

# **Bavarian Environmental Pact 2000-2005**

On Oct 23, 2000, The southern German State of Bavaria reissued another 5-year Environmental Pact Program as a continuing effort toward sustainable industrial/community development. State Government, 900 companies as well as 50 business/industrial organizations have signed on with pledges for greater environmental protection.

## **Highlights of Environmental Pact I (1995-2000)**

- 580 facilities are EMAS registered (EMAS = ISO 14000 + regulatory compliance), the most of any state in Europe!
- 3,500 facilities were subject to Eco-audits (precursor to EMAS registration)
- 3,800 facilities requested environmental information from their Trade Associations
- The State of Bavaria bought 15 million shares in the state/industry cooperative venture for hazardous waste treatment and disposal
- The State of Bavaria contributed \$45 million for brownfields cleanup and redevelopment
- Bavaria is the first state to give EMAS registered facilities regulatory flexibility and reduced oversight and monitoring requirements

## **Environmental Pact II (2000-2005)**

### **Vision Statement**

Centrally located Bavaria will become the European leader in a cooperative (state/industry) venture for sustainable development in a healthy environment with high social productivity and strong self-responsibility for citizens and businesses

### **Major Statewide Goals of Pact II**

#### ***Climate Protection (Greenhouse Gas Emissions)***

- CO<sub>2</sub> reductions from 99.2 in 1998 to 80 million tons in 2010
- ozone depleting chemicals (60% NO<sub>x</sub> and 69% VOC reductions by 2010)
- Start up of specific Kyoto Protocol projects

#### ***Resource Conservation***

- 33% increase in energy efficiency by 2010
- 10% increase in water conservation by 2010
- 5% increase in use of bio-mass/bio-fuel
- 73% recovery/reuse/recycle of all household waste by 2010
- Decreased land consumption (stop the trend toward urban sprawl)

#### ***Product Life Cycle Analysis (Integrated Product Policy-IPP)***

- Better manufacturing of products with respect to humans and the environment
- More emphasis on ecological product design and use, cradle-to-cradle responsibility

#### ***Transportation***

- Reduced noise and pollution from vehicular traffic
- Sustainable traffic infrastructure

### ***Trade and Industry***

- 400 EMS in operation in various trades by 2005
- 1000 additional eco-audits by 2005

### ***Service Sector***

- increased environmental emphasis in banking, investment, resource use
- increased emphasis on reuse/reduce/recycle

### ***Environmental Management***

- 50% of all manufacturing companies to have EMS in place by 2005
- 2000 environmental audits for small to medium sized businesses

### ***Regulatory Simplification and Deregulation***

- Simplify, systemize and harmonize environmental regulations
- Flexibility & reduced fees for environmentally aware and self-responsible businesses

### ***Regionalization***

- Linkage of the Environmental Pact and local Agenda 21
- Cooperative environmental protection at regional and local levels

### ***International Contacts; Exports of Environmental Technology***

- Combined international and national environmental policy concepts
- Information transfer of environmental know-how
- Promotion of export of Bavarian Environmental Technology

### ***Cooperative Models***

- Continued joint ventures for recycling, hazardous waste and radioactive waste treatment & disposal
- Continued joint ventures for brownfields cleanup and redevelopment

## **Selected Specific Commitments**

### **Manufacturers and Commerce Organization**

- Conduct programs/presentations and other educational outreach for the members on renewable energy and energy conservation
- Develop a certification program to certify/register “Energy Managers”
- In coop. with State government will develop guidance documents on energy conservation
- In coop. with many other organizations, work toward increasing bio-mass fuel use by 5%
- City of Nuremberg Chamber of Commerce: moderated workshops with industry to develop sustainable products
- Develop database and marketing for environmentally friendly industries and their products (under the IPP realm)

### **Import/Export Association**

- Create guidance document for ISO 14000 development
- More marketing and consumer education on environmentally friendly practices
- Develop partnerships for take-back provisions

### **Electric Utilities**

- Continued sponsorship of fuel cell technology research (high efficiency energy conversion systems)

- In cooperation with the Chemical Industry continued research and use of co-generation and waste heat recovery
- Those utilities with excess waste heat will offer it at property line to 3<sup>rd</sup> parties at no cost
- Via contracting will increase participation in decentralized construction, operation, and financing of in-house or in-company power plant/co-generation units
- Participation in Agenda 21 energy workgroups
- Increased use and promotion of renewable energies, creation of customer incentives, making available and affordable (as deregulated markets permit) certified “green electricity”
- Support the use of heat pumps via reasonable electricity costs
- Will continue to work for and maintain use of hydroelectric dams
- Will offer turn-key systems for solar and photo voltaic systems for customers
- Prepare a technical college level course on ecological and economical incorporation of co-generation
- Continued funding projects to develop alternative/renewable energies

### **Gas Utilities**

- Commit to combined use of renewable energy (in particular natural gas & solar and natural gas & bio-gas)
- Via consumer outreach, education and other feasible means increased use of natural gas in-house co-generation units, natural gas fired turbines and heat pumps, as well as use of natural gas in gas and steam power plants.
- Commit to consultation and financing advice for household, small and retail customers, and if requested, design of energy management systems for industrial customers
- Participation in Agenda 21 energy workgroups
- Planning, construction, and operation of energy-saving heat generating facilities and also in cooperation with renewable energy and waste heat recovery. Also to incorporate these facilities with district heating areas
- Continued participation in promoting and building an additional 12 to 15 natural gas stations in southern Bavaria

### **Paper industry: by 2005 (baseline year: 1990)**

- Reduce CO<sub>2</sub> emissions by 22% per ton of paper produced
- Reduce energy consumption by 20% per ton of paper produced
- Increased use of co-generation, when economically feasible
- Increased use of all types of wastepaper including high quality graphics paper
- In cooperation with state agencies develop measures to optimize material cycles
- Increased use of sustainably harvested wood, when economically feasible

### **State government**

- Work with local governments toward goals of resource conservation and betterment of the environment
- Work with trade associations to create market-driven environmental awareness
- \$1 million funding of an innovative technology center
- \$1 million funding for EMS development, eco-audits
- Department of Commerce, Traffic and Technology: more emphasis on environmental issues

- Fund pilot projects for integrated EMAS registration (safety, environmental, QA/QC [ISO9000]) of small businesses
- Conduct 15 eco-audits per year at public schools (joint funding by industry/state)
- Rework existing laws to streamline permitting, creation of a facility wide permit
- Create more incentives for conducting eco-audits, reducing waste disposal and wastewater discharge costs
- EMAS (= ISO14000+compliance) registered facilities to pay reduced air emission fees
- In coop. with industry: a state working group to discuss/conduct projects in co-generation
- By 2002 in a test city, develop a pilot bus fleet using hydrogen fuel technology
- More construction of park & ride facilities to encourage car-pooling and mass transit
- Interstates: on heavy traffic stretches, will provide long distance bus service

### **Other Selected Groups/Associations**

- The Hair Stylist Association: 20% participation in the Pact by 2005
- Roofers Association: 15% participation in the Pact by 2005
- Chimney Sweeps Association: by 2001, ISO 14000 certification for all members
- Brewery Association: more emphasis on returnable bottles, publication of guidance document: “The Environmentally Friendly Brewery”
- Construction Industry: 80% + construction debris recycling
- Automobile Owners Association: more emphasis and marketing of environmentally friendly driving practices
- Hotel/Motel Industry: campaign for environmentally friendly hotels and restaurants, start pilot projects to conduct eco-audits at restaurants
- Architects Association: on-going training sessions on high performance buildings
- Tourism: use of eco-labelling to promote good practices
- Agriculture Sector: support state efforts of 5% increase in bio-mass production and usage
- Automobile Industry: development of bio-gas vehicles and low-noise tires
- Asphalt Industry: 100% recycling of asphalt
- Electronics Sector: develop rules for reduction, reuse and take-back provisions for electronics