigates the topic of innovation and the creation of new things and ideas.

Sustainability: EnBW also helps preserve rain forests.

Our environmental management

EnBW was the first large energy company in Germany to have its environmental management system certified under the international standard ISO 14001. In a first step, TÜV Rheinland audited and certified the environmental management system of EnBW's holding company and its implementation at EnBW Regional AG in 2006. In a next step, other group companies that are integrated in the system will follow in the course of 2007: EnBW Kernkraft GmbH, EnBW Gas GmbH, EnBW Kraftwerke AG and EnBW Systeme Infrastruktur Support GmbH.

EnBW thus takes the lead again, this time in environmental protection, showing its commitment to a process of continuous improvement of its environmental performance. In the 2005 annual report, we announced the development of binding general prescriptions for environmental protection in the form of an environmental management system at group level. Having now obtained the certification from TÜV Rheinland, we have reached this goal.

TÜV Rheinland testified to EnBW's highly professional approach to the development of an environmental management system, which sets out binding rules for environmental protection. Among other things, the environmental management system prescribes optimisation of organisational processes and more clarity with respect to interfaces and responsibilities. The aim is to prevent negative effects on the environment in all areas in the best possible way and continuously improve environmental performance and the environmental management system.

ISO 14001 is a worldwide standard which defines a procedure to systematically anchor environmental protection within the management of a company.

Innovation at EnBW

Partners for Innovation: Impulskreis Energie

Leading representatives of industry, science, politics and trade unions met for the first time in January 2004 at the invitation of Germany's chancellor at that time, Gerhard Schröder, in order to pool the innovative power of their companies and institutions as "Partners for Innovation". The common goal was to turn good ideas into marketable products more quickly and to create a new climate for new beginnings and innovation in Germany. The closing event for this successful initiative took place on October 26, 2006 in the presence of Germany's chancellor Dr. Angela Merkel.

Prof. Dr. Utz Claassen, CEO of EnBW, was one of the partners of this initiative. He had been given responsibility for the central topic energy. The existing "Impulskreis Energie" defined his brief as follows: To identify potential for innovations relating to energy, highlight possibilities of use and derive recommendations for politics, industry and the population on that basis. The key energy topics generation, transmission and distribution were considered above all under the aspects of reducing emissions, enhancing efficiency, saving energy and expanding renewable energies.

Partners for Innovation: Chancellor Dr. Angela Merkel speaks at the closing event of this successful initiative.

In light of the limited availability of the fossil primary energy sources oil, gas and coal, the work of "Impulskreis Energie" has lost none of its original urgency. Electricity and the price of electricity have a direct impact on our well-being, not just in economic terms. The process of energy generation must therefore be economical, efficient, climate-friendly and safe.

The two dozen members of "Impulskreis Energie" formulated "Recommendations for designing the German innovative environment in the energy sector". With the involvement of the relevant ministries (environment, economy, research), they developed a "Vision 2030" together and realised the first lighthouse projects that will bring us a step closer to the future of energy.

The results of the largest joint innovation initiative ever in Germany on the topic of energy show that EnBW's efforts were all well worthwhile. With the cooperation of experts from industry, politics and science, a comprehensive package of measures, assessments and recommendations has been developed that can guide and promote "energy" as a discipline in Germany.

Parallel to the content-based collaboration, a very cooperative working relationship developed between the participants of "Impulskreis Energie", which they rated very highly. These contacts will continue in one form or another beyond "Impulskreis Energie".

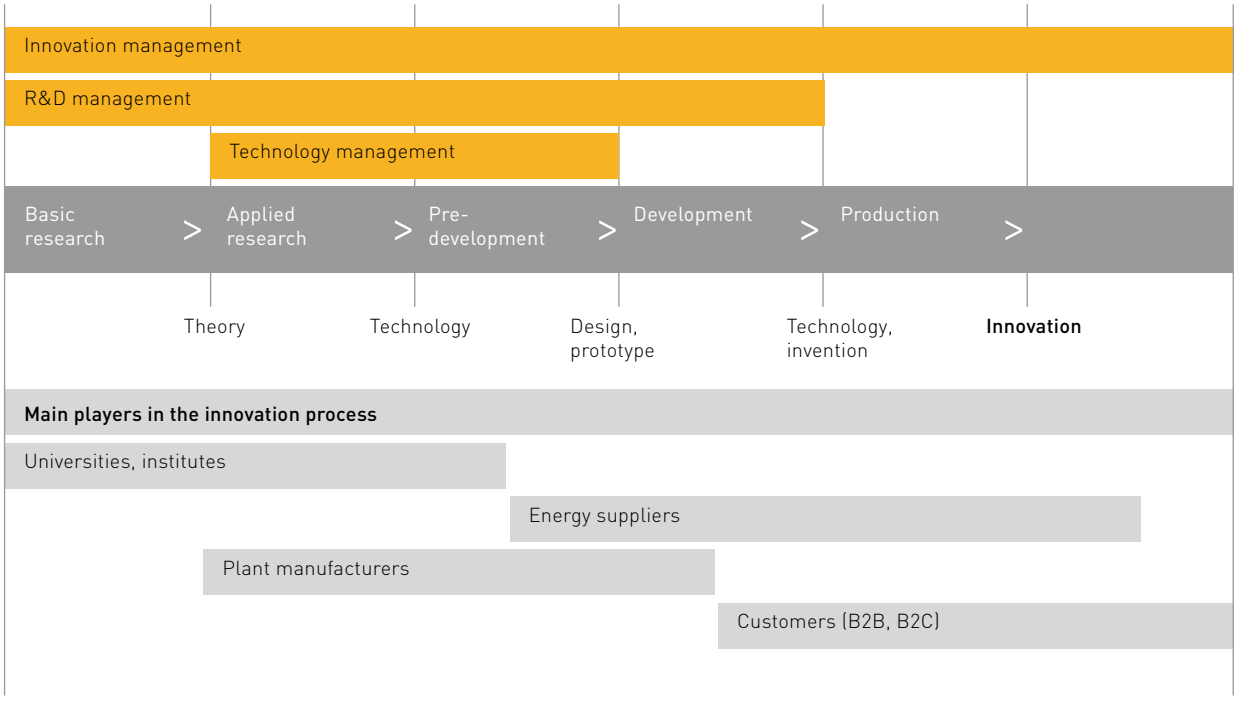
Based on this experience, the aim of EnBW is to continue this successfully launched, positive process of cooperation between industry, science and politics in the important field of the future that energy is. Through the work in "Impulskreis Energie", EnBW also received additional impetus for the innovation process within the group which it has already begun to implement.

Impulskreis Energie: With its solar power system, the Erich-Kästner school in Blankenloch-Stutensee is an energy-efficient school.

Innovation management

In a highly competitive economy, a company's innovative power is a vital factor for sustainable success. To be successful, companies must be capable of adapting their processes and structures in such a way that they can always react quickly and effectively to a change in market conditions. Companies with a highly developed innovative power have much higher earnings power.

European and German energy suppliers in particular are facing the special challenges of liberalisation: They must transform themselves from monopolists to competitors in the marketplace. This is all the more difficult because, for the customer, electricity is an interchangeable product. At EnBW we have realised that we will only be able to secure and expand our market position and earnings power in the long term if we have innovative products to set us apart from the competition. To this end, we are systematically looking for new growth areas and developing new products and services.



The scope of innovation management covers the entire value added chain.

Ideas for technical innovations, new services, new business models or new organisational structures are systematically assessed. Only those ideas that have the potential to increase our company's economic success are pursued further. In a structured innovation process, we turn them into new EnBW products and services and integrate them into the value added chain. Innovation management plays a decisive steering and structuring role in this process and ensures that it is implemented successfully.

The new technology and innovation management division created at the group's holding company manages all innovation processes centrally for EnBW. The division channels expertise and resources from the whole company into an innovation project with a view to developing the innovation. Innovation management guarantees that innovations at EnBW do not just happen by chance, but are purposefully encouraged and promoted with the most efficient use of resources. The framework for action is set by the innovation strategy, which in turn is harmonised with the overall strategy of the group.

By continuously adapting the innovation strategy to changing market conditions, we make sure that EnBW's innovative power is always geared towards the needs of the customer and guided by technological progress. All employees must be familiar with the statements and aims of the innovation strategy and able to understand them.

Our innovation management ensures that our company can provide our customers with the best products and services and will continue to do so in the future and guarantee its employees the best jobs in the long term. With its highly developed innovative power, EnBW is an attractive partner for customers, employees and shareholders alike.

Energy city of the future: "EnBW EnyCity"

Conurbations are areas with a particularly high energy consumption. Emerging countries as well as industrialised countries are expected to become progressively more and more urbanised. Today, 40 to 50% of the world's population live in conurbations, by 2030 this figure will be roughly 60 to 70%. The rising consumption of energy in emerging countries will therefore largely be concentrated on these areas. The "EnBW EnyCity" concept developed by EnBW makes it possible to manage this development sensibly under economic and ecological aspects.

EnBW Eny City: EnBW's modular planning system allows cost-effective reduction of primary energy needs and emissions and thus to optimise urban energy supply worldwide.

This concept is based on determining the best combination of tried and tested technologies for the supply of energy to conurbations. The spectrum of technologies and methods applied ranges from highly efficient power stations to local technologies such as heat pumps, fuel cells and renewable energies, or new construction engineering technologies and materials for energy-efficient buildings. During the implementation phase, the "EnBW EnyCity" model helps to monitor the impact of changing conditions on the optimisation targets. The planning criteria for the further development of the city can then be adjusted accordingly.

If a city were to be designed today in China using the "EnBW EnyCity" standards, its CO_2 emissions would be some 25% lower than those of a traditionally developed Chinese city of the same size; its primary energy needs would be up to 30% lower. This conserves energy resources and also means that investors are less dependent on rising energy prices.
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The Research Institute for Energy Economy (FfE) in Munich has reviewed and assessed the savings potential created by the "EnBW EnyCity" optimisation system for all German cities with 100,000 or more inhabitants: These 82 cities could save a total of 45 million MWh of primary energy every year; the CO_2 emissions could be reduced by some 100 million t CO_2 by 2030 and by a total of 320 million t CO_2 by 2050. Various German cities are currently examining the prerequisites for implementation. The interest exhibited by municipalities in the "EnBW EnyCity" optimisation method is extremely high.

In light of ever scarcer resources and climate change, the balance of economy and ecology is becoming an increasingly pressing consideration for capital expenditures on energy-generating plant and equipment and infrastructure for supplying conurbations. Since power plants require high capital expenditures and have a life of several decades, they have a long-term effect for investors and the environment; planning errors can only be rectified at high cost. The "EnBW EnyCity" concept takes into account and optimises the entire urban energy system with all its framework conditions. This makes it a reliable basis for decision-makers.

Adiabatic compressed air energy storage plant

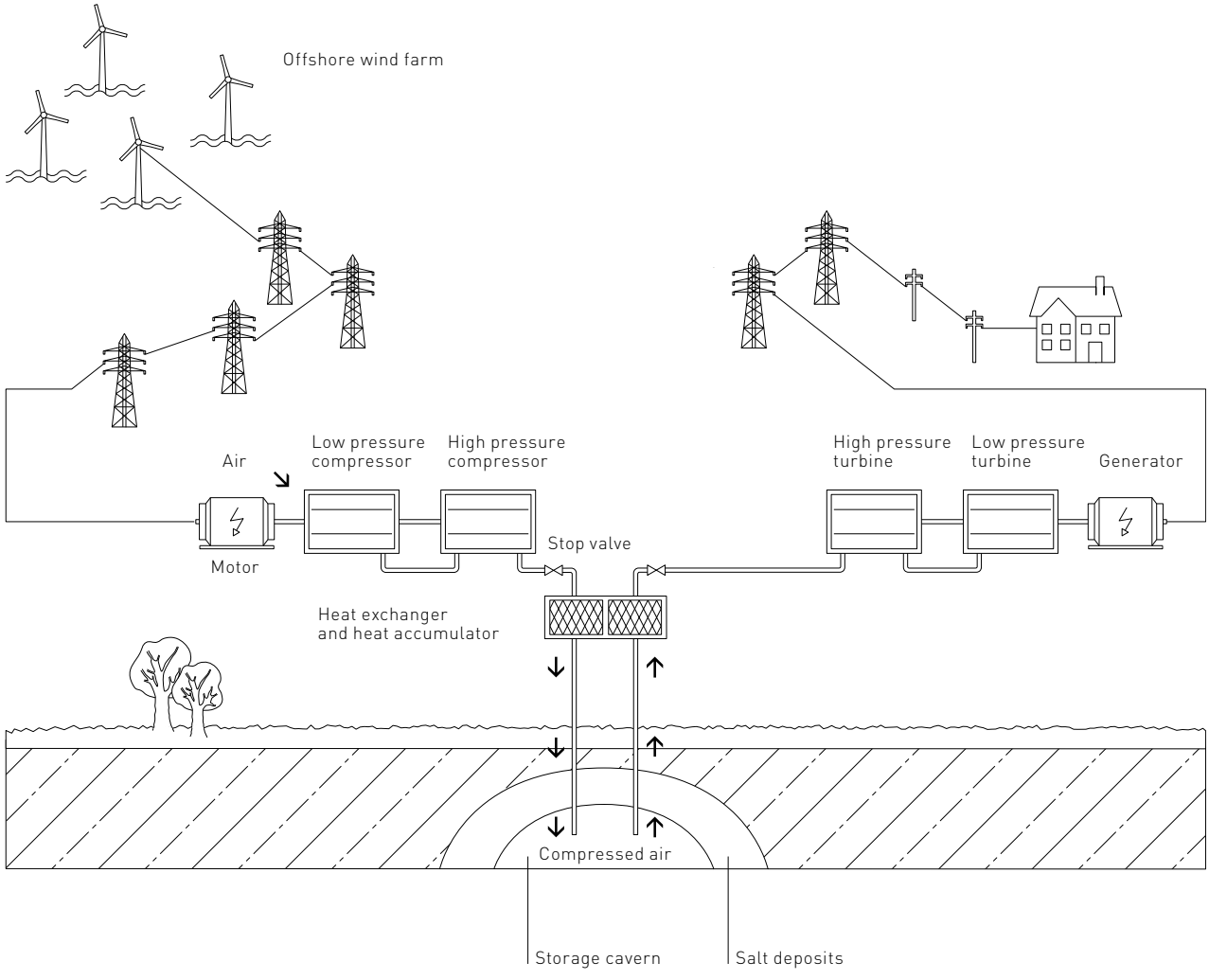
EnBW plans to build and operate the first adiabatic compressed air energy storage plant in the world at a location in Lower Saxony. EnBW has the support of the state of Lower Saxony for this project. The number of wind power plants in northern Germany and the continued addition of new offshore wind power plants calls for long-term investments in efficient new energy storage facilities in close proximity to the wind power plants in order to ensure the required consistency of energy flows in the German transmission grid. Adiabatic compressed air energy storage plants can be built in the direct vicinity of the north-German wind farms because the north-German plains offer ideal geological conditions for the construction of large underground storage caverns for compressed air. In future, they could assume a function in the German electricity supply system comparable to alpine water storage power plants.

In compressed air energy storage plants, air is compressed by electronically powered turbocompressors and pressed into an underground cavern. In diabatic plants, the heat generated during compression of the air is conducted to the outside.

To generate electricity, the compressed air is drawn from the cavern and released via a gas turbine. For this purpose, it has to be heated up again using natural gas, for example. The first diabatic compressed air energy storage plants are operated in Germany (Huntdorf) and in the United States (McIntosh, Alabama); they reach a maximum degree of efficiency of 54%. They have no potential for a further significant increase in efficiency. The ecological and economic implications of this technology have prevented introduction of the compressed air energy storage plants on the market to date.

In contrast to the diabatic plants, the adiabatic compressed air energy storage plant planned by EnBW does not exchange heat with the environment and reaches a degree of efficiency of 70%, operating entirely without fossil fuels. The heat generated during compression of the air is transferred to a heat accumulator. The air is stored in a cavern at a low temperature. To generate energy, the stored air is conducted from the cavern via the heat accumulator and heated there until it can be transferred to the air turbine from the outside without any further addition of heat.

How it works: Compressed air energy storage plant



OWC wave power plant

Together with Voith Siemens Hydro Power Generation GmbH & Co. KG and in alliance with the state of Lower Saxony, EnBW is seeking to develop the first German OWC wave power plant on the German North Sea coast. This type of power plant generates electricity by converting wave energy by means of an oscillating water column (OWC). As a demonstration facility, the power plant will make an important contribution towards establishing this technology for use around the globe.

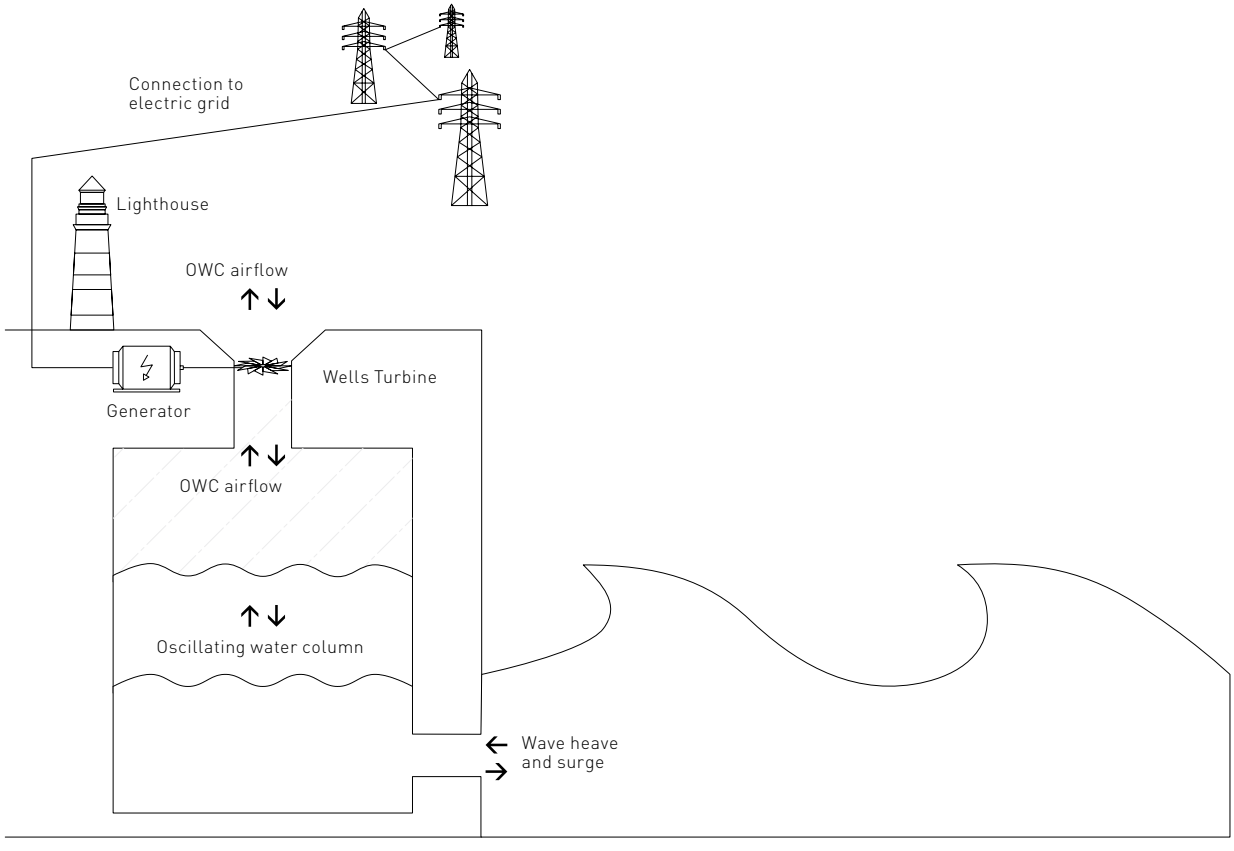
Along the European coastlines, the power inherent in sea waves theoretically has a potential of 300 GW. Assuming a realistic exploitation of 10% of this potential, some ten million households can be supplied with electricity. Like all other renewable energies, wave power will not be able to cover our energy needs on its own in the long term. However, it can make a significant contribution to the future energy mix.

The world's first and only OWC wave power plant to date is operated on the Isle of Islay in Scotland. This wave energy converter which is installed onshore was developed by the Voith Siemens Hydro subsidiary Wavegen Ltd., which also operates the power plant. The plant has an installed output of 500 kW.

The underlying principle of this innovative type of power plant is based on an oscillating water column caused by the wave movement, compressing and then releasing the air column trapped above it. This takes place in a concrete chamber that is built on the coast and open to the sea below the surface of the water. The pressure differences that occur in this chamber are compensated by a newly developed air turbine and converted to electrical power in the process. Electricity is generated without any fuel, i.e. entirely without any emissions.

Steep coastlines are the most suitable locations for such OWC wave power plants. The power plant envisaged by EnBW is to be integrated into existing coastal protection facilities on the North Sea coast.

How it works: OWC wave power plant



The biggest home game of all time
EnBW's involvement in the 2006 FIFA World Cup™

With its motto "The biggest home game of all time", EnBW supported the 2006 FIFA Football World Cup™ in Germany as a national sponsor and the only official FIFA partner from Baden-Württemberg. To make sure that all brands could benefit from the rights as a national sponsor, we had precisely coordinated all the measures beforehand.

We started back in 2005 with a series of 2006 FIFA World Cup™ adverts, which illustrated our regional roots in Baden-Württemberg and the social and ecological responsibility of our company. All key measures were accompanied by the media.

Direct access to our customers was enabled by the public viewing events – for instance the "EnBW and SWR1 2006 FIFA World Cup™ Tour in Baden-Württemberg", realised in cooperation with the state, or the "FIFA Fan Party" in Stuttgart. The tour passed through eight towns in Baden-Württemberg, where a total of more than 100,000 visitors watched the World Cup matches on a screen spanning 40 square metres. Show acts and a party atmosphere were thrown in for free.

EnBW was present at the "FIFA Fan Party" on the Schlossplatz in Stuttgart throughout the World Cup. Our Energy Truck was also in action. We actively supported the city's events. In total, more than 1.5 million football fans from Germany and abroad celebrated the world cup in the state capital.




Apart from the sport and fun, environmental considerations were also an important topic during the World Cup. We achieved quantitative environmental goals under the Green Goal™ environmental protection programme – something completely new for a football World Cup. The stadiums and the media and hospitality areas consumed electricity in the region of 13 million kWh. As a national sponsor, EnBW made its contribution to climate protection by providing this quantity of electricity from renewable energy sources.

Our subsidiary Yello Strom GmbH also made efficient use of the FIFA rights during the world cup. Its action focused on TV adverts, in which the Yello team and Franz Beckenbauer encouraged Germany as a whole to "change clubs".

The bottom line for EnBW's World Cup involvement is highly positive:

- Optimum use of the 2006 FIFA World Cup™ rights for all EnBW brands
- Assumption of EnBW's role as a host in Baden-Württemberg under the motto "The biggest home game of all time", cooperation with the state and municipalities, and the dialogue with brand targets
- Mobilisation of Yello customer potential throughout Germany
- Use of the Green Goal™ rights
- Direct contact with targets, both offline and online

2006 FIFA World Cup™: EnBW is a national sponsor and the only official FIFA partner from Baden-Württemberg.




Changing climate
Facts, impacts, perspectives

1st German congress on climate change

Scientists, politicians and businessmen from around the world followed EnBW's invitation to the 1st German congress on climate change, "Changing Climate – Facts, Impacts, Perspectives", which was held on September 20 and 21, 2006 in Berlin. It was the first time that such a panel of qualified experts had debated about climate change in Germany at the invitation of a business enterprise. The congress did not just present the facts and impacts, it also dealt with the options that we have to prevent climatic disaster.

Berlin Declaration signed by leading climatologists from around the world

The Berlin Declaration and the aims that it contains are a concrete result of the congress. Among other things, it says that it will probably not be sufficient for industrial nations to reduce emissions by more than half by the middle of the century in order to limit global warming to two degrees until 2010. In light of the rapidly growing global "thirst for energy" and the unjust distribution of energy availability, industrial nations will have to reduce emissions by a disproportionately large amount, probably by around 70 to 80%. That goal can only be reached through a close alliance of business, politics and science. Following the example of the British Corporate Leaders Group on Climate Change, EnBW wants to establish a comparable group in Germany and motivate further companies to join this movement.

The exact wording of the Berlin Declaration, the full list of speakers and more information on the 1st German climate congress can be found at: http://www.enbw.com/content/en/commitment/society_politics/changing_climate_congress/index.jsp

Climate congress: EnBW brings together experts in Berlin.

What some experts said at the congress

"The impact of climate change is tangible: We can already observe changes in ocean currents today. (...) If there isn't a turnaround soon, most animals will be endangered within a few decades."

Prof. Dr. Tim Flannery, Australian biologist and author of the bestselling book "The Weather Makers"

"Among scientists there is no longer any controversy about the fact that the climate change has already begun. (...) We still have 30 or 40 years' time to prevent the worst, provided that we start immediately."

Prof. Dr. Mojib Latif, Head, Ocean Circulation and Climate Dynamics at IFM-GEOMAR/University of Kiel

"EnBW and its CEO Prof. Dr. Utz Claassen are the scouts in matters relating to climate protection, their compass is pointing in the right direction."

Sigmar Gabriel, Federal Minister for the Environment, Nature Conservation and Nuclear Safety

"If we go on like this, there will be a summer of the century like 2003 every other year from the middle of the century onwards."

Prof. Dr. Vicky Pope, Head of the Climate Prediction Programme at the Hadley Centre

"Our planet has a fever. (...) The impending climate disaster involves the great opportunity to assume global and collective responsibility for the world."

Al Gore, 45th Vice President of the USA, via video conference

"The European Union has set the target of limiting the rise in temperature to two degrees in relation to pre-industrial times. (...) The costs would come to 1 to 1.5 per cent of the aggregate GNP until 2100."

Prof. Dr. Stefan Rahmstorf, Head of the Climate System department of the Potsdam Institute for Climate Impact Research

"Now is the time to act so that future generations can benefit."

Prof. Sir David King, Chief Scientific Advisor to the British government

"The possibilities of hydrogen will make possible the first truly democratic energy regime in history."

Prof. Dr. Jeremy Rifkin, President of the Foundation on Economic Trends

Translation of the speech
delivered by Prof. Dr. Utz Claassen
at the 1st German climate congress
"Changing Climate – Facts, Impacts, Perspectives"
on September 21, 2006 in Berlin

Ladies and Gentlemen,

The climate change is in itself a typical example of most of the problems that arise when we interfere with nature – we act before understanding, and when the first of us begin to understand, we do not listen to all they have to say.

More often than not, the first who begin to understand are top scientists. But society and politics alike are often slow to listen carefully to what these scientists have to say. The climate change proves this quite clearly: We have interfered massively in global cycles without understanding the implications, and we have failed to listen to those of us who realised this. Otherwise we could have followed the Swedish scientist Arrhenius back in 1896, who forecast with a pretty high degree of precision, logic and consistency a large number of effects that industrialisation would have on the climate.

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This first climate congress today is dealing with those kinds of things that could already have been dealt with at a conference 110 years ago. However, we always need a crisis before we act on new findings. Incidentally, what applies for global political decisions also holds true for management decisions: Management will also often wait until the figures are in the red and there is a real crisis until it is capable of taking action and willing to do so.

A mad generation?

In autumn 2002, I visited various countries in the Middle East together with the prime minister of the state of Lower Saxony at the time, Sigmar Gabriel. In the course of our trip, we visited Ras Laffan Industrial City in northern Qatar – an industrial zone with liquefaction facilities and a port for exporting liquefied gas.

An incredibly large tanker was berthed there at the time with a cargo of gas reduced to 1:600. According to local management, in purely arithmetic terms, the cargo was worth about the volume of energy needed to supply all of Japan for about one hour. Of course Japan does not depend solely on electricity supplied from Qatar, but we can nevertheless use this gigantic equation to illustrate the point and take it a step further: Without gas liquefaction technology, 600 of these tankers would have to travel halfway around the globe every hour just to supply Japan with enough electricity! This equation shows: We are running the risk of going down in history one day as the mad generation that burned up unlimited amounts of fossil energy sources; we are facing both a climatic problem and a resources problem.

From Kyoto to the Silvretta

Nothing brings home the risks of climate change better than a typhoon or a hurricane experienced at first hand. I was in Japan in 1993, on my way to Kyoto, when the most severe typhoon since the Second World War swept over the country. The typhoon cost many lives and left a trail of destruction behind it.

When we set out from Toyota City, the black air looked thick enough to cut with a knife. But the Japanese remained calm, aware that there were two possibilities: Either we would arrive in Kyoto before the typhoon and everything would be okay, or the typhoon would be there before us, which would be okay too, for in this case the train would come to a halt out in the open country for technical reasons, and we would not be thrown off track more than twenty to twenty-five metres. We reached Kyoto before the typhoon, but had to leave our luggage in the hotel bathroom because glass panes and furniture were expected to be whirled around. We waited in the basement until the danger had passed.

Near Palm Beach I experienced one of the wettest hurricanes the USA had ever seen. After the storm, the strip of beach in front of the hotel was only about half as wide as beforehand. The water entered the hotel not only from above but from all sides. Even this concrete building was basically no longer inhabitable after being flooded with all that water in the hurricane; the whole interior would have had to be renovated.

In our part of the world, the climate change has admittedly been somewhat more moderate, but no less evident. When the EnBW Board of Management was in conference on the Silvretta, a location chosen in light of our cooperation with Vorarlberger Illwerke in the fields of renewable energies, pump storage, and hydro-electric power stations, I had the opportunity to see the long-term effects of climate change. I had taken photos there as a schoolboy, and only 26 years later the
glaciers had already receded so much that I found a different landscape to the one I knew from my youth.

It would be arrogant and downright stupid to claim that the climate change is not one of the largest problems of all times on our planet: 2005 was the first year ever that there were not enough letters in the alphabet to categorise the North Atlantic tropical cyclones of one season.

Ecology meets economy

There are various scenarios, the most extreme of which even estimate a temperature rise of up to ten degrees by 2100. Yet it is completely irrelevant whether we are talking about two, five or even ten degrees. Whatever the figure, the underlying problem is a serious one. In East Frisia where I come from, everyone knows that it is a lot if the sea level rises by just half a metre; this applies all the more for people living on the Maldives. If the temperature rises by more than five degrees, not only our way of life but also economic conditions will change dramatically. For if the climate here in Europe were like that in North Africa, this would also have a far-reaching impact on the economy. There is no need to invoke a conflict of interests between economy and ecology – the impending danger on the ecological front is so great that it will also have dramatic economic implications.

Net warming effect

The situation is even worse if we consider that the effect of global warming is not measured on a gross basis but as the net effect of two different trends.

This net effect is a combination of the opposite effects of global warming caused by greenhouse gases and global cooling caused by particles and air pollution in the atmosphere. Recent studies have compared the north atoll with the south atoll of the Maldives, and the comparison reveals the difference between a region affected by Indian industrial particle concentration and a region that is free of that. These studies come to the conclusion that the global dimming effect, that is the dimming and cooling-down effect caused by air pollution, is much higher than assumed to date.

By deduction, this also means that the gross warming effect caused by greenhouse gases is higher than previously assumed. Since we are however making great progress on a global scale in the areas of air pollution and particle concentration, this fact alone means that the net effect of global warming will constitute a much more serious problem in the next century than was the case in the last century.

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A right to energy

If the demand for energy stays the same, the effect of global warming will be considerably higher in the coming one hundred years than in the last hundred years. It has already been mentioned several times during this conference that the demand for energy will not remain at its present level, and that on the contrary in every known scenario it will rise dramatically.

Sigmar Gabriel indicated yesterday morning why this is: Among other things, just under two billion people currently not hooked up to the power supply network are still waiting to be supplied properly with energy. In addition, one of the greatest social injustices on this planet is that of the 6½ billion people today only 2½ billion have unlimited access to energy. That means that 4 billion of today's world population of 6½ billion have yet to gain unlimited access to energy. By 2050, there will be 3 billion more people living on earth. That means that, in addition to the 2½ billion who are supplied with energy without restriction today, another 7 billion people want to be supplied with energy without limitation.

It is therefore pointless to discuss whether the demand for energy will increase by 30, 50 or 300 per cent. In any case, it will increase on a huge scale, as the example of China shows. If the population were to stagnate in China, and at the same time China were to raise its per capita electricity consumption to the average EU-15 level, the country would need more than 2,000 new power stations, each with a capacity of 500 megawatts. If this additional demand for energy in China were then to be satisfied without nuclear power using the best renewable and fossil energy technologies available today, this would involve additional CO_2 emissions of 3,500 tonnes per year for China alone. That is seven times the amount currently emitted on aggregate by the energy industry in Germany each year. We have to add to this the growing need in India, where more than 2,000 power stations with a capacity of 500 megawatts will be needed too, not to forget Indonesia and Brazil. And these estimates do not even include an increase in the population. Even as it is, we are heading towards a situation in which we face a serious climatic problem.

Remember what Sir David King said yesterday: Now is the time to act. Even now keeping within the two degree increase in temperature, which we consider the critical limit, is practically no longer possible. He said, "It's probably beyond our capabilities." If you also consider the enormous additional demand for energy, it is not surprising that numerous countries are failing the targets agreed in the Kyoto Protocol by a wide margin, whether they ratified it or not. We are under extreme pressure to act. Sir David King rightly said in no uncertain terms that the climate change and managing it may be the biggest problem and possibly the greatest challenge facing the world.

Evolution will not be able to save the day this time

You could argue that the human race is adaptable and has always responded to challenges by way of evolution. Yet that is a dangerous illusion. During the last year I have had many a discussion on this topic with the evolution researcher Prof. Schrenk. It is true that climate change ironically had a favourable influence and advanced human evolution at two decisive turning points – one when we started to walk upright, and the other when jaws and teeth evolved. Yet in today's world of air conditioning, high-rise buildings and office complexes, humans are not as adaptable as they were thousands of years ago. Apart from that, we do not live in separate populations any more today which can undergo a mutation and selection process over 30 or 40 generations. Consequently, the next dramatic climate change may cost us our existence.

Geological dimensions

The climate change is therefore not a short-term economic and energy policy issue, it is an issue of geological significance. Many short-term discussions will fade into the background. There is no need to argue about how long brown coal, hard coal, gas or uranium deposits may last. I do not agree with Sigmar Gabriel. The scientists advising me believe that fossil energy sources will not last anywhere near as long as fissionable material. But in geological terms, this question is completely secondary. From a geological perspective, whether we are talking about 30, 300 or even 3,000 years, it is no more than the blink of an eye. Geologically speaking, it is completely irrelevant whether hard coal lasts 100, 500 or 800 years. Geologically speaking, it is completely irrelevant whether the uranium deposits will last 20 to 60 years like Sigmar Gabriel says, or whether they will last 170 years like many companies say, or whether energy can be generated in comparable ways for over 40,000 years, which is what we believe. In geological terms, all this is irrelevant.

From a geological perspective, there is absolutely no alternative to making a transition to the renewable energy industry, like Mojib Latif called for yesterday. The only question is what steps are involved in the transition and what is the best way to go about them. There are various possible solutions. As you know, the Federal Minister for the Environment and myself have different opinions on the matter. But the issue is so vital that we have to discuss it with mutual respect and listen to each other's arguments. We must realise that this is a geological problem that we have to solve, and not a short-term economic or energy policy problem.

Act now!

What can we do? Yesterday Sir David King mentioned the wedges solution – a combination of seven to eight measures which he believes can lead to a substantial reduction of CO_2 emissions. We follow a similar approach with our corporate strategy. As a starting point, there are three simple but effective ways of reducing CO_2 emissions via energy policy: Burn less oil, burn less gas and burn less coal.

How do we do that? On the one hand, by expanding renewable energies on a global scale in an economically reasonable, globally balanced manner with a focus on "storage media". Of course we would ideally generate solar energy in the Kalahari and in the Sahara for consumption in Tokyo, New York or central Europe. However, that will only work if we have the right storage and transport media. For that purpose, we need a cross-company approach that is agreed between industry and politics in order to bundle the necessary resources. Developing the energy storage and transport media to allow us to make the transition to a solar renewable energy industry is something of a "man-on-the-moon" project. In our opinion at least, this probably also means that we will have to continue – at least temporarily – to use nuclear energy around the world so as not to fixate too hastily on fossil fuels, but create a window that allows the time, money and research and development needed to plan and realise the transition to the renewable energy industry. This is not simply about gaining time for nuclear energy. We want to answer and will answer the question how we could and would use this extra time gained through nuclear energy if we had it to help shape the scientific research on energy storage and transport media.

Another important factor is to improve energy efficiency, both in the generation and consumption process. Let me be quite clear about this: I am pleased about every kilowatt-hour of electricity that I can sell and am not ashamed if we make a profit on it. But I am just as pleased about every kilowatt-hour that I don't sell because of measures taken to avoid wasting energy. My Chief Sales Officer, Detlef Schmidt, who is also here today, and I are in agreement that EnBW should step up efforts to advise private retail customers in energy efficiency matters.

The energy industry cannot solve the problem on its own

Ladies and gentlemen, let me also say this: The energy industry and industrial emitters will not solve the climate issue alone. Private households will also need to make a contribution. A substantial contribution will, by the way, also be required of the mobility industry, in particular the automotive industry. Just imagine China had the same traffic and vehicle density as the United States or Germany, and also conventional drive systems. Actually, I would welcome it if a German automotive company would hold a congress like ours here today in the near future. The urgency is the same there.

So what is EnBW doing?

You may now ask, "What is EnBW actually doing about it? Since you are our hosts, you ought to be setting an example." Let me give you a couple of examples.

Renewable energies

With regard to renewable energies, we decided to promote all related biomass projects in Baden-Württemberg that are brought to our attention or identified by us, provided they make economic sense and are in line with regional policy. You all know that with the topic of biomass projects, it is often a question of how willing municipalities are to make such projects their own. And there are varying degrees of willingness. To be fair, we have to admit that we cannot change the energy mix fundamentally with biomass. Even if we were to cut down all the forests in the state of Baden-Württemberg, that would not in itself bring about a fundamental change in the energy mix. Nevertheless, biomass is an important part in the puzzle.

Geothermal energy

As a second measure, we will promote all geothermal projects that are ecologically and economically feasible. We already have pilot projects with the federal government and state government and want to be the main geothermal player in Germany. Mr. Renner, our group representative for renewable energies, and I are in agreement that we should continue to intensify our efforts considerably in the field of geothermal energy, and the Board of Management has passed a resolution to this effect. Geothermal energy should not be underestimated. It is true that a large number of drillings are needed to generate a substantial volume of energy. The short-term potential of geothermal energy should therefore not be overestimated. But let us take a look at geothermal energy from a geological perspective: Once we have used up the fossil energy sources and uranium deposits, and if contrary to expectations we should not have succeeded in expanding the solar renewable energy industry, we would only have geothermal energy as a last resort. Then at the latest, efficiency considerations will fade into the background. We would therefore be well advised to familiarise ourselves with this last resort early enough and with enough intensity, both intellectually and in practical terms.

Large-scale hydropower

The third area in which EnBW plays a leading role is large-scale hydropower. We are the power supplier in Germany with the highest share of energy generated emission-free. Large-scale hydropower plays an important role here. With capital expenditures of more than € 300 million, the hydro-electric power station in Rheinfelden is the largest project decided on to date during my term of office. The quantity of energy generated corresponds to that generated by 350 large wind turbine generator systems per year. In addition, in southern Germany it makes more sense to use the large hydro-electric power station in Rheinfelden – which can be used for the base load – instead of erecting 350 wind turbine generator systems in the southern Black Forest on the Höchenschwand or Heppenschwand hill slopes. In harmony with the needs of the local fauna, we are planning a fish ladder with spawning grounds in Rheinfelden. A ten-digit amount will be spent on this "luxury edition" salmon ladder alone. And rightly so. I wish we could also transfer this consistency and equal treatment to other areas as well. When I pass lorries transporting half-rotting cattle on the motorway after a long day's work, I wish that the criteria that apply for animal protection in the energy industry were also adopted in other areas of society.

Wave power

The fourth topic is wave power. In concert with the state government of Lower Saxony, EnBW was the first German energy company to announce its intention of constructing a wave power station that is integrated in a coastal protection programme. Voith-Siemens will be our industrial partner. Within Europe, such power generators have already been installed in Scotland. For Germany, however, they are an innovation. And if we can prove that it is possible to generate wave power profitably and in an economically feasible way in Germany, this would open up a fourth form of energy where EnBW takes the lead which would also constitute an additional, completely new renewable energy source for our country.

Compressed air energy storage plant

As a fifth measure, again per agreement with the state government of Lower Saxony, EnBW will erect a compressed air energy storage plant in Lower Saxony. That is to say, we want to transfer the idea of a pump storage power station to the flatlands. It won't work everywhere. It needs certain geological conditions, in this case salt and caverns. This is another means of developing other forms of generating power using renewable energy sources, for the compressed air energy storage power plant is for all intents and purposes a form of storing energy on a medium-sized scale.

Nuclear power

In addition – and I am not being sarcastic when I say this – we are making a contribution to climate protection everyday by operating our nuclear power plants. Let me emphasise that I respect opponents of nuclear power just as I respect proponents of nuclear power; ultimately, the question here is that of weighing up the (significant) advantage of avoiding CO_2 against the disadvantage of the residual risk of an accident. We must weigh these things up against each other.

We have come to the conclusion that those who were the furthest with research and development and leading in terms of safety should not keep their competence and their contribution to the global development to themselves. And we have also come to the conclusion that it would be wrong to prematurely fixate on fossil fuels, which is why we consider the extension of the operation of nuclear power plants a sensible measure. I want to make this quite clear: No one has the divine wisdom to know what the right energy mix is. We don't want to overrate the importance of nuclear energy. But in view of the dramatic problems relating to climate protection it must not be a taboo either.

Energy efficiency

At EnBW, we want to continue – as I mentioned earlier on – to increase our efforts noticeably in the area of energy efficiency, both in power generation and consumption. Besides the customer advice initiatives mentioned earlier, we were the first major energy group that decided to assume a share in the German Energy Agency dena, the German competence centre for energy efficiency. As part of the "Partners for Innovation" initiative, we have developed many concepts in cooperation with the Federal Chancellor's Office and other companies, including our competitors.

We will support the energy-efficient schools initiative with financial and human resources. This initiative serves not only to promote energy efficiency but also educational purposes.

Energy tables are another measure by means of which we want to make sure that small and medium-sized companies can develop the same competence in energy efficiency matters as large groups of companies.

In Crailsheim, the "Local Solar Warmth" project was carried out as part of the "Partners for Innovation" initiative.

We are carrying out the "Price Signal at the Power Socket" project with a test market in Baden-Württemberg in order to ensure that the customer can choose electricity at the most "energy-efficient" times of the day via a price signal at the socket.

And, as a kind of networking innovation, we are pursuing the "EnBW EnyCity" project which bundles German competencies in the area of energy efficiency from energy companies, energy suppliers and experts for renewable and fossil technology and for control technologies to export these to regions around the world. Where new towns and regions are being built on virgin land, we want to use this project to generate export potential for our economy and energy efficiency potential for the world.

Good examples

Ladies and Gentlemen, another important aspect is to make sure that all efforts are balanced on a global scale. I do believe that we need some countries and also companies to lead the way. Germany has in recent years indicated across all political parties – even if specific measures were a matter of debate – that our country attaches great importance to the topics of ecology and climate protection.

As a country, Germany has sought to set a good example. Even if we haven't always seen eye to eye on everything with Mr. Trittin and today with Mr. Gabriel, it is like Sigmar Gabriel said yesterday: As far as the general direction is concerned, there is a consensus across all political parties in Germany that climate protection is an extremely important task. You won't find any major party that does not have it firmly on their agenda.

The same applies for companies. We are pleased at EnBW to set a good example. But our example is only worthwhile if it is followed by others. Within companies as well as within politics we must increase our efforts in order to convince others of our ideas.

The last World Energy Congress took place in Sydney two years ago. In the run-up to the congress, I asked myself which region in the western industrialized world would be predestined most for renewable energies.

I came to the conclusion that Western Australia offered excellent conditions, since the country had not only relatively strong winds coming off the Indian Ocean and a lot of sunshine, but also a low population density and consequently a lot of space for wind and solar farms.

On my way to Sydney I passed through Western Australia, and made two observations: One, the people living in Western Australia are privileged in this world; we can only envy anyone who is fortunate enough to live there. And second, the energy mix in Western Australia focuses on hard coal, gas and oil. In Western Australia, people believe that customers would not accept the price increases arising from the use of solar and wind energy and that the governments would not accept the resulting effects on employment.

I think they are wrong there. But I don't want to start moralising, I just want to describe the situation: Western Australia has the sun, wind, and the space. We only have a limited amount of sunshine, the wind tends to be volatile, and population density is high. What is happening at the moment is not yet balanced in terms of resources used, and we must work on this in a joint effort. Just imagine how much more fantastic this fantastic country Australia – one of the most beautiful in the world in my opinion – would be if it did not exceed the United States with per capita CO_2 emissions, but was maybe somewhere around our level.

The Kyoto Protocol

This is why, ladies and gentlemen, we wish that what was agreed in Kyoto can also be achieved in America, Australia, China and India. Yet formal treaties, resolutions and signatures are only one possibility. It is not for us to criticise other people for having different opinions about how to achieve a goal. If other nations want to focus more on the market and on the freedom of market forces, it remains to be seen who has chosen the more successful path. What we can do, however, is to seek to stay in regular contact with these people in order to reach an agreement, at least on the goals themselves and the direction in which we should be heading.

Yesterday, Sigmar Gabriel also spoke about goods and costs of the future. And he is right about that. We are also living in a world in which the capital markets tend to be oriented towards the short term. Sigmar Gabriel mentioned the quarterly results yesterday himself. And I can tell you, in my career, since I have been CEO, I have only failed to meet my quarterly targets once. That experience was sufficient to stop me doing it again.

We must therefore not be fooled into thinking that short-term targets are not important for the tasks of geological dimensions. If you want to make an impression on a geological scale, you need to be capable of taking action in the short term. Also, laws such as the German Stock Corporations Act rightly require us to commit to the interests of the shareholders. At first glance, this seems to be a balancing act for us. But I am convinced that, ultimately, this is not a balancing act. I have always told my students in environmental controlling that economic and ecological optimisation will converge anyway in the medium or long term. Today we just need to add one further aspect to this observation: Taking into account the new information gained concerning climate protection, we cannot afford even in the short term to believe that economy and ecology are not convergent.

The summer of the century 2003

2003 was my first summer in the energy industry. During what is referred to as the summer break, the Board of Management had weekly meetings and conference calls to deal with water shortage in our rivers and the related cooling problems for nuclear and fossil power stations. Although we were able to solve the situation successfully, it wasn't an easy task either for EnBW or other German or European companies to ensure supply reliability. The summer of 2003 was difficult and tiring and we had to concentrate really hard and focus to make sure that end customers would not suffer from the climatic changes.

At the time, I asked our experts how often they thought a summer like 2003 would recur with similar effects on the volume and temperature of the cooling water available. In purely statistical terms, they assumed that it would happen again in 100 years at the earliest. If that is the case, I thought, I would be safe for my remaining term of office; my CEO contract would have to be extended 20 times before I would have to deal with such problems again. But that proved to be wrong. Since 2003, we have had to address the parameters quantity and temperature of cooling water with some intensity every year – even if not as intensively as 2003.

In view of these events, I can assure you: We will not make any decision at EnBW that ignores climate issues. We would not want to be criticised one day as the generation that used fossil fuels irresponsibly. We hope that political decision-makers will facilitate our taking the right course. We are aware that the resources which we talk about every day and about the allocation of which we argue every day will only last for the blink of an eye in geological dimensions. And – without playing down the importance of quarterly profits – we are therefore fully aware of the fact that the quarterly profits of the next five years of course cannot be considered to be as important as what is going to influence our planet's ecology over the next 500 million years.

This is where Goethe is more topical than ever. If "more light" were indeed his last words, they would have a double meaning in the context of today's conference. The world wants much more light and much more energy, Mojib Latif's globe by night showed us how many areas there are around the world that want more light.

But we all need much more light, much more enlightenment, much more realism and visions in order to satisfy the demand for more light. We need more light to get more light.

My little daughter is now eleven months old. I wish that she may one day still be able to show her daughter the beaches on the Seychelles, the beaches on the Maldives and, of course, also the beaches of the East Frisian Islands. Thank you.

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The production of this Annual Report was climate neutral.

The production of this Annual Report inevitably resulted in greenhouse gas emissions. EnBW Energie Baden-Württemberg AG commissioned the "my climate" company to ensure that the production of the report was climate-neutral. This means that the emissions are offset by climate protection projects in other locations – in this case, by EnBW funding for a TÜV-certified biomass project in India that meets the "Gold-Standard" criteria. The project makes a provable positive contribution to sustainable development; it is not only socially and ecologically meaningful but also creates new jobs and helps to improve the quality of air in the region.

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Company report

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