



Country profile – Czech Republic

The section 'Key climate- and energy-related data' was prepared by the EEA. It includes the latest data available as of 31 July 2014

The section 'Climate and energy policy framework' was prepared by eclareon and Ecologic Institute, Germany. It includes the latest information on national policies and measures available as of 31 May 2014.

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Key climate- and energy-related data — Czech Republic

Key data on GHG emissions	2005	2011	2012	2013	EU 2012
Total GHG emissions (UNFCCC, Kyoto Protocol) (Mt CO ₂ -eq.)	146.0	135.3	131.5	126.9	4 544.2
GHG per capita (t CO ₂ -eq./cap.)	14.3	12.9	12.5	12.1	9.0
GHG per GDP (g CO ₂ -eq./PPS in EUR)	802	633	605	585	350
Share of GHG emissions in total EU-28 emissions (%)	2.8%	2.9%	2.9%	2.8%	100%
EU ETS verified emissions (Mt CO ₂ -eq.)	82.5	74.2	69.3	67.7	1 848.6
Share of EU ETS emissions in total emissions (%)	56%	55%	53%	53%	41%
ETS emissions vs allowances (free, auctioned, sold) (%)	- 14.9%	- 14.2%	- 22.1%	+ 37.0%	- 14.1%
Share of CERs & ERUs in surrendered allowances (%)	0.0%	8.4%	32.1%	n.a.	26.4%
Non-ETS (ESD) emissions, adjusted to 2013–2020 scope (Mt CO ₂ -eq.)	60.5	58.1	59.1	59.2	2 566.6
Key data on renewable energy	2005	2010	2011	2012	EU 2012
Share of renewable energy in gross FEC (%)			9.3%	11.2%	14.1%
() = including all biofuels consumed in transport	(6.0%)	(9.3%)			
Share of renewable energy for electricity (%)	3.7%	7.5%	10.6%	11.6%	23.5%
Share of renewable energy for heating and cooling (%)	9.1%	12.1%	12.6%	13.6%	15.6%
Share of renewable energy for transport (%)			0.7%	5.6%	5.1%
() = including all biofuels consumed (%)	(0.5%)	(4.6%)			
Key data on energy consumption	2005	2010	2011	2012	EU 2012
Primary energy consumption (Mtoe)	42.2	41.9	40.6	40.1	1 584.8
Primary energy consumption per capita (Mtoe/cap.)	4.1	4.0	3.9	3.8	3.1
Final energy consumption (Mtoe)	26.0	25.4	24.5	24.1	1 104.5
Final energy consumption per capita (Mtoe/cap.)	2.6	2.4	2.3	2.3	2.2
Efficiency of conventional thermal electricity and heat production (%)	48.2%	48.0%	47.3%	46.9%	50.0%
Energy consumption per dwelling by end use	2005	2009	2010	2011	EU 2011
Total energy consumption per dwelling (toe/dwelling)	1.60	1.56	1.51	1.55	1.42
Space heating and cooling (toe/dwelling)	1.14	1.10	1.06	1.09	0.96
Water heating (toe/dwelling)	0.23	0.22	0.22	0.22	0.18
Cooking (toe/dwelling)	0.12	0.11	0.11	0.11	0.08
Electricity (lighting, appliances) (toe/dwelling)	0.11	0.12	0.13	0.12	0.20

Progress towards GHG targets (under the Effort Sharing Decision, i.e. non-ETS emissions)

2013 ESD target (% vs base year)	+ 0.7%	2020 ESD target (% vs base year)	+ 9.0%
2013 ESD emissions (% vs base year)	- 1.6%	2020 ESD projections WEM (% vs base year)	- 7.4%
		2020 ESD projections WAM (% vs base year)	- 9.3%

Based on approximated emission estimates for 2013, emissions covered by the Effort Sharing Decision (ESD) (i.e. in the sectors which are not covered by the EU ETS) are expected to be below the annual ESD target in 2013. Projections also indicate that 2020 ESD emissions are expected to be below the 2020 ESD target, with the current existing measures.

Progress towards renewable energy targets

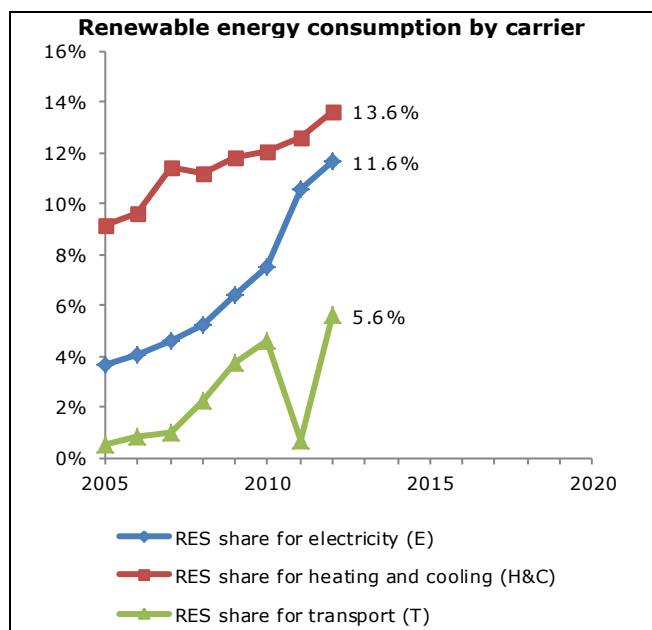
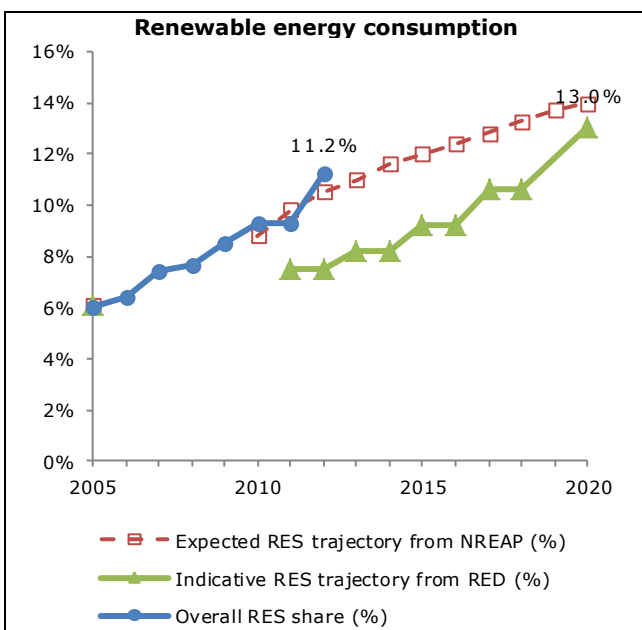
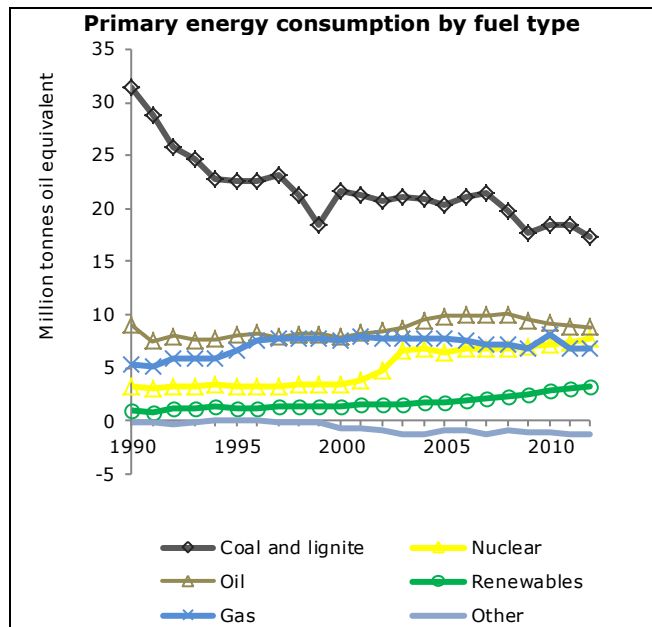
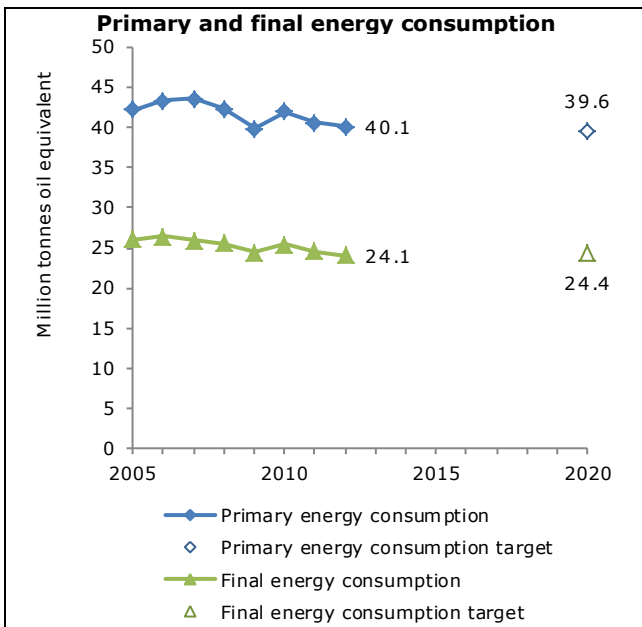
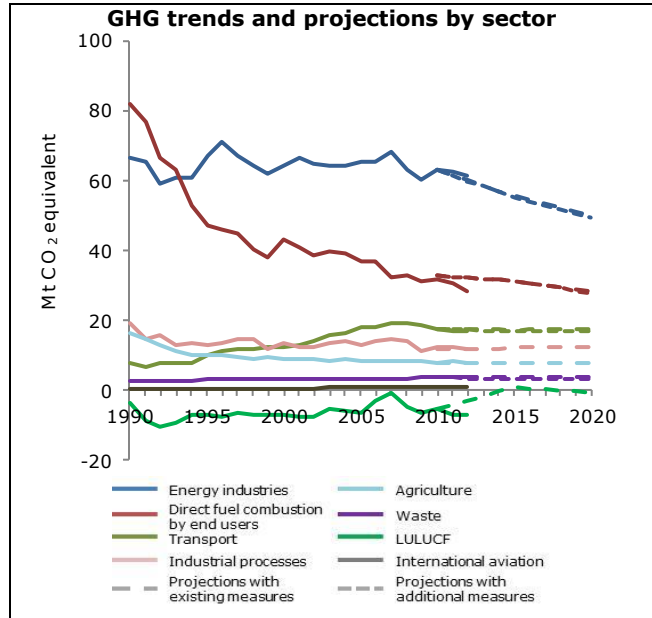
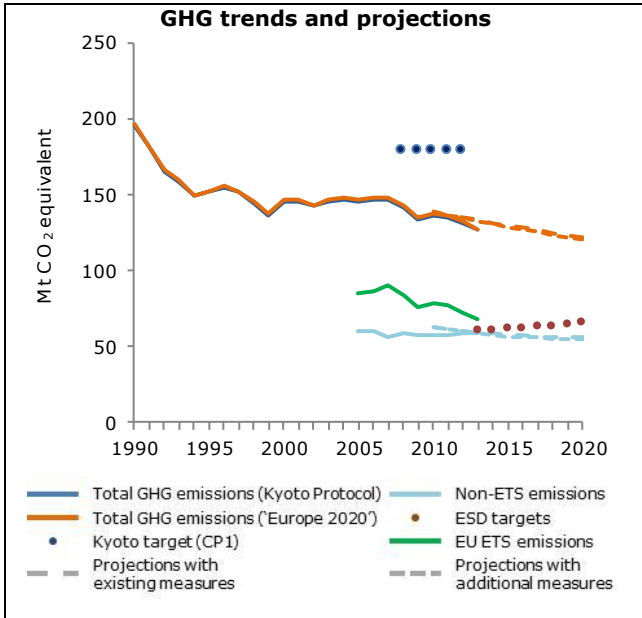
2012 RES share in gross final energy consumption (%)	11.2%	2011–2012 indicative share from RES Directive (%)	7.5%
2020 RES target	13.0%	2012 expected share from NREAP (%)	10.5%

The average share of renewable sources in gross final energy consumption for 2011–2012 was 10.3% (2.6 Mtoe), which is higher than the indicative RED target for 2011–2012 (7.5%). At the same time, the share of renewables in 2012 (11.2 %) is higher than the expected 2012 NREAP target (10.5 %). Over the period 2005–2012 the observed average annual growth rate in renewable energy consumption amounted to 8.1%. In order to reach its 2020 NREAP target, Czech Republic needs an average annual growth rate of 4.8% in the run-up to 2020. In absolute terms, this is equivalent to 1.1 time its cumulative effort so far.

Progress towards energy efficiency targets

Primary energy consumption:		Final energy consumption:	
2005–2012 average annual change	-0.7%	2005–2012 average annual change	-1.1%
2012–2020 average annual change to target	-0.1%	2012–2020 average annual change to target	0.2%

In the Czech Republic, primary and final energy consumption decreased at a faster pace than is necessary to meet the 2020 targets. A reduced economic activity, particularly in industry, contributed to this development. Further improvements in energy efficiency will be necessary to remain on track to the target, in particular in transformation for electricity production as well as in the transport sector.



Climate and energy policy framework

Challenges and opportunities

On the energy demand side, the Czech Republic remains one of the most energy-intensive economies in the EU and energy savings have been recognised as a policy priority. The effective use of available EU funds for such energy efficiency measures is estimated to lead to annual gross domestic product (GDP) growth of 1 % and to create 35 000 new jobs. The energy savings support programme 'New Green Savings' (Nová zelená úsporám) is expected to create around 70 000 jobs mainly in the fields of construction and services up to 2020, and is to be partly financed through sales of emissions allowances. However, due to low Emissions Trading System (ETS) allowance prices, CZK 12 billion (approximately EUR 437 million) of the envisaged total budget of CZK 27 billion (approximately EUR 984 million) is now missing (Třetí ruka, 2014). Additional funding will be required for the long-term energy efficiency strategy to work (EnviWeb, 2014).

The high carbon intensity of the Czech economy also poses a challenge for the pursuit of green growth and climate targets. Energy supply is the largest source of emissions in the Czech Republic and the high share of fossil fuels is only slowly decreasing. Plans to build two new units at the Temelín nuclear power plant (NPP) have been halted due to increased cost estimates. Moreover, recent revisions to the Czech renewable energy support scheme may risk the achievement of the 2020 renewables target and threaten employment in the renewable energy industry. Proposals for implementing an environmental tax reform include a carbon tax component, which could improve incentives for switching from fossil fuels to renewables in a cost-efficient way. In addition, environmental tax reform and complementing measures could incentivise the reduction of overall fuel consumption and the purchase of low-carbon vehicles, and lead to significantly reduced fuel imports.

Climate and energy strategies

The Czech Republic's National Programme To Abate the Climate Change Impacts in the Czech Republic is the country's main document coordinating climate policies at the national level and was adopted in 2004 prior to its accession to the European Union. Currently, a new document titled 'Climate Protection Policy' is being drafted, looking at both the short- (by 2020), medium- (by 2030) and long-term (2050) horizons, and is aimed at implementing the EU Climate and Energy package. The State Energy Concept (Státní energetický koncept (SEK)) represents a strategic energy management document with a 30-year outlook, which was first adopted in 2004 and is constantly being updated. The last update from November 2013 envisages significantly increasing the share of nuclear energy from 33 to 52 %, while strongly reducing the share of coal energy from 60 to 16 %. However, following the Czech public utility České Energetické Závody's (ČEZ) decision not to build two additional reactor units at Temelín NPP, it is not clear if the Czech government still plans to expand the country's nuclear capacities.

Renewable energy

Good progress has been made in the Czech Republic in increasing the share of renewables in final consumption, in particular for electricity. The main support mechanism for renewable electricity has been a feed-in tariff (FIT), but high FITs that were not adapted to quickly declining production costs for solar photovoltaics (PVs) led to an overly rapid and costly expansion of PV installations. As a result, in 2012 the Czech government merged all electricity support measures (renewable energy sources (RES), secondary energy sources, combined heat and power) into one single act of law, the Act on Supported Energy Sources (Zákon č. 165/2012 Sb. o podporovaných zdrojích energie), which significantly reduced support for renewables and limited the amount and type of eligible operators. In August 2013, the Czech parliament adopted an amendment to this Act that primarily intended to halt the increase of electricity prices for consumers. According to this amendment, the feed-in and premium tariff scheme will be entirely abolished by the end of 2014. The Czech government has also decided to extend a 'solar tax' for plants put into operation in 2010, set at 10 % of the revenue from feed-in and premium tariffs (Třetí ruka, 2013). The retroactivity of this measure could lead the Czech Republic to face arbitration proceedings from the side of the European Commission. Heat from RES is mainly supported through subsidies under the Operational Programmes funded by the European Regional Development Fund (ERDF) and exemptions for renewable heating plants from real estate tax, as well as a building obligation for the use of renewable heating.

Energy networks

The Czech government is currently working to respond to unscheduled power flows, largely from windfarms in northern Germany, which are seen as endangering the stability of its grid. Czech transmission grid operators are coordinating with their German counterparts and in the medium term have agreed to install so-called phase-shifter transformers in the trans-border area with Germany by 2016 to more effectively regulate cross-border power flows.

Energy efficiency

No integrated energy efficiency strategy exists for the Czech Republic. The Czech Republic has finished a first phase of **environmental tax reform** in which it introduced taxes on natural gas, solid fuels and electricity to supplement an excise duty on mineral oils. In the second phase, the Czech Republic is looking at taking into account the energy and carbon content of fuels and plans to implement a carbon tax on natural gases, other gases, solid fuels and fuel oils. This carbon tax component of the reform was originally supposed to take effect on 1 January 2014, but has been delayed.

The Czech Republic has not yet introduced an **obligation for energy market operators**.

The Czech Republic promotes the use of **combined heat and power** through preferential FITs, scaled by the installed capacity and through an obligation for power distribution companies to connect cogeneration to the grid and purchase the electricity they produce.

No obligations or voluntary agreements exist so far to reduce energy consumption in **industry** and negotiations on the introduction of voluntary agreements have stalled. Two programmes, the Operational Programme Industry and Enterprise and the Operational Programme Enterprise and Innovation, provide subsidies for energy efficiency measures and the use of renewables in enterprises and industries.

In the **building sector**, new buildings and existing buildings undergoing major renovations must adhere to new, stricter energy efficiency standards and obtain Energy Performance Certificates. Efficiency measures are supported

through the 'New Green Savings' programme, which was approved by the Czech government in November 2013. It will offer grants with a total amount of CZK 27 billion (approximately EUR 1.1 billion) by 2020. The Ministry of Environment has earmarked CZK 1 billion (approximately EUR 36 million) for the first round, while a planned second round would add another CZK 1.9 billion (approximately EUR 69 million) from the sale of emissions allowances. Loans and grants are also provided for green projects through the State Environmental Fund (SEF), including CZK 80 million (approximately EUR 3.4 million) subsidising the purchase of new, more efficient and low-emission boilers. The new state programme EFEKT will provide CZK 30 million (approximately EUR 1.2 million) in 2014 to promote energy savings and the use of renewable and secondary energy sources, and could play an important role in regions that are not eligible for support under the EU Structural Funds.

Transport

Incentives for efficient driving and the purchasing of efficient cars include a registration fee that is charged on vehicles that do not fulfil the EURO 3 vehicle standard as well as ownership taxes for passenger cars and freight vehicles based on engine size, and weight and number of axles, respectively (ACEA, 2012). A time-based vignette system for passenger cars, a distance-based fee for heavy-duty vehicles and an ownership tax on vehicles for business use are also in place (CE Delft, 2012). Both tax rates for petrol and diesel are near the EU average, but diesel is taxed lower than petrol (European Commission, 2013). The Clean Air Act (Zákon o ochraně ovzduší) represents a significant emissions reduction policy that, in relation to transport, requires a minimum biofuel content.

The Czech Republic has also introduced a number of measures to promote a modal shift to more sustainable modes of transportation, including the introduction of 'Park and Ride', 'Bike and Ride', combined freight systems and an integrated transport system with preference for public transport vehicles. An EU grant of CZK 1 billion (approximately EUR 36 million) for energy efficiency measures in the transport sector has led to a new call in January 2014 aimed at replacing the oldest and most polluting public transportation buses with a total of 154 buses on compressed natural gas (CNG) as well as the construction of 10 new CNG filling stations.

Agriculture

Agriculture policy related to climate change mitigation is largely based on the EU Common Agricultural Policy (CAP) and the Czech Rural Development Programme (2007–2013). The 3rd Action Plan of the Nitrate Directive (1991/676/EEC) aims to reduce water pollution by nitrates from agricultural sources through remarcation of vulnerable areas and setting rules for management, including a limit of 170 kg N/ha for the application of organic fertilisers. Moreover, the Action Plan for the Development of Organic Farming 2011–2015 aims at raising the amount of agricultural land devoted to organic farming from 11.5 % in 2012 (above the EU average) to 15 % in 2015, and at increasing the share of the organic food market to 3 %.

Waste

Some recent developments have seen a weakening of waste management policies in the Czech Republic. In March 2013 the Czech parliament approved an amendment to the nation's Waste Act aimed at reducing the administrative burden on business, which among other things withdraws the obligation of individual waste producers to prepare waste management plans. In February 2014, the Czech parliament voted to lower recycling targets for packaging waste. In addition, a leaked study by the Ministry of the Environment indicates that about 80 % of the European funds intended to increase the recycling of municipal waste were used for other, non-priority projects. However, the country is taking steps to reduce the emissions-intensive practice of landfilling. The Waste Act gradually increases fees for landfilling in order to encourage waste incineration and the government is planning to place more weight on waste incineration in the current update of its National Waste Management Plan. However, in March 2014, the Ministry of Environment announced that all three of the waste incineration projects it had planned to support with EU funds had failed to receive approval by the European Commission.

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