1. Introduction

Russia is rich in energy resources. It is the second biggest exporter of oil and the biggest natural gas exporting country in the world and plays an increasing role in supplying energy to the European Union. For the future EU-25, Russia’s role as energy supplier will even increase. In 2003, the Russian Government approved the Energy Strategy of Russia to the year 2020, which highlights the central role of energy for the development of the Russian economy and for Russia’s national security. The energy sector accounts for 22% of the Russian GDP and 30% of total industrial production. It provides about half of the income of the federal budget.

In the past, energy efficiency improvement was not given first priority goal in Russia’s energy and economic policy, although this could have an important positive impact on economic development. Energy intensity of GDP in Russia is among the highest of the world. It was 1.34 toe/1000 USD in 1992 and even increased up to 1996 (1.89 toe/1000 USD). Since 1997, energy intensity of GDP decreased slightly, and it was below 1992 levels for the first time in 2001. However, energy efficiency improvement proceeded at a much slower pace than in the Baltic States, where energy intensity was almost at the same level as in Russia at the beginning of the 1990s. The new energy strategy, however, seems to set higher priority on achieving energy efficiency improvements.

2. Increasing Energy Efficiency – a Major Challenge and Opportunity for Russia

The potential for improving energy efficiency in Russia is huge and has been assessed by different studies. According to estimations of the Russian Energy Strategy, energy saving potential in Russia through 2020 amounts to about 252-300 million toe, this is about 39-47% of its current energy consumption. The Strategy notes as well that the high energy intensity of Russia’s GDP, which is 3.1 times that of the EU, is not only the result from special climatic factors and the vast size of the Russian territory. The energy intensive nature of the Russian economy, the growing technological gap in some parts of Russia’s industry as well as the low energy prices,

1 IEA, Key Energy Data, various editions.
2 Energy intensity of GDP was twice as high as in Canada if GDP is measured in PPP. It was even more then five times higher than in Canada if GDP is measured in USD according to exchange rates. The TPES/GDP (toe per 1000 USD) was 1.72 for Russia in 2002 and 0.36 for Canada. The figure for Germany at that time was 0.13 toe per 1000 USD. See IEA Energy Indicators by Country.
which do not act as incentives for saving energy, have been identified as most important reasons.

\[ \text{Final energy consumption} \quad \text{Energy saving potential} \]

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<th>Sector</th>
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<td>Other</td>
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Source: Russian Ministry of Energy, Moscow

Fig. F1. Energy Consumption and Technical Energy Saving Potential in the Russian Economy in 2002, mn toe

A sectoral analysis of the technical energy saving potential made in 2002 by the Ministry of Energy of the Russian Federation shows the following results. (See Figure F1)

The main bulk of the energy efficiency potential is within the Russian energy sector itself. According to the IEA, the energy sector accounts for an estimated 40% of the potential savings. Investment in new capacities and modernisation in the power and gas sectors made by RAO EES Rossii (the Russian power supply holding) and Gazprom have already had a certain positive effect on energy efficiency. However, other parts of the energy sector like the communal heating sector, which is mainly owned by the municipalities, have a huge potential for energy efficiency improvement as well. In addition, on the demand side, the final customers in the residential sector and the public sector as well as the industrial and service sectors could achieve considerable improvements in energy efficiency.

As far as multi-storage residential houses are concerned, their actual energy consumption is about 0.22 Gcal/m², which is more than five times