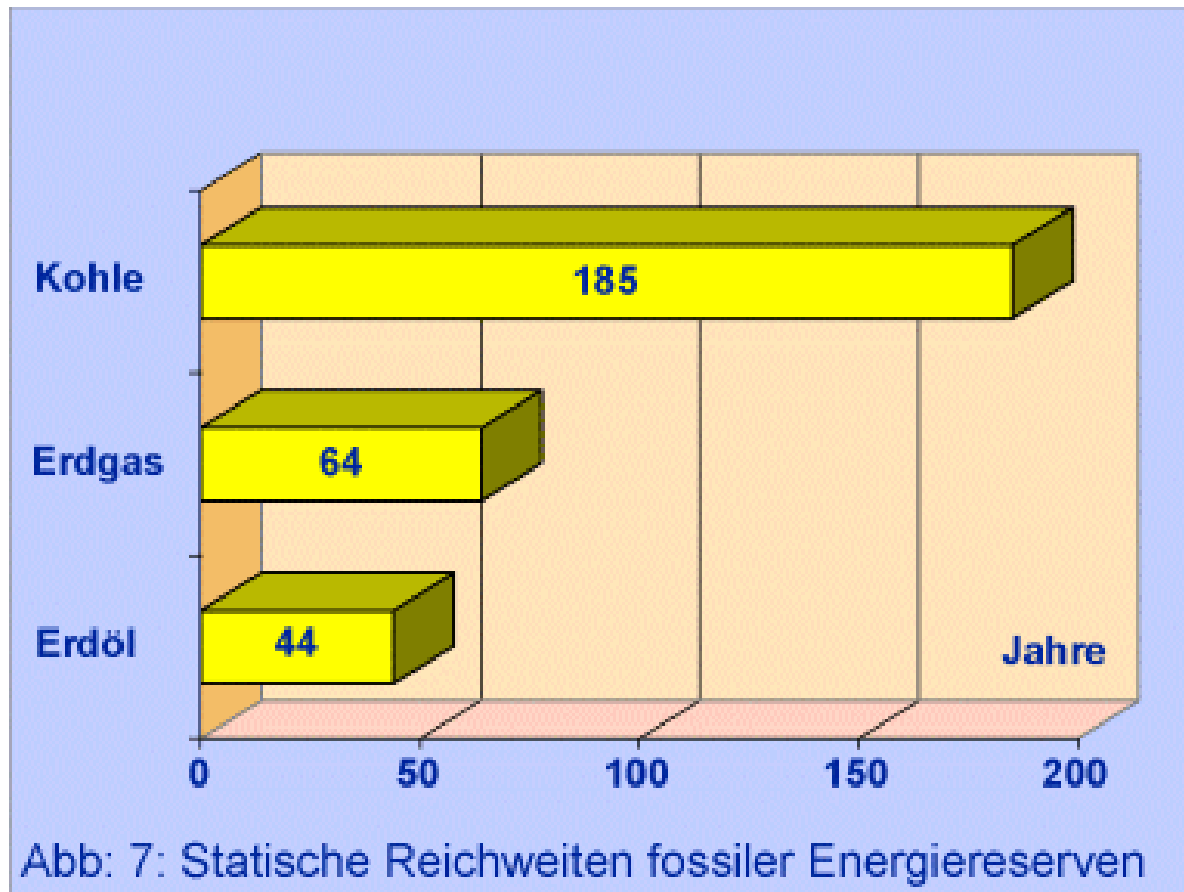


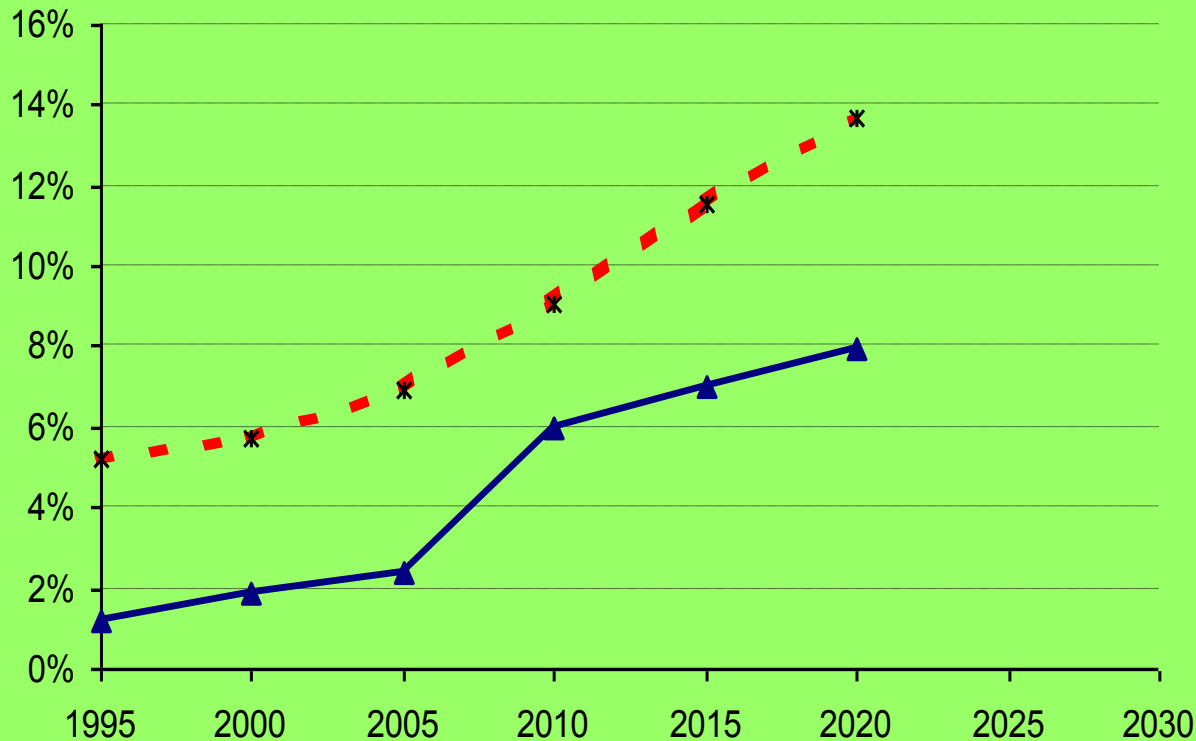
The key strategic targets of the energy policy of the State include:

- the basic conception of long-term development of the energy sector
- legislation and economic environment which would encourage power producers and distributors to prefer environment-friendly behaviour
- a gradual reduction of the volumes of energy and raw materials needed by the economy on the level of advanced industrial countries
- support to new production technologies with minimum need for energy and raw materials and with maximum utilisation of the energy and raw materials
- support to programmes leading to energy savings and to greater utilisation of alternative energy and raw material sources in supplying the population with energy



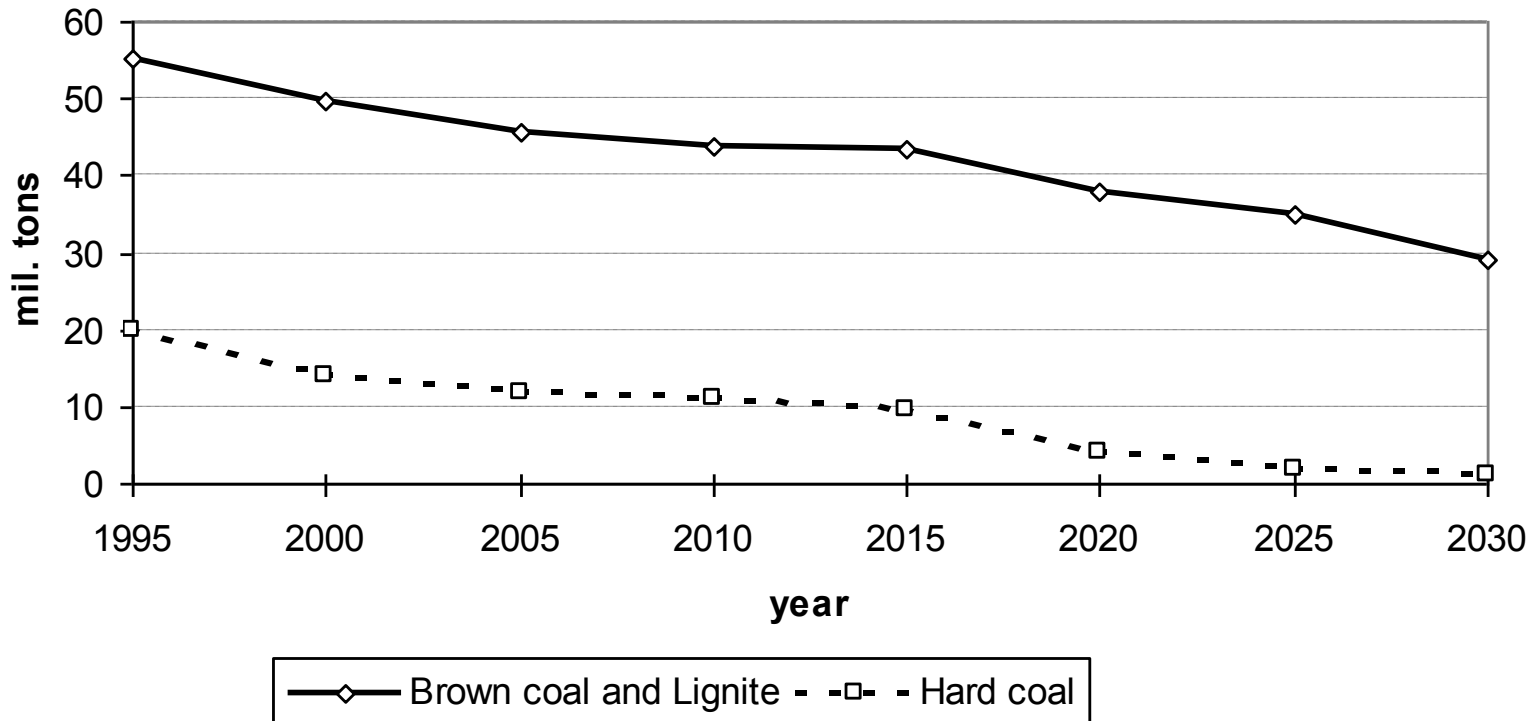
Renewable energy sources

Contribution of renewable sources, including biomass, to the consumption of primary energy sources in the Czech Republic



—▲— Scenario of a real growth
- - * - - EUR15 scenario FORUM

If the proposed solution is used as shown above - while respecting territorial ecological limits of brown coal extraction and if the Frenštát mine (and/or other mining sites) are not developed, the extraction volumes can be expected to develop as follows:



Environmental protection and coal mining and use

- removal of environmental damage, especially the damage caused by extremely high emissions of pollutants discharged into the air
- implementation, in the coal-fired power plants, of de-sulphuring and de-nitrifying projects, as well as installation of equipment to separate dust, have substantially reduced the exhalations, particularly those of sulphur dioxide and dust. In 1998, compared with 1990, the exhalations of sulphur dioxide were reduced by 60% and dust by 80%.
- In December 1997 a Protocol on the Convention was adopted, by which the Czech Republic joined the countries which would reduce the emissions of greenhouse gases by 8% before 2008-2012, compared with the level of the year 1990.

The development of CO₂ emissions

Year	1990	1991	1992	1993	1994	1995	1996	1997
CO ₂ aggr [M]	187.5	170.2	155.2	149.1	143.4	142.7	149.6	151.4
CO ₂ aggr [%1990]	100.0	90.8	82.8	79.5	76.5	76.1	79.6	80.7

If the total electricity output of nuclear power plants (the Temelín nuclear PP and the Dukovany nuclear PP) were replaced by the same output of traditional coal-fired power plants, then the volume of carbon dioxide emissions in the Czech Republic would increase by 17%.

Electricity production - sources, 1991 - 1996

Ukazatel	1991	1992	1993	1994	1995	1996
	mil. kWh					
Elektrárny celkem	60646	59293	58882	58705	60847	64257
v tom:						
parní vč. spalovacích	47195	45405	44659	43952	46343	49004
vodní	1319	1638	1596	1776	2274	2403
jaderné	12132	12250	12627	12977	12230	12850

Localisation and types of power stations



Spotřeba energie stále roste

V roce 1997 se celosvětově spotřebovalo 12,8 miliard tun ekvivalentu hnědého uhlí (EHU)

**1 t hnědého uhlí = 0.67 t nafty = 850 m³ zemního plynu = 2
9.3 x 10⁹ Joulů**

**1 t uranu (přírodního) = 14000 až 23000 t ekvivalentu
hnědého uhlí (zásoby 2.34 milionů tun při ceně 80 USD/kg;
zásoby s nižší kovatostí 18 milionů tun**

Odhady zásob fosilních paliv – na 45 až 185 let

Concentrations of some trace elements in North Bohemian coal and in solid residues after conventional coal combustion

Concentration < 10⁻⁶	Ag, Bi, Ga, Ge, Mo, Sb, Tl, W
Concentration 10⁻⁵ - 10⁻⁶	Be, Ga (sub-micron fly ash), Ge (sub-micron fly ash), Pb (slag), Sb (sub-micron fly ash), Sn (slag and sub-micron fly ash)
Concentration 10⁻⁴ - 10⁻⁵	As, Co, Cu (fly ash), Mn (slag and sub-micron fly ash), Ni, Pb (fly ash and sub-micron fly ash), Sn (fly ash), Sr, Zn
Concentration 10⁻³ - 10⁻²	As (sub-micron fly ash), B, Cr, Cu (slag and sub-micron fly ash), Mn (fly ash), V, Zn (sub-micron fly ash)

Besides the above, coal or fly ash often contain increased levels of Cd, Cl, F (in N-Bohemian brown coal hundreds of ppm) , Hg, Se.

Spotřeba energie stále roste

V roce 1997 se celosvětově spotřebovalo 12,8 miliard tun ekvivalentu hnědého uhlí (EHU)

**1 t hnědého uhlí = 0.67 t nafty = 850 m³ zemního plynu = 2
9.3 x 10⁹ Joulů**

**1 t uranu (přírodního) = 14000 až 23000 t ekvivalentu
hnědého uhlí (zásoby 2.34 milionů tun při ceně 80 USD/kg;
zásoby s nižší kovatostí 18 milionů tun**

Odhady zásob fosilních paliv – na 45 až 185 let

Concentrations of some trace elements in North Bohemian coal and in solid residues after conventional coal combustion

Concentration < 10⁻⁶	Ag, Bi, Ga, Ge, Mo, Sb, Tl, W
Concentration 10⁻⁵ - 10⁻⁶	Be, Ga (sub-micron fly ash), Ge (sub-micron fly ash), Pb (slag), Sb (sub-micron fly ash), Sn (slag and sub-micron fly ash)
Concentration 10⁻⁴ - 10⁻⁵	As, Co, Cu (fly ash), Mn (slag and sub-micron fly ash), Ni, Pb (fly ash and sub-micron fly ash), Sn (fly ash), Sr, Zn
Concentration 10⁻³ - 10⁻²	As (sub-micron fly ash), B, Cr, Cu (slag and sub-micron fly ash), Mn (fly ash), V, Zn (sub-micron fly ash)

Besides the above, coal or fly ash often contain increased levels of Cd, Cl, F (in N-Bohemian brown coal hundreds of ppm) , Hg, Se.