Siberian Coal Energy Company

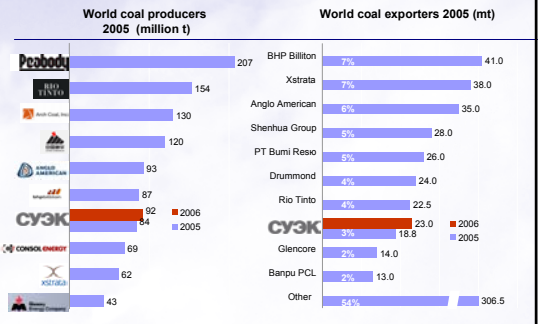
Prospects for coal-fired power generation:

Russia within the contest of global trends

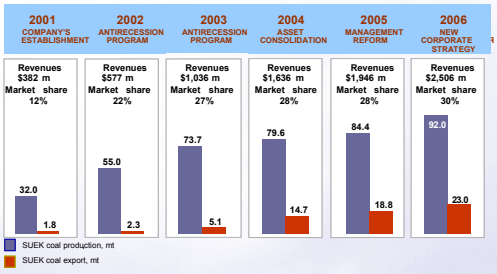
November 2006

SUEK is the largest coal energy company in Russia

- SUEK is ranked **7th in the world** in terms of coal production.
- SUEK is comprised of **41 coal-mining operations** (of which 24 open pits and 17 underground mines) in 8 regions of Russia.
- SUEK is a **shareholder of power grids in 10 regions of Siberia and the Far East**, with a total installed capacity of **15,000 MW.**
- **SUEK's** commercial **coal reserves – 8.2bn t (second in the world).** Considerable part of SUEK coals meet the highest world's environmental standards.
- SUEK is **the largest exporter of Russian coal,** and is in the top ten world's coal market players.
- Over **50% of coal supplied to Russian power plants** is produced by SUEK.
- SUEK has been implementing the largest coal-mining capacity **upgrade program** ever initiated in Russia.
- SUEK employs **44 thousand people.**



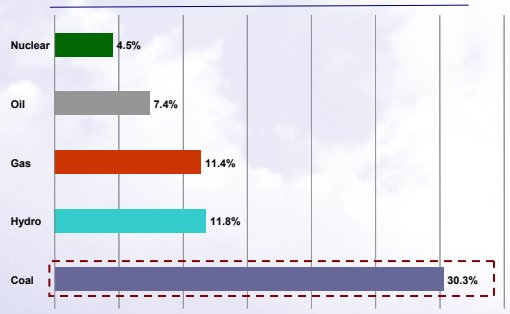
Dynamics of SUEK key performance indicators



The world's coal-fired generation is developing at an outstripping rate

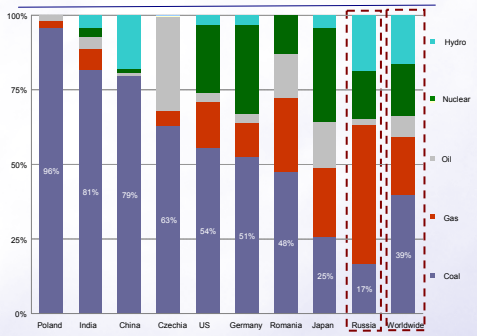
- Coal's share of total power generation in the world is 40%, and is the highest in the world.
- The growth in coal demand is boosted by the rapid economic development of China, India, and other Asian countries, whose power sectors primarily rely on solid fuels. The US demand growth also contributes to the overall increase.
- Coal reserves are widely distributed around the globe, far exceeding the reserves of any other fossil fuel. It encourages power generating companies all over the world to diversify primary energy sources, while maintaining coal's share high in their energy mix.
- The advantages of coal are in its safety and convenience in handling, storage and use.

Primary energy consumption growth 2001-2005



Source: World coal institute

Components of power generation mix by country, %

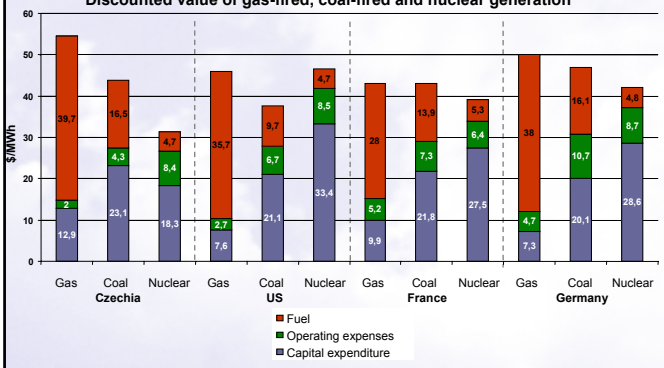


Source: International Energy Agency

Comparative efficiency of world's coal-fired generation has been increasing

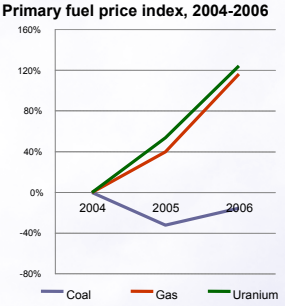
- As the analysis of power generation of various countries of the world shows, an overall cost of gas-fired power generation is comparable to coal-fired generation due to higher fuel cost
- In 2005 the comparative efficiency of coal-fired generation increased due to high growth rates of gas and uranium prices leaving coal prices behind

Discounted value of gas-fired, coal-fired and nuclear generation



Source: IEA, Projected Costs of Generating Electricity, 2005

Primary fuel price index, 2004-2006

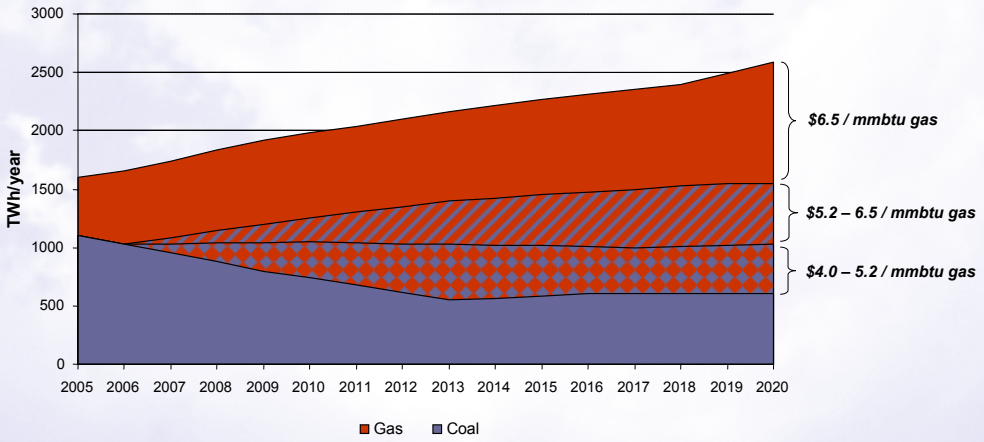


Source: SUEK's analysis and estimate

Further growth in coal consumption will primarily depend on gas price dynamics

- An overstripping growth in gas prices will promote competitive price advantage of coal-fired generation in power sectors of developed countries, even if carbon prices are taken into account.
- If gas price is over $5.2/mmbtu, the share of coal-fired generation may even increase.

Proportion of coal- and gas-fired generation, depending on natural gas price, Europe*



* at $20 / tonne CO2 price, coal price $50/tonne cif ARA

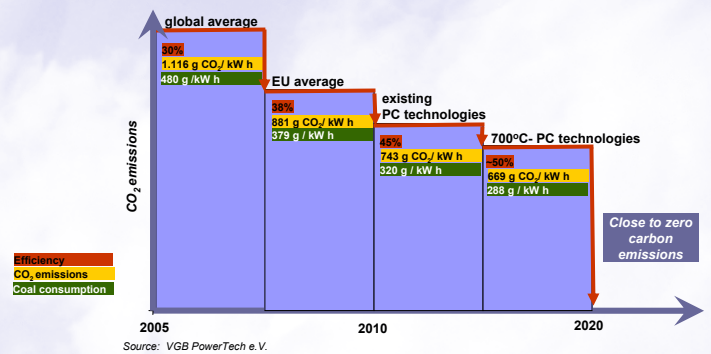
Source: BP Analysis («Europe in a Global Context» / The 21st Annual European Autumn Gas Conference)

Technology development in the world's coal-fired generation

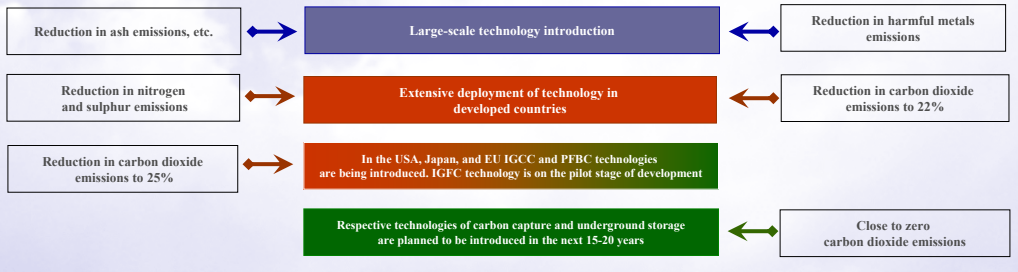
Three main trends in coal-fired generation technology development:

- **Reduce CO2 and Sox emissions**
- **Improve boiler efficiency (and profitability)**
- **Utilize technologies that allow use of new resources that cannot be mined conventionally.**

Forecasted quality indicators of coal-fired generation



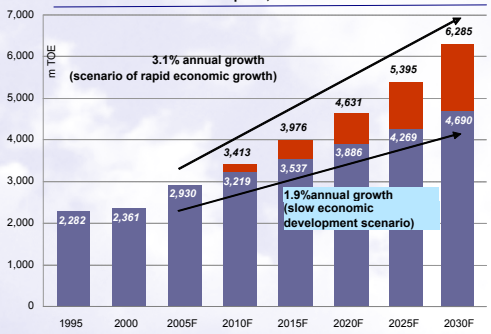
Source: VGB PowerTech e.V.



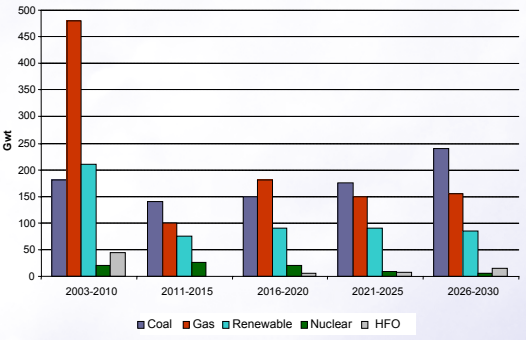
Development of new coal-fired generation will promote steam coal consumption worldwide

- **In the next decades coal will maintain its position as a dominant primary energy source making a critical contribution to meet the demand for energy.**

World's coal consumption, 1995-2030F



World's generating capacity growth, by fuel type, 2005 - 2030



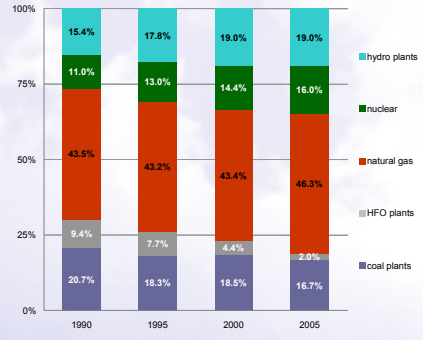
Source: BP Statistical Review of World Energy , June 2006; International Energy Outlook, 2006

Source: World Energy Outlook, 2006 US Energy Information Administration DOE

Coal's share in Russian power generation is less than in other countries

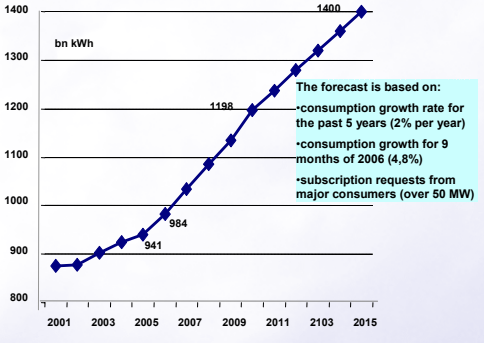
- From 1990 to 2005 the percentage of coal in Russian power generation declined from 20.7% to 16.7%, while the share of gas increased to 46.3% from 43.5%
- From 1990 to 2000 there was a "gas pause" in Russia, characterized by gas consumption at low prices
- During 2006 - 2010 all Russian regions are projected to substantially increase electricity consumption. During times of peak demand the shortage of generation capacity is faced by the regions.
- The need to plan a large-scale start-up of new capacity brings up an issue of a reliable long-term fuel supply.

Russian power generation by energy source, 1990-2005



Source: Mining Congress, Rosinformugol

Electricity demand, bn kWh

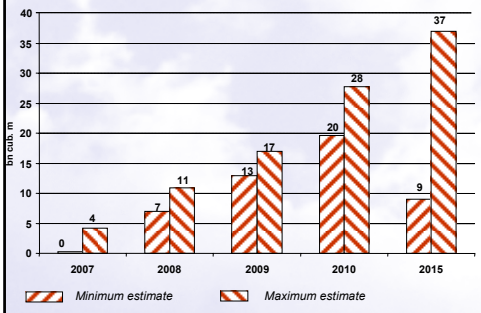


Source: Ministry of Industry and Energy, Russia

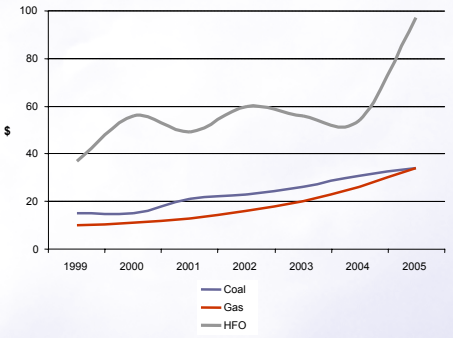
Gas-fired generation in Russia faces an increasing gas shortage

- Until recently, the underestimation of gas price in the domestic market of Russia resulted in its irrational utilization: efficiency of the majority of gas plants is just 35 – 40% (while that of the world's state-of-the-art coal-fired plants is 50 – 55%).
- The failure to ramp up production rates and gas supply volumes amidst rapid domestic demand growth may result in potential shortage of gas in the domestic market by 2015, which will average to 9 - 37 bn cub. m.
- Price competitive advantages of gas-fired generation in Russia have been reducing due to the outstripping gas price growth. The forecasted gas tariff growth to $85 per 1,000 cub. m as early as in the coming years will make gas-fired generation more expensive than that of coal in most Russian regions.

Forecasted domestic gas deficit in the Russian market



Price of fuel for power generation, $/t TOE

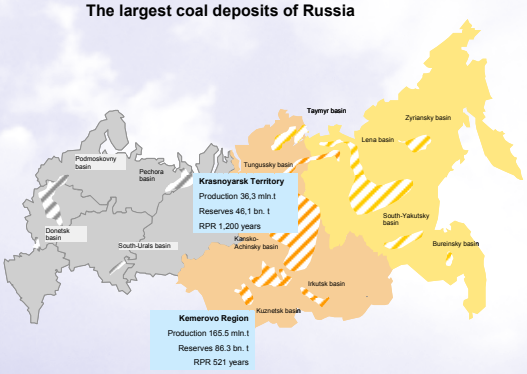


Source: SUEK estimate

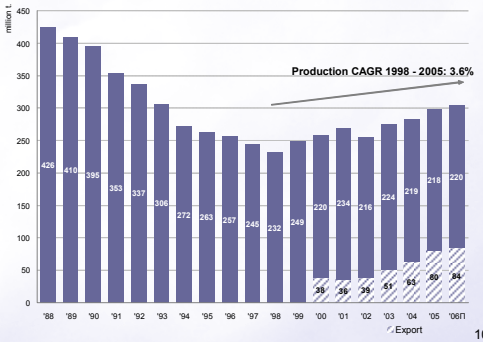
Coal sector may provide fuel to meet the required generation capacity expansion

- Russia holds the world's second largest coal reserves.
- In 2005 Russia produced nearly 300 million t of coal, but has not attained the level of 1988 so far (nearly 426 m tonnes)
- The main coal producing regions of Russia are Krasnoyarsk Territory (Kansko-achinsky coal basin) and Kuzbas. Kansko-Achinsky lignite is extracted in opencast mines; its CV is 3,700kc. Kuzbas hard coal is produced mainly in underground mines; its CV is 5,000-6,000kc.
- Kansko-Achinsky and Kuzbas coals are environmentally sound, their sulphur and ash content are among the lowest in the world.

The largest coal deposits of Russia



Coal production dynamics, Russia



Source: Company's estimate and data

Source: BP Statistical Review of World Energy, 2006, National Statistics Committee of Russia, Company's estimate

Presumable strategic priorities in the use of Russian primary energy sources

GAS

Ensuring global energy security by means of stable export supply to Europe and Asia.
Implementation of large-scale export projects

Intensive development of gas chemistry in Russia

The national project of gas supply to the sector of public utilities

COAL

Stable fuel supply to power generation amidst power consumption growth.
Innovative, environmentally sound coal-fired generation as one of the fundamentals of a new electric power generation