

**International Workshop on  
Environmental Aspects of Coal Ash Utilization**

Tel Aviv, Israel  
December 15<sup>th</sup> – 16<sup>th</sup> 2009

**Welcome Speech**

O. Lulav

NCAB – National Coal Ash Board

I would like to start by thanking our guests from abroad, who are our partners in the work that we do, as well as our friends, for taking the trouble to travel thousands of kilometers to bring us the most up-to-date knowledge regarding the environmental aspects of the uses of coal ash, and to help us define the most appropriate conditions for its application:

Dr. Robert Barry (Bob) Finkelman from the USGS USA,

Dr. Eng. Hans-Joachim (Jochen) Feuerborn, General Secretary of ECOBA – the European Coal Combustion Products Association, Germany,

Dr. Rudolf (Ruud) Meij from KEMA, the Netherlands, and last but not least

Dr. Hans Albert van der Sloot from ECN, the Netherlands.

I would also like to thank the lecturers and session chairs, who have volunteered to participate in the workshop, and to recognize the value of their vital contribution to the work of the National Coal Ash Board.

Coal ash is an industrial byproduct. What is done with it, whether it is removed as a waste product or put to beneficial use, is dependent on what its owners decide, based on their preferences and subject to the prevalent economic, technological and environmental possibilities.

In Israel, it was decided from the outset – following the establishment of the first coal-fired power station in 1982 – to define coal ash as a valuable resource. Facilities for the treatment of the ash in the power stations were built in order to enable the most efficient exploitation of the ash. Academic research launched as early as the late 1970s and engineering standardization from the mid-1980s on, created the technological foundation for exploitation of the ash in the various branches of civil engineering – construction and road paving. Later, in the late 1990s, an initial document governing the environmental conditions for the various uses of the ash was drafted.

For many years, due to various reasons, coal ash in Israel was used only in the cement industry and only to a partial extent. Large amounts were dumped in the sea as waste, contrary to the original intention, and plans for a large landfill site for coal ash to be located in the south of the country were discussed by the various official planning agencies.

The activities of the National Coal Ash Board – NCAB, which was established more than fifteen years ago as a joint framework of the Ministries of National Infrastructures, Environmental Protection and the Interior and the Israel Electric Corporation and the

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National Coal Supply Company, restored the treatment process to its original course – the utilization.

Turning coal ash into a resource through the creation of economic and environmental motivation for its efficient exploitation, an exploitation based on technological standardization and subject to environmental conditions, is the optimal pathway for the treatment of coal ash. This mechanism will enable the ongoing removal of coal ash from the coal-fired power stations in a fashion that will ensure the reliable continuous functioning of those stations.

As a byproduct of the combustion of the earth's rocky outer shell, coal ash contains substances that – in the absence of proper planning and responsible management – could cause environmental damage.

“Proportionality” is the name of the game, in other words, finding the right balance between benefits and risks, as in all areas of life. The potentially dangerous elements contained in the ash (heavy metals and radionuclides) are interesting and important from a scientific standpoint, but lack any direct, practical environmental significance. It is a fact that trace elements can pollute, on the one hand, and are vital, on the other, and some people maintain that the same is true for exposure to ionizing radiation. The activities of the NCAB are designed to characterize and assess the environmental effects of the conditions under which the various applications of ash – construction, road paving, industry and agriculture – are executed and come up with the best ways to take preventive cautionary steps during these applications.

The coming workshop, like the previous one four years ago, will deal with the various environmental aspects of the uses of coal ash. The last workshop helped to identify and define the questions that remained open and decide on a supplementary research program. In the current workshop, we plan to formulate proposals to improve and upgrade the environmental conditions for the use of the ash, based on the performed research.

On the first day, we will present the public with as full an array as possible of local and world-wide knowledge regarding the environmental aspects of the conditions imposed on the various applications of coal ash. On the second day, the professional-scientific teams of the NCAB will debate specific proposals for such conditions in light of the results of the research. This will be done with the aim of upgrading the environmental conditions for coal ash use, in order to enable the optimum utilization of the ash while exercising due preventive environmental caution.