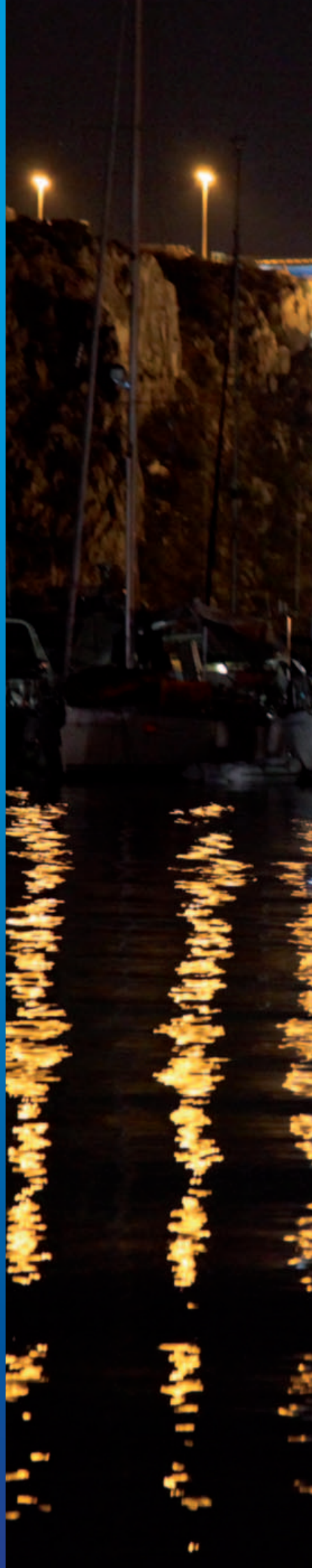
SUSTAINABLE DEVELOPMENT

POLICY AND ORGANIZATION OF NATURE AND ENVIRONMENTAL PROTECTION FUNCTION

HARMONIZATION WITH THE EU LEGISLATION

BASIC INDICATORS

MAJOR ACHIEVEMENTS IN 2009



POLICY AND ORGANIZATION OF NATURE AND ENVIRONMENTAL PROTECTION FUNCTION

HEP CONTINUOUSLY MONITORS and analyzes the impact of its business processes on the environment. The company reports on all environmental components timely and objectively to relevant institutions, units of local self-government and the interested public. Employees working in nature and environmental protection function attend seminars and workshops to get informed about duties and activities arising from environmental and nature protection legislation. Technical support to these employees that are active in individual HEP Group companies is provided by the members of HEP's Team for Environmental Protection Coordination and Standardization.

HARMONIZATION WITH THE EU LEGISLATION

Because of the importance for HEP Group of compliance with the EU legislation, in 2009 three specialist teams were set up in addition to the central HEP Environmental Coordination and Standardization Team.

The role of **Team for the implementation of the Plan of reduction of SO_2, NO_x and particulates from large combustion plants and gas turbine in Croatia** (Plan) is to inform HEP d.d. Management Board and management of subsidiaries about legal requirements arising from the Plan, about the meaning of tougher limit values of air pollutant emissions coming into force after December 31, 2009 and December 31, 2011 for HEP Group, and to create background information for HEP Management Board for the planning of HEP Group funds for the financing of projects oriented to SO_2, NO_x and particulates emission reduction, with the view of making HEP's plan operations compliant with legal requirements in force.

The task of **Team for the implementation of Kyoto Protocol provisions** is to inform HEP d.d. Management Board and management of subsidiaries about the obligations arising from legislation in the area of greenhouse gas emission reduction. The Team in June 2009 in cooperation with the Faculty of Electrical Engineering and Computing organized a workshop entitled Carbon Dioxide Management Strategy. The workshop gave, inter alia, a presentation of a list of HEP's obligations arising from the provisions of the Kyoto Protocol, description of a third phase of the European emission trading scheme, an overview of dependence of cost of emission rights on electricity supply/demand balance, description of influence of emission trading on electricity producers and presentation of emission trading tools used by energy company leaders to make decisions on strategy of greenhouse emission management.

A third is **Team for the obtaining of integrated environmental requirements**. The integrated environmental requirements (so-called "environmental permits") are a condition for continued operation of all existing thermal power plants of HEP of rated thermal capacity above 50 MW and for obtaining a siting permit for new construction and reconstruction of existing plants. The obligation arises from Integrated Pollution Prevention and Control (IPPC) Directive 2008/1/EC whose provisions were transposed into a regulation concerning the procedure of determining integrated environmental requirements. During 2009, a procedure was initiated for selection of authorizing officers who can prepare supporting documents for the obtaining of integrated environmental requirements. The Team has identified the activities that need to be implemented to obtain integrated environmental requirements, obstacles to the implementation of these activities and deadline for the obtaining of integrated environmental requirements, based on which HEP d.d. Management Board and management of subsidiaries will be able to make appropriate business decisions and to plan the necessary finance.

Upon the coming into force of the **Regulation on Declaration of Ecological Network**, some existing and some of planned HEP's plants, mostly listed in the Strategy and program for physical planning of the Republic of Croatia and in relevant county physical plans, have become a part of the ecologically significant areas and ecological corridors. After Croatia's entry into the EU, the National Ecological Network will become an integral part of the ecologically significant area of EU – NATURA 2000. Under the provisions of the Environmental Protection Act and the Regulation, protected areas and ecological network areas are subject to guidelines for protection measures applicable to all physical and legal persons using natural resources and performing actions or operations under the Act in these areas, HEP included. The protection measures under the Act and the Regulation pose uncertainty on construction of planned or continued operation of existing HEP's generating plants, and thereby energy production and security of customer supply. They also make it harder to meet the obligations arising from national and EU legislation in the area of air pollutant emission reduction, including greenhouse gases, the implementation of some activities of regular plant maintenance, protection of nature and safety at work, and contribute to increase in energy production costs. HEP has therefore reported at consulting meetings to representatives of the ministries in charge and State Administration for Nature Protection on the expected consequences of protecting the areas of existing and planned electric power facilities.

BASIC INDICATORS

During 2009, inspection controls of environmental protection were carried out in HEP plants (Peruća HPP, Varaždin HPP), water rights inspection (Sisak TPP, EL-TO Zagreb, Jertovec CCGT, Rijeka TPP and Gojak HPP) and one coordinated inspection control at TE-TO Osijek. The reports on the coordinated inspection controls are published by the Ministry of Environmental Protection, Physical Planning and Construction on its website.

According to water quality analyses carried out during 2009 by authorized laboratories as required by water laws and regulations, all HEP's plants operated in accordance with permits and legal requirements. In 2009 HEP continued to monitor air emissions of pollutants -sulfur dioxide (SO_2), nitrogen oxide (NO_x), carbon dioxide (CO_2) and particulates as required by air quality legislation, as well as the quantities of hazardous and non-hazardous waste generated by HEP.

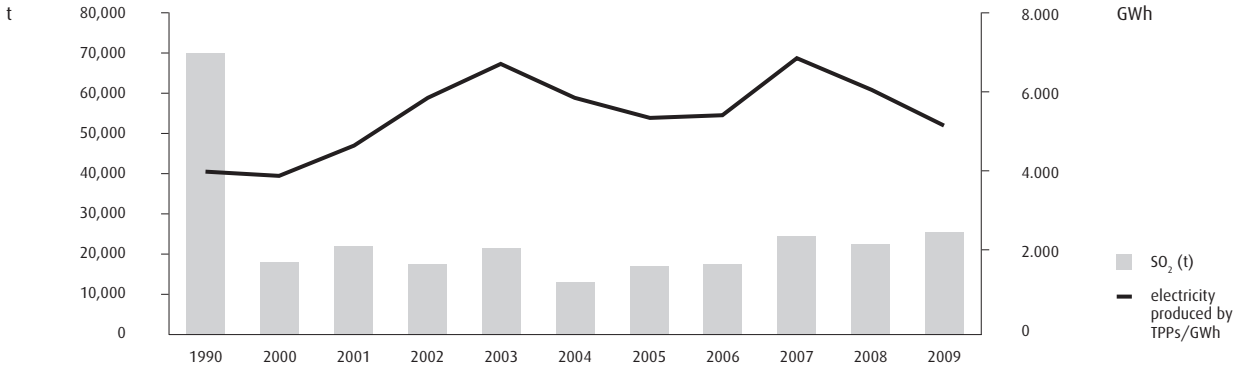
AIR EMISSIONS

In 2009 production of electricity from HEP's thermal power plants was lower than in 2008. In spite of that, sulfur dioxide (SO_2) emission went up by 13 and particulates emission by 15 percent compared to 2008. This is because emission of SO_2, occurring as a result of thermal power plants burning fossil fuels, depends on sulfur content and particulates emission depends, among other things, on the quantity of ash in a fuel.

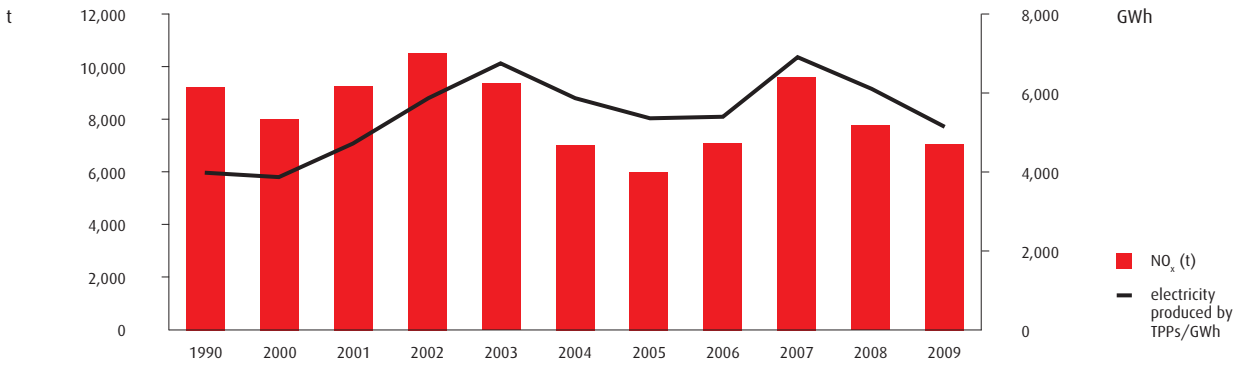
Year	SO_2 (t)	NO_x (t)	CO_2 (kt)	particulates (t)	Electricity produced from HEP's thermal power plants (GWh)
1990	*69,402*	*9,248*	*3,750*	*2,031*	*4,030*
2000	17,827	7,975	3,654	885	3,958
2001	21,669	9,222	4,347	1,382	4,713
2002	17,248	10,544	5,259	1,135	5,899
2003	21,350	9,391	5,679	1,507	6,703
2004	13,081	7,051	4,503	767	5,899
2005	16,890	6,003	4,694	664	5,387
2006	17,258	7,092	4,544	954	5,436
2007	24,376	9,532	5,460	756	6,845
2008	22,165	7,834	4,862	566	6,075
2009	24,956	7,031	4,043	651	5,178
Change 2009/2008 (%)	**+13**	**-10**	**-17**	**+15**	**-15**

TREND OF AIR POLLUTANT EMISSIONS FROM HEP'S THERMAL POWER PLANTS (1990) 2000-2009

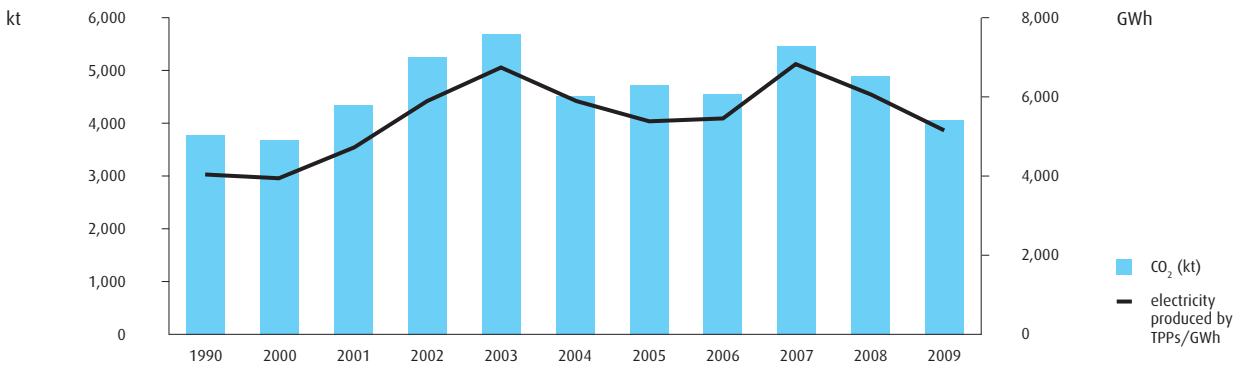
SO_2 EMISSION



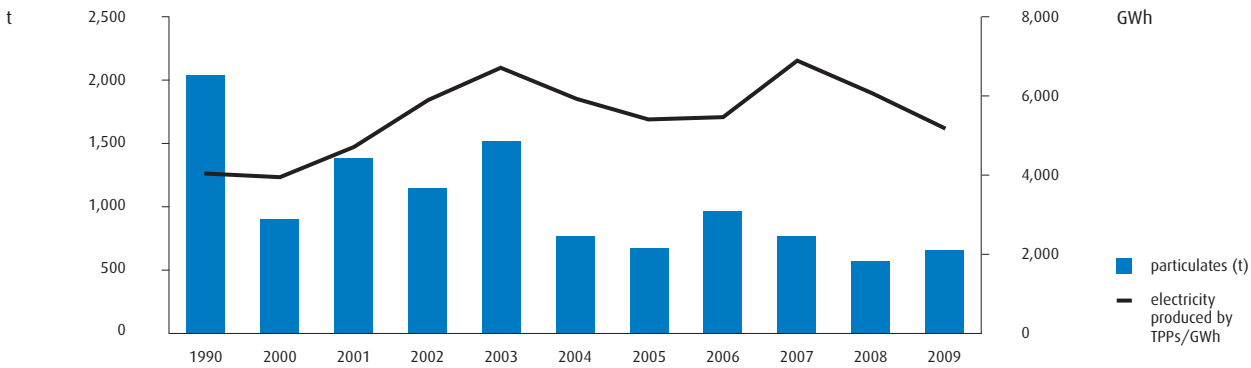
NO_x EMISSION



CO_2 EMISSION



PARTICULATES EMISSION



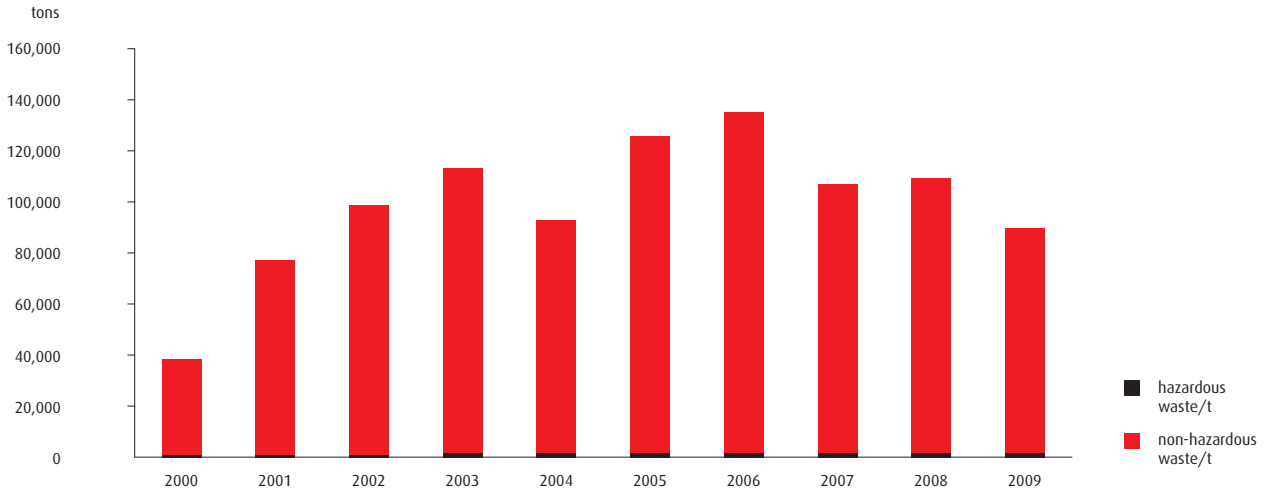
WASTE

During 2009, the trend of previous five year period of improving waste management system continued. The plants continued to build and equip temporary storages for waste and secondary raw materials and furnish them with tanks for separate waste collection. Since January 1, 2009 all HEP Group plants have begun handling waste data electronically using the application "Waste Management".

In 2009 HEP Group generated a total of 1, 100 tons of hazardous and 88,405 tons of non-hazardous waste. The waste was delivered to authorized collectors and processors for further processing and final disposal.

TOTAL QUANTITIES OF HAZARDOUS AND NON-HAZARDOUS WASTE GENERATED WITHIN HEP GROUP 2000-2009

Year	Hazardous waste (t)	Non-hazardous waste (t)
2000	490	37,531
2001	518	76,717
2002	577	98,492
2003	1,148	111,292
2004	940	92,067
2005	1,209	124,820
2006	1,112	134,336
2007	1,269	105,569
2008	1,243	107,623
2009	1,110	88,405
Change 2009/ 2008 (%)	**-11**	**-18**



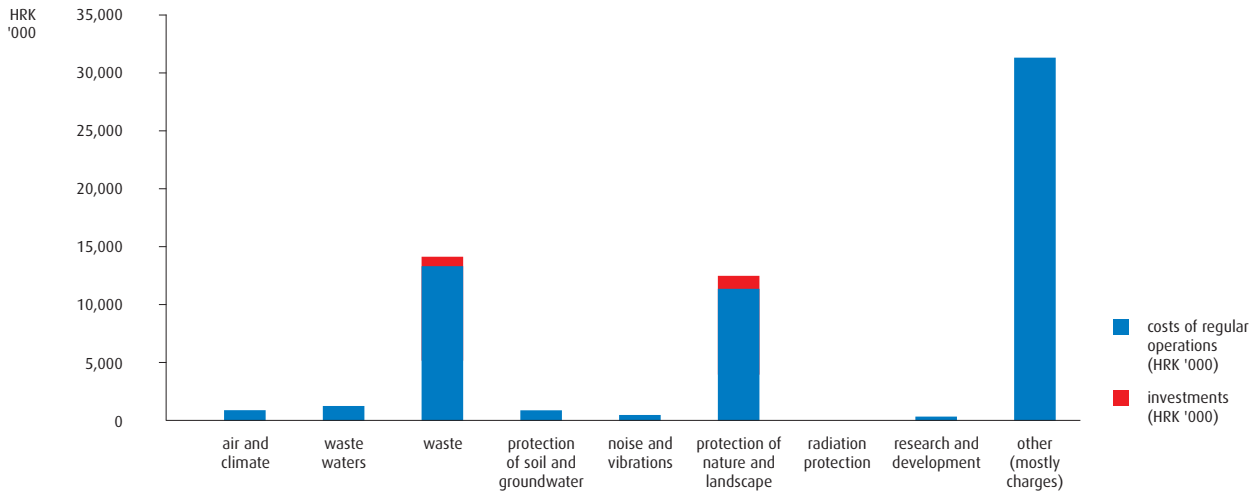
EXPENSES FOR NATURE AND ENVIRONMENTAL PROTECTION

In 2009 total expenses for nature and environmental protection incurred by HEP Group companies amounted to 61.036 million kuna. The most significant investments in 2009 were those made to improve waste management system in HEP's plants and to protect nature.

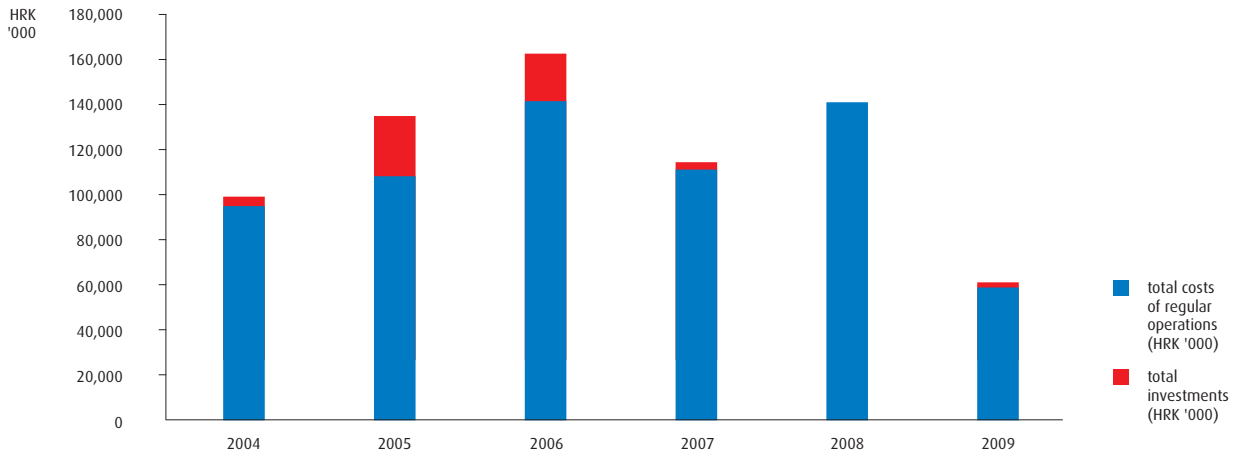
Since the beginning of the implementation of Accounting for Nature and Environmental Protection Expenses project (RETZOK) in 2004 until the end of 2009, HEP Group invested 56.068 million kuna in total in the protection of nature and the environment while total costs of regular activities to protect nature and the environment were 658.092 million kuna.

HEP GROUP EXPENSES FOR NATURE AND ENVIRONMENTAL PROTECTION IN 2009 ACCORDING TO RETZOK

Environmental area	**Costs of regular operations** (HRK'000)	**Investments** (HRK'000)
air and climate	858	0
waste waters	1,247	0
waste	13,155	788
protection of soil and groundwater	813	0
noise and vibrations	333	0
protection of nature and landscape	11,193	1,207
radiation protection	60	0
research and development	183	0
other (mostly charges)	31,185	13
TOTAL	**59,028**	**2,008**



HEP GROUP TOTAL EXPENSES FOR NATURE AND ENVIRONMENTAL PROTECTION 2004-2009



MAJOR ACHIEVEMENTS IN 2009

ACHIEVEMENTS BY THERMAL POWER PLANTS

- In 2009 the Rules on Waste Management were prepared in HEP Proizvodnja d.o.o. as well as Implementing Rules on waste management in all plants
- TE-TO Zagreb, EL-TO Zagreb, TE-TO Osijek, Sisak TPP and Rijeka TPP obtained permit to carry out the business of hazardous waste management in order to co-burn its own waste oils.
- In accordance with legal obligations, a software application was developed to verify air pollutant emissions from HEP's thermal power plants required to continuously measure emissions and a transfer of data was launched from the continuous emission monitoring system to the information system for emission monitoring managed by the Environmental Protection Agency.
- The Ministry of Environmental Protection, Physical Planning and Construction was submitted for opinion and approval security reports for Sisak TPP, TE-TO Zagreb, Rijeka TPP and TE-TO Osijek as well as notices about the presence of small quantities of hazardous substances in EL-TO Zagreb and Jertovec CCGT.
- TE-TO Zagreb and EL-TO Zagreb submitted to the City Office for Energy, Environmental Protection and Sustainable Development reports on the implementation of measures for air pollutant emission reduction as required by the Program for Air Quality Protection and Improvement in the City of Zagreb.
- All thermal power plants prepared programs for the monitoring of greenhouse gases and submitted them to the Ministry of Environmental Protection, Physical Planning and Construction for assessment and opinion, which is one of preparatory actions for joining the European emission trading scheme (EU-ETS).

BIOLOGICAL DIVERSITY CONSERVATION PROJECTS

- The implementation continued of the Cooperation Agreement concerning the measures to protect the protected species of the white stork *Ciconia ciconia* (L.) made between HEP and the Ministry of Culture in 2004. On the Creativity and Innovation Day of the association MRAK, in May 2009, HEP's project Stork Protection was one of the three nominated for the award in the category of sustainable development.
- Based on a separate Agreement on Cooperation on monitoring and ringing of stork population in the area of Sisak-Moslavina County made in 2005, the implementation of activities continued in order to conserve biological diversity and protect nature.
- The implementation of measure to prevent birds from being killed by electric shock on medium voltage lines continued. A cooperation was established with the Directorate for Bird Protection at the Ministry of Culture, to which a report was submitted on the measures implemented to protect the birds from electric shock on medium voltage lines. Several nests were put up on overhead lines at Elektra Slavonski Brod where storks gather and in Nova Gradiška some parts of the 10 kV overhead line where birds gather were insulated.

OTHER

- In HEP Operator distribucijskog sustava and HEP Operator prijenosnog sustava , inventory was taken of condenser batteries containing polychloride biphenyls (PCB) and a plan was prepared for equipment disposal the purpose of which is the final withdrawal of PCB from use.