

PRIORITIES FOR BULGARIAN EU PRESIDENCY

CLUSTER MEETING - 07- 08.09.2017, Sofia,
Bulgaria

Prof. Yoncho Pelovski – Vice President
of *Bulgarian Chamber of the Chemical Industry*

Legal pressure on the Chemical Industry in EU - *Restrictions create problems and transfer productions outside of Europe*

- new limits for emissions and imissions in the air, waters and soils
- new limits for emissions of green gases
- Management of the wastes is regulated on the base of the ofthenly changed EU directives
- New chemical legislation and REACH implementation separately from the Global Harmonized System
- New requirements for unleaded gasoline and lower content of sulfur and other components in the fuels follow the EU policy in this area
- Very long and quite complicated procedures for EIA and getting Authorization and permit for new installations
- Implementation of IPPC EU directives
- Implementation of Seveso II .

RE-INDUSTRIALIZATION IN THE EU

- THIS PROCESS IS UNEASY AND IT CAN NOT BE DONE FOR FEW YEARS;
- A number of productions are transferred during last decade from EU countries to the other non-EU countries;
- Negative social effects . jobless and lower GDP

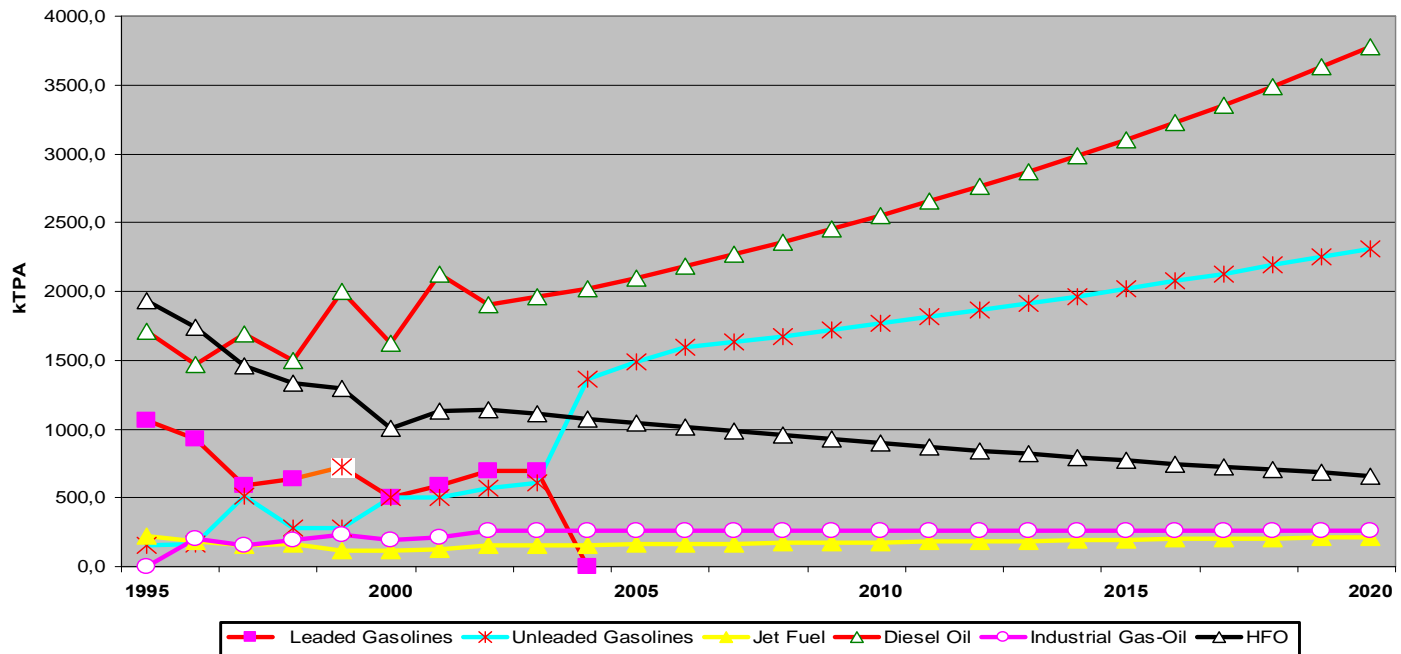
Type and capacity of chemical productions in Bulgaria

- “ More then 1000 000 tons of soda ash
- “ Capacity for production of more then 1 000 000 tons of Nitrogen fertilisers
- “ Capacity for more 250 000 tons of superphosphate
- “ Capacity for more then 40 000 tons of hydrochloric acid
- “ Capacity for 30 000 tons of phthalic anhydride
- “ 10 0000 tons of synthetic fibers
- “ 6 000 tons of artificial fibbers
- “ 16 000 tons of toothpaste.

The plants producing chemicals and rubber and plastics products operate between 50 % and 55 % of their equipment capacity. With a relative share of 13,9 % of the gross volume of production output by the manufacturing industry - chemicals, rubber and plastics items production ranks third within the manufacturing sectors in Bulgaria

FUELS

Прогноза за българския пазан на основни продукти



GREEN TECHNOLOGIES – Priorities of the way to achieve sustainability

GREEN TECHNOLOGIES FOR TREATMENT OF INDUSTRIAL AND HOUSEHOLD WASTES

- MINIMIZATION OF SOLID WASTES TO THE POINT OF 0-DEPOSITION USING COMPLEX OF TECHNOLOGIES FOR ECOLOGICAL and ECONOMICAL FRIENDLY UTILIZATION:
- RAW MATERIALS CAPACITY FOR RECYCLING OR RECOVERING THE TRADITIONAL NATURAL RESOURCES
- EFFICIENT USE AS A RENUABLE ENERGY RESOURCE CAPACITY OF SOME WASTE COMPONENTS
- NEW PRODUCTS ON THE BASE OF NEW HYDROTHERMAL AND TRIBOCHEMICAL PROCESSES USING SUITABLE ADDITIVES DOR ACCELARATION OF CHEMICAL REACTIONS

GREEN TECHNOLOGIES – Priorities of the way to achieve sustainability

- **GREEN TECHNOLOGIES SUPPORTED BY:**
 - **FINANCIAL RESOURCES FOR DEVELOPMENT AND IMPLEMENTATION OF NEW NON-WASTE TECHNOLOGIES;**
 - **FINANCIAL SUPPORT FOR IMPLEMENTATION OF BETTER PRACTICE FOR COLLECTION AND SEPARATION OF MULTYCOMPONENT SOLID WASTES**
 - **NEW STANDARDS FOR PACKAGING MATERIALS SUPPORTING REUSE AND EASY RECYCLING**

MANAGEMENT OF AIR QUALITY

NEW CLEAN UP TECHNOLOGIES FOR INDUSTRIAL WASTE GASES TREATMENT;

- NOW DAYS ARE STILL USED MOSTLY OLD TYPE CHEMICAL TECHNOLOGIES WHERE THE RESULT IS CLEANER AIR, BUT 4-6 TIMES MORE AS A MASS RELEASED WASTE WATERS OR SOLID WASTES OR BOTH /TYPICAL EXAMPLE LIME-LIMESTONE CLEAN UP INSTALATIONS FOR SULFUR DIOXIDE REMOVAL;
- USING THE BEST EXAMLESE OF INOFATIVE NEW RADIATION OR MEMBRANE OR BIOCHEMICAL PROCESSES FOR CLEAN UP SYSTEMS TO BE INTRODUCED IN THE INDUSTRY - GREEN TECHNOLOGIES WITHOUT HARMFUL EMISSIONS;
- WIDER USE OF ANY POSSIBILITY TO ACCELARATE THE P[ROCESSES AND MINIMIZE EQUIPMENT SIZE AND ENERGY CONSUMPTION

MANAGEMENT OF WATER QUALITY

ROLE OF GREEN CHEMICAL TECHNOLOGIES:

- **Minimization of fresh water consumption**
Examples – DOW CHEMICAL IN NIDERLANDS;
AGRIA AND SOLVAY-SODI IN BULGARIA etc.
- **Separation and utilization ions and particles as raw materials – as bioactive components, nitrates and phosphate anions etc;**
- **Sterilization using radiation and wave clean technologies**

Initiatives - Responsible Care and Stewardship products - MOVING TO NEW STAGE

- The Initiative reached our country early in 2002. Bulgarian experts received training in EU Chemical Legislation at Bulgarian Chamber of Chemical Industry (BCCI)
- The BCCI RC collaborators visited 27 chemical companies and they implemented R. Care;
- During the last ICCA conference, held in Roma, 17-19 of November 2004, Bulgaria was recognized as a member of Leadership group of this initiative;
- WE HAVE TO TRY TO DEVELOP THOSE INITIATIVES TO THE LEVEL OF STANDARDS OR TO INTEGRATED MANAGEMENT SYSTEM

Emissions trading

- **Biomass Boiler, Svilosa JRS.** This was the first agreement for Bulgaria of the mechanism for *Joint Implementation* of the Kyoto Protocol. The World Bank as a custodian of PCF will purchase at minimum 0.5 million tons of reduced emissions of CO₂ for the period of 2004 – 2012. During preparation of the wood in the cellulose manufacture each year are deposited around 50 000 tones of barks. The former practice is to deposit the waste biomass. Boiler was build up for biomass burning with a capacity of 13 MW, using the wood waste. The Biomass Boiler partially substitute the used in HPP coals, reducing the emissions of carbon dioxide and avoiding the emissions of methane, relevant to the rotting of the deposited wood waste. The benefits are as follows:
 - Avoiding the disposal of 100 000 t/year of wood waste and utilization of the bark energy potential.
 - Reduction with 4000 tones of methane emissions till 2012.
 - Reduction with 14 000 tones of methane emissions till 2012.
 - Reduction of the CO₂ emissions with 47 000 t/year.
 - Opening of 15 new job vacancies.
- **Agropolychim JSC** is implementing an investment program for better Energy efficiency. The main objective of the Program is implementation of energy-savings technologies in Ammonium Plant - main consumer of electric power and natural gas. Production capacity is 26 t/h and work time 330 d/y. The process improvements and new catalysts introduced, give a chance to save electric power = 4 752 MW/y and natural gas = 11 675 664 Nm³/y.

Energy saving

- Energy saving Program in process of implementation in Zebra JSC. Zebra JRS was certified, according ISO 9001, 14001 and is on the way to cover the requirements of OHSAS 18001.
- New High-Tec installations are introduced in Lukoil-Neftochim, Plastimo JRS and Plastmasovi izdelia JRS. As a result Plastimo JRS introduced new insulation materials on the Bulgarian market
- Plastmasovi izdelia JRC is going to introduce recycling of PET bottles

Lessons learned and next step activities needed - conclusions

- The implementation of EU legislation in Bulgaria is uneasy task for the industry, including chemical industry
- The implemented projects and the developments, related to the Responsible Care initiative, demonstrate the good will and efforts made by the managers from the Bulgarian chemical industry to achieve the level required by the new legal acts in the country
- The technological improvements adopted at the refineries, related to the production of lead-free petrol are a good precondition for the improvement in the quality and environmental adequacy of motor fuels, reflected in the requirements of Directive 98/70/EC on the quality of petrol and diesel fuels and the respective amendment . Directive 93/12/EEC

of experience and the granting of support in the following directions will mostly welcome:

- Investigations and expert analyses of the best applicable technologies and practices related to the implementation of new environmentally cleaner alternative;
- Analyses of the profit and expenses as well as the economic mechanisms for ensuring the investment process and access to the best available practices;
- Improvements of the products quality control, including import-export control from outside of EU market;
- Improvement of the control on the emissions, especially particulate emissions and minimization of wastes;
- Management of chemicals and replacement of specific hazardous products with less or no hazardous need international co-operation and support from the authorities;
- Development of Responsible Care initiative, including Stewardship products, as an integrated publicly recognized management system need exchange of experience and support from the authorities and public.