

## INFORMATION



### CONFERENCE ON OIL SHALE IN JORDAN

The international conference “Recent trends in oil shale research and applications” took place in Amman, the capital of Jordan, on November 7–9, 2006. The conference was organized by Jordanian Natural Resources Authority and Al-Balqa Applied University. The majority of the 250–300 participants came from Jordanian universities, research institutions and enterprises. The Estonian delegation was numerous as well, consisting of representatives from the Estonian Parliament, the Ministry of Foreign Affairs, Tallinn University of Technology, and the companies Estonian Energy, Narva Power Plants, Estonian Oil Shale and Viru Chemistry Group. There were reports also by specialists from China, Turkey, Saudi Arabia, Morocco, Australia, Germany and Czech Republic. All reports were available in CD form.

Due to continuously increasing price of oil, more and more attention is being paid to the possibility of producing oil at thermal processing of oil shale. In principle, obtaining oil at heating oil shale is not difficult. In practice, flow sheet of thermal treatment makes implementation of the process a complicated task. Since oil shale contains much mineral matter, oil yield ranges from 8 to 15%; thus massive amounts of oil shale are to be treated. That, in turn, requires considerable dimensions. Large-scale production is accompanied by elevated pollution of the environment. The participants took the position that oil production from oil shale is profitable at crude oil price about 35 \$ per barrel.

Direct combustion of oil shale for power production has aroused an interest as well. Only Estonia is experienced in combusting such a complicated fuel as oil shale in high-power equipment. Estonia is the only state in the world where the need for electricity is covered by combustion of local oil shale. If needed, electricity is reported abroad.

World's oil shale resources are estimated to be equivalent to 500 Gt crude oil. These resources – at least 600 oil shale beds – are distributed more or less uniformly over the world.

Why was this symposium hold in Jordan? As known, Jordan is rich in oil shale resources – 40 Gt or 28 Gbarrels crude oil. Further geological investigations may lead to an even greater number. In Estonia, the thickness of oil shale bed may reach 3 m, in Jordan – mostly about 30 m, in some regions (at the depth of 140–400 m) oil shale bed may be 70–200 m thick. Most of oil shale layers are covered with 30–70-m overburden. The opening speech of the conference was addressed to prospective foreign investors in developing Jordanian oil shale industry. Estonian Energy Ltd and Jordanian Government signed a contract allowing the Estonian partner to exploit 300 million t in a future joint enterprise.

The reports presented dealt with properties of various oil shales, technologies of thermal processing and combustion, environment protection and utilization of oil shale mineral part (ashes).

In comparison with other states utilizing oil shale, the situation in Estonia is excellent. We are experienced in oil shale combustion, and we have developed the technologies in use at power plants. The same can be said about thermal treatment of oil shale to produce shale oil. Further success in both fields is basing on our considerable scientific potential.

Professor Arvo OTS



