

*Norwegian Institute for Air Research*

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***Possibilities of mercury emission  
reduction from energy sector***



*Seminar „10 years of NILU Polska” – Katowice, 20 October 2011*

# Mercury emission from energy sector in Poland

- Coal-fired power plants – main source of mercury emission, but also large possibilities of emission reduction;
- Total anthropogenic mercury emission to air in Poland in 2009: 14.5 Mg Hg;
- New regulations:
  - new directive 2010/75/UE (*Industrial Emission Directive*, IED) – directive requirements in case of LCP will come into force on January 2016,
  - mercury convention (*Minamata Convention*) - the new instrument on mercury emission reduction currently under construction by 2013.

## **NILU Polska – projects for energy sector**

- Assessment of environmental aspects of introduction clean coal technologies, including CCS;
- Assessment the influence of new investments in energy sector on environment;
- Preparation of mercury emission reduction strategies.



*Katowice, 20.10.2011*

## Cooperation with Polish energy sector

### TAURON

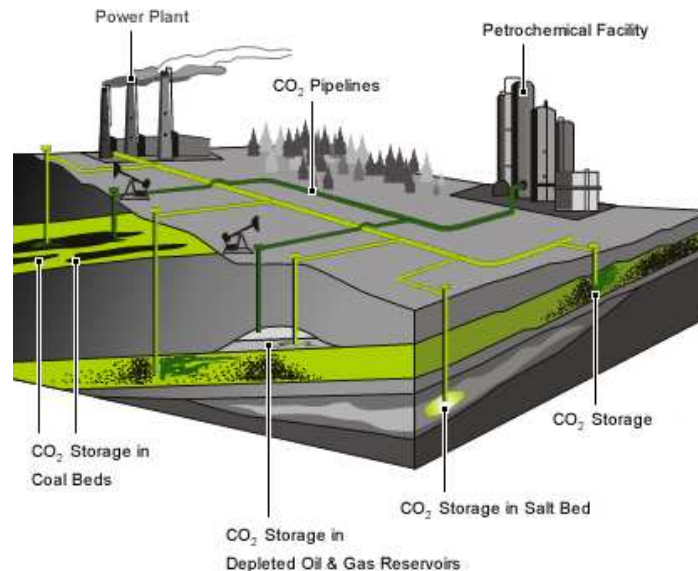
*„Overcome of technological and non-technological barriers make impossible the introduction of sequestration carbon dioxide in power plants” (2011)*

- IChPW, Częstochowa University of Technology, NILU, NILU Polska

→ Environmental, social, legal and economic issues of CCS technology (*Carbon Capture and Storage*): capture, transport and storage of CO<sub>2</sub>

## Participation of NILU/ NILU Polska:

- assessment the influence on environment of CO<sub>2</sub> capture technology in new and existing power plants,
- assessment the influence on environment of CO<sub>2</sub> transport and storage,
- comparison of costs and benefits of CCS technology introduction.



*Katowice, 20.10.2011*

## Cooperation with Polish energy sector

### **PGE TURÓW**

*„Many-variants feasibility study of power revitalization in Turow power plant with environmental impact assessment report” (2010-2011)*

- NILU, EPK, NILU Polska

→ Current and future environmental impact assessment in connection to new power unit 460MW building

Participation of NILU/ NILU Polska in preparation of environmental impact assessment report on Turów power plant revitalization:

- assessment of emission through cooling tower to air, including mercury,
- assessment of emission to water, including mercury,
- investment impact assessment on climate and landscape



*Katowice, 20.10.2011*

# Strategies for energy sector

## MERCPOL

*„Cost-benefit analysis for human health and environment related to mercury emission reduction in Poland”  
(2009-2010)*

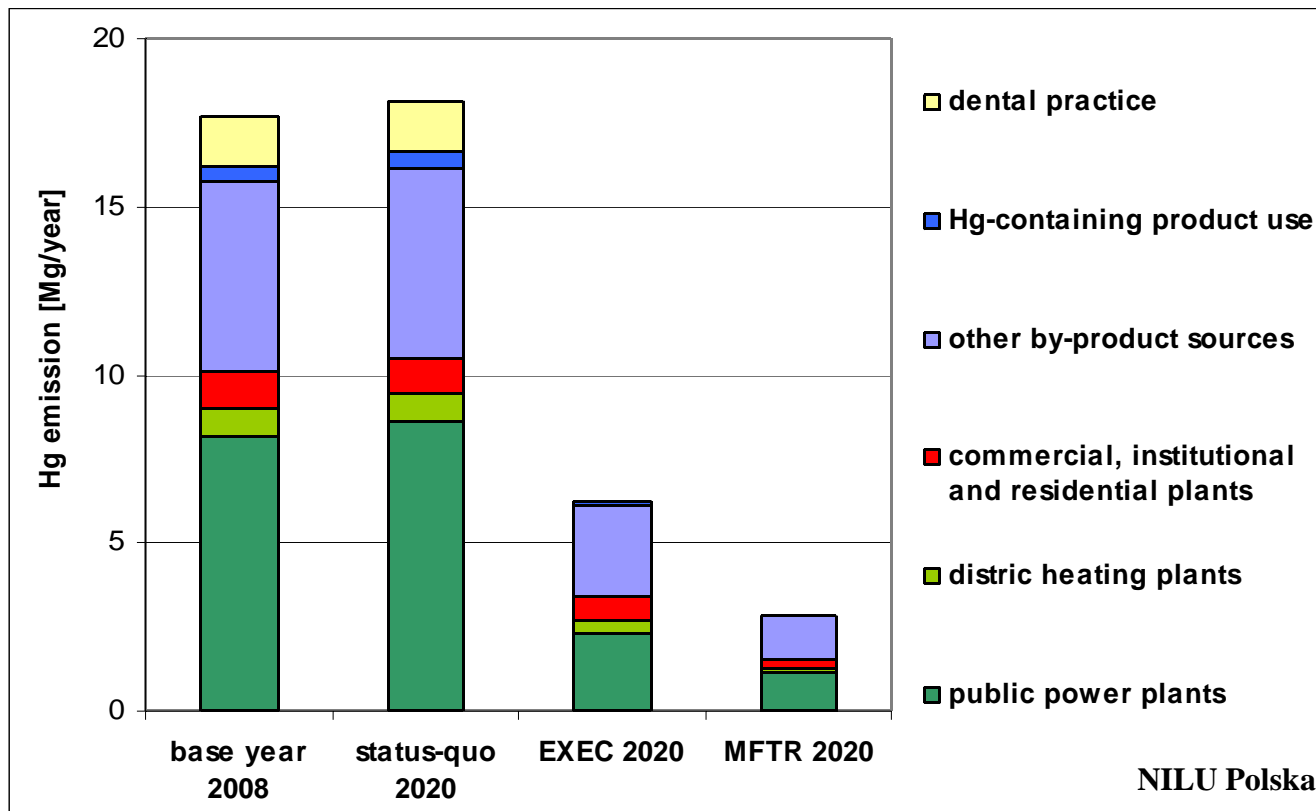
- NILU Polska, financed by the Chief Inspectorate of Environmental Protection (GIOŚ) from sources of the National Fund for Environmental Protection and Water Management (NFOŚiGW)



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- analysis of factors affecting on mercury emission amount,
- review of mercury emission reduction methods and technologies,
- preparation of mercury emission scenarios to the year 2020,
- cost-benefit analysis of scenarios and recommendations.



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***Thank you for attention***



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