

ESTONIA

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In 2000, Estonia's economy showed steady growth with relatively low inflation. Foreign investment increased by 12% in 2000. Foreign direct investment, accounting for nearly half of the total, grew by 15.8%. Accumulated foreign investment reached 108% of Estonia's GDP. The European Commission expects that in 2001-2002 Estonia will evidence a strong economic growth with GDP increases of 5.9% and 5.7% respectively.

Estonia is not rich in mineral resources. It mines oil shale, peat and some industrial minerals. There are also two deposits of phosphate rock (Maardu and Toolse) but mining at the Maardu deposit was stopped owing to environmental considerations while a project to develop the Toolse deposit was cancelled.

Estonia's reserves of oil shale are considered to be the largest in the world (3,800 Mt). Estonian experts estimate that the reserves are sufficient for about 50 years of development. Oil-shale, mined by Eesti Põlevkivi, is used as the principal fuel for regional power plants owned by Narva Elektriijaamad. The plants produce more than 90% of Estonia's electricity. Besides, oil-shale is processed by Kriviter chemical plant in Kohtla-Järve which produces more than 50 different components.

In February 2000, US Minister of Commerce William Richardson and Estonian Economics Minister Mihkel Pärnoja signed a three-year treaty on co-operation between the two countries on processing of oil-shale. The treaty envisages mutual cooperation in research and development in spheres related to shale processing. The research, financed by the US, is to focus on extracting new chemical components from oil shale, and decreasing waste and damage to

environment from development of shale deposits.

Recently, environmental issues have started to be a major factor in defining the future of oil-shale mining. Estonian experts argue that damage caused to the environment by oil-shale production is considerably greater compared to other mineral resources. About 82% of the extracted oil-shale is used in the power industry which accounts for 81% of water consumption and 61% of the air emissions from stationary sources, and generates 83.3% of waste in Estonia.

Meanwhile, Estonia is seeking ways to decrease the share of oil-shale in production of electricity. The Government of Estonia has approved a national research and development plan in the energy sector, and the development of a national energy strategy for Estonia has been initiated. According to preliminary calculations, the total investments needed to reconstruct oil-shale thermal power stations is almost EK6 billion. Most of the sum is needed to introduce a new environmentally friendly combustion technology. An important task is the re-concentration of electricity and heat generation using different local (peat, wood, energy forest and wind energy) and imported (coal, gas and oil) fuels.

In April 2001, Narva Elektriijaamad decided to sign a contract with Foster Wheeler Energia for modernisation of two blocks of 200 MW at the Narva power station. The cost of the modernisation is €250 million, and the project is designed to raise effectiveness of shale usage as well as reduce pollution. Alstom Power Inc. from the US, and Germany's Lurgi Energie und Entsorgung GmbH also took part in the tender.