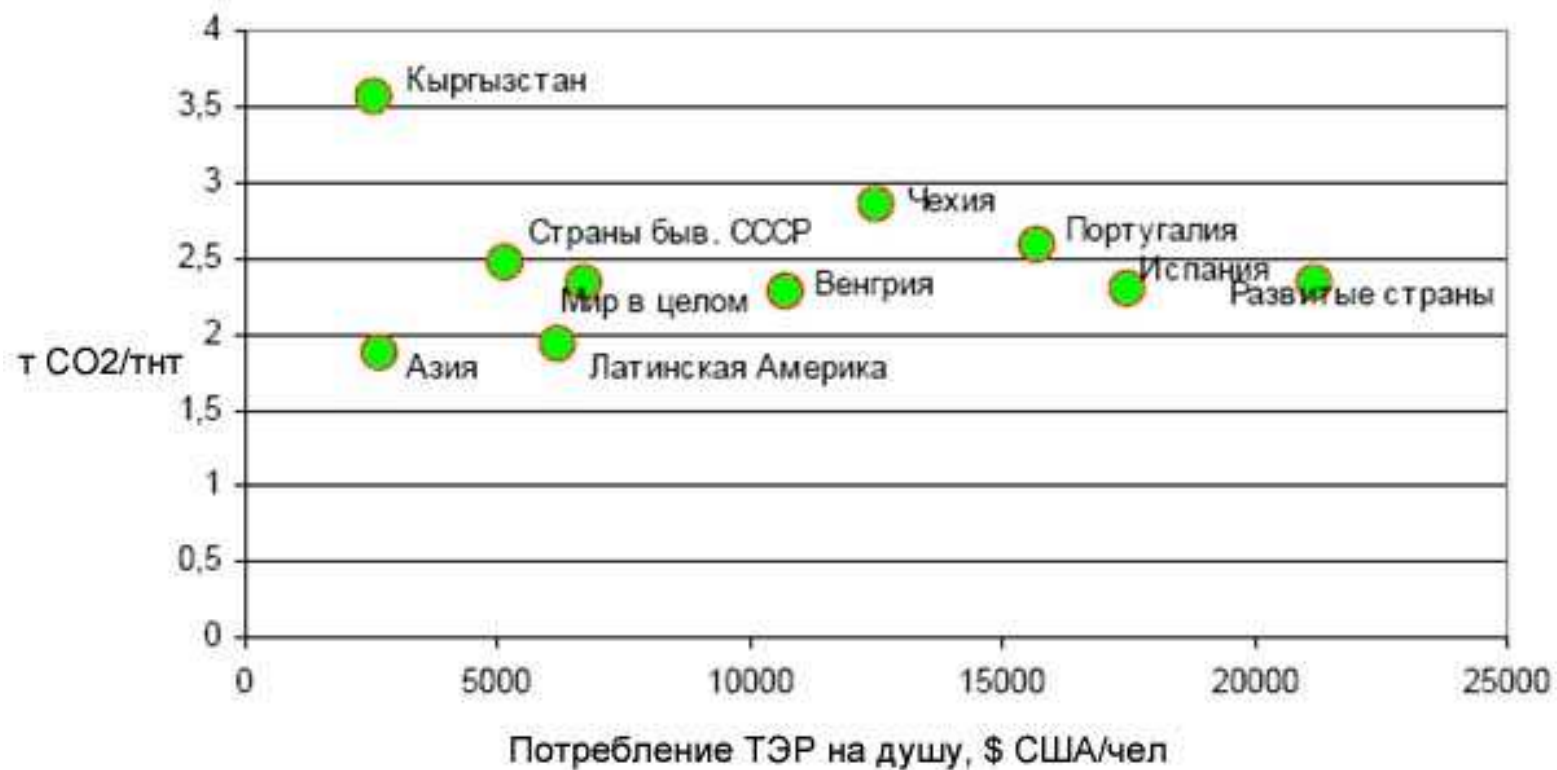


Coal resources and prospects

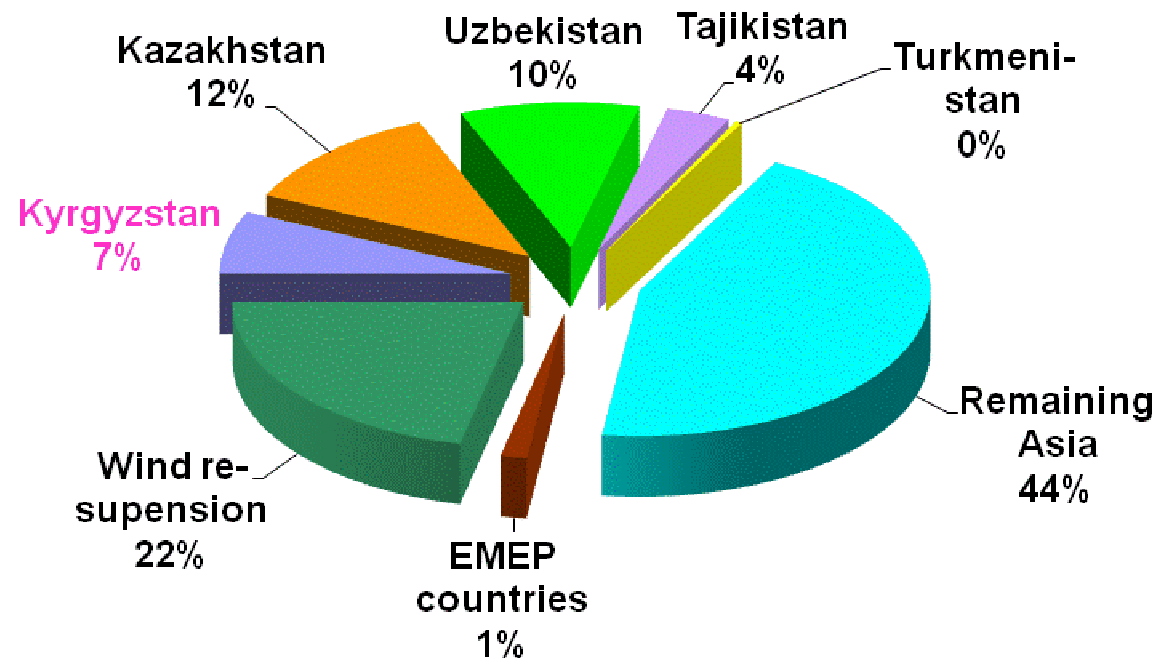
- The total reserves of coal in Kyrgyzstan about 32.0 billion tons.
- Considerable reserves are found in the Kavaksky pool located in high-mountainous Naryn area
- Probable economically available reserves of 70 basic coal deposits are estimated to than 2,2 billion tons
- The coal reserves in the Kavaksky pool is 279,3 million tons, including a deposit the Kara-Keche for open mining - 192,5 million tons.

Kyrgyz Republic

The level of emissions CO2



Transboundary pollution in Central Asia



Kyrgyzstan

The tax rate for pollution

- **NO₂ = 49,32 som/tons (2,6 \$usd)**
- **NO = 21,1 som/tons (1,1 \$usd)**
- **SO₂= 19,8 som/tons (1,06 \$usd)**
- **CO= 1,2 som/tons (0,06 \$usd)**

Payment for emission into the atmosphere

- **Total payment for pollution amount to 9,3 mln. som (497,3 th. \$USD):**
- **-SO₂ = 8,6 mln. som (459,9 th. \$USD)**
- **- CO = 0,024 mln. som (1,2 th. \$USD)**
- **- NO₂ = 0,7 mln. som (37,4 th. \$USD)**

Program ECE the United Nations

- The program CAPAKT:
- Trainings have been carried out
- The improved capacity buildings of experts of the Central Asia countries on technologies of clean burning of coal
- Workings out business of plans are trained
- Developed Concrete project of CBC
- It is necessary for regional advisers ECE UN to continue work of implementing of the developed projects.

Projects using clean coal technologies in the Kyrgyz Republic

- **The project № 1. The customer of JSC "Power plant" HPS-1 in Bishkek.**
- **1st phase «Replacement of three boilers БК3-160 by boilers БК3-420ЦКC», cost of 17,725 million US \$.**
- ***2nd phase* - installation of a turbine unit with backpressure system P-50/60-130/13-2 or thermal turbines 100 МВт. Cost -8 million US \$.**
- **Total cost -26 million US \$.**

CO2 Emissions thermal power station of Bishkek,/thousand tons /

2002	2003	2004	2005	2006
1515,5 (35,5%)	1644,5 (55,4%)	1686,1 (54,9%)	1681,9 (65,8%)	1585,4 (69,7%)

Economy of fuel and reduction of CO₂ emissions after replacement of three boilers

fuel, (th.ton/year)	emissions CO ₂ , (mln.ton/year)
163	0,5

Project 2. Economy of fuel and reduction of CO2 emissions after replacement of three boilers.

- Cost of the project for each boilers БК3-220, 82 thousand US \$,
- Including in the first phase - installation of system of the temperature control of surfaces of heating with symbolic circuit and with archiving of measurements - 41,5 th. US \$.
- 2nd phase - installation of adaptive system of automatic control with replacement of valves of injection - 40,5 th. US \$.
- total of 11 boilers БК3-220 - 902 th. US \$.

Projects in Kyrgyzstan

- **Project № 3. Customer Kyrgyzzhilkommunsojuz (Bishkek, street Bokonbaeva, 88; «Boiler-house reconstruction in Naryn»**
- **Boiler KBTC-10 - only 2 pieces working on solid fuel, productivity of each boiler 10 Gkal/h, the heated volume of 120 thousand m³.**
- **Cost of the project is 300 thousand US \$.**
- **Project №4. The customer Kantsky cement plant**
- **« installations of gas turbine on Kantsky cement plant»**

Thermal Power station

- **The project assumes the building of a thermal station on the Kara-Keche deposit. The total capacity is 1600 MW_T. 8 units by 200 MW_T capacity each.**
- **The total cost of the project is 1,3 bl. USD**
- **The electric power cost 1,6-2,0 cents per KW_{th}.**

Energy saving policy in Kyrgyzstan

- **The passive relation of the government to the energy saving policy.**
- **Preference of short-term priorities, using inefficient mechanisms for implementation of energy saving policy**
- **Absence of the necessary information and statistical data gives a incorrect basis for policy development.**

...the experience in developing energy policy strategy, based on principles of steady economic growth and energy security in Kyrgyzstan

- **Assist the state authorities to introduce internationally recognised concepts and principles of energy;**
- **Integrate environmental and energy saving aims into energy policies;**
- **Estimate potential of regional and international cooperation;**
- **Introduce key market concepts in the field of pricing, taxation, tariff policy, etc. in energy sector.**

Environmental initiatives in the energy sector.

- **1. A balanced structure of deliveries to consumers of primary energy with increase of relative weight of local coal, with a stable share of natural gas.**
- **2. Working out measures to reduce emissions of SO₂ and NO_x, hotbed gases and flying ashes.**
- **3. The further development of system of ecological audits.**
- **4. Performance of low cost measures to save energy and to reduce harmful emissions by energy producing enterprises.**
- **5. The further improvement of legislation and standard base.**
- **6. To stimulate using of ecologically safe fuel and implementaion of measures to reduce pollution.**
- **7. Esblishment of stationary monitoring systems of environmental pollution on the main heating plants.**

Continuation

- 8. To use tax system to motivate realization of environmental protection programs in order to reduce pollutions.
- 9. Improvement of environmental pollution control system on the plants of power industry.