Assessment of climate change policies in the context of the European Semester

Country Report: Czech Republic

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The report provides an overview of current emission trends and progress towards targets as well as policy developments that took place over the period May 2012 to January 2013.

The content of the report represents the state of knowledge in February 2013, specific updates were made adding the latest official greenhouse gas emission data by the European Environment Agency (EEA).

Please feel free to provide any comments or suggestions to the authors through the contacts listed above.

Short summary

- ***Background:*** *The Czech Republic's climate and energy policy strongly focuses on nuclear power, while originally high political support to renewable energy is in decline.*
- ***GHG target:*** *Non-ETS emissions in 2011 were below of the 2013 target and according to the latest national projections the Czech Republic is expected to overachieve its 2020 target.*
- ***Policy development:*** *On 1 January 2013, the new Act on Supported Energy Sources came into effect, and stricter energy efficiency rules for buildings were introduced.*

1 Background on climate and energy policies

Of all EU Member States, the Czech Republic has received the largest contributions from the Cohesion Fund and European Regional Development Fund for energy efficiency measures for the 2007–2013 programme period (ECA 2013). The country supports programmes for renewable energy in all sectors as described in detail below. However, recent political developments indicate that the Czech Government is focusing mainly on nuclear power generation to reduce its emissions and to develop into a low-carbon economy, rather than to continue fostering renewable technologies and cutting emissions in other sectors.

In August 2012, the Czech Ministry of Industry and Trade (MPO) announced the official prioritisation of nuclear power generation. The MPO is planning to build three additional reactor units at Czech utility ČEZ's Temelín and Dukovany plants. According to the latest update to the State Energy Concept, nuclear energy would account for 30-35% of the domestic energy mix by 2040, an increase from today's 16%, while the share of solid fuels would drop from 40% to 12-17% (Prague Post, 2012a). Coal-fired power generation would decline to around one-third of its current level by 2025, whereas the role of natural gas in electricity generation is expected to grow (ICIS, 2012a). No new coal plants are planned, and a progressive closure of outdated generation is foreseen.

Meanwhile, originally high political support to renewable energy is in decline. The original support scheme to the solar energy proved to be extremely inefficient and possibly causing market distortions. Subsequently, after deciding to grant feed-in tariffs only to relatively small renewable power generators (plants with capacities up to 100 kW), the Czech Regulatory Authority ERÚ announced that it will halt any kind of financial support for renewable energy from 2014 onward. Furthermore, updates to the Czech *National Renewable Energy Action Plan* that occurred in August 2012 aim to reduce renewable energy development going forward. According to the MPO, the country will still be able to fulfil its EU-required renewable energy target, and the changes were designed to minimise the impact on final consumers of energy (EurActiv, 2012).

Most Czechs say they would favour renewable energies; however only if the support represents no additional costs, according to a survey conducted by the Czech marketing company ppm factum. The survey results indicate that public opinion towards renewables

is positive, but that electricity prices remain the most important criterion. Consequently, 90% of those polled rejected any further electricity price increases in connection with the support of renewable, and two thirds of the population agreed that the current additional surcharge for renewables should not be mandatory (ppm factum, 2012).

Perhaps one reason for a relatively positive attitude to renewable energy (at least in principle) is the relative success of "green growth" in employment. Despite the economic crisis, the number of Czech "green jobs" (defined as employees working for institutions offering services for environmental and natural resource protection) in 2010 exceeded that of 2005 (+0.8%), while the economy as a whole recorded an employment decrease (-3.3%) in the same timeframe. The largest number of green jobs in the Czech Republic is in waste collection, treatment, and disposal activities (51.7%). However, the country still has a smaller share of green jobs than the average for other industrialised nations: The average is 2% for the EU 15, while the percentage in the Czech Republic is 1.5% (Czech Statistical Office, 2011). In January 2010, the government adopted an updated *Strategy for Sustainable Development* (MŽP, 2010), which broadly aims to put the country on a path toward green growth by eliminating imbalances between the economic, environmental, and social pillars of sustainability.

2 GHG targets, status quo, and the latest developments

Background information

In 2011, the Czech Republic emitted 133.5 Mt CO_2eq (UNFCCC inventory 2011). This is 32% less than in 1990. Energy supply accounts for the biggest share of total emissions with 44%. This reflects the Czech Republic's high share of fossil fuels in the energy supply mix. Emissions from this sector showed only a very slight decrease between 1990 and 2011. However, emissions from energy use, the second biggest source, decreased by 65% during this time, due to the dramatic decline of economic activity during the transition to a market economy in the 1990s. Other contributors to the decline in energy use emissions include increased energy efficiency in buildings and district heating, as well as the switch from solid fuels to gas in the residential and service sectors. Since 1990, emissions from industrial processes and agriculture showed declines of 40% and 50%, respectively, also owing to structural changes in course of the transition to a market economy. In contrast, emissions from transport increased by more than 120% from 1990 to 2011, and during this time the number of vehicles per inhabitant almost doubled (UNFCCC inventory 2011, EEA 2012c, UNFCCC 2012).

Progress on GHG targets

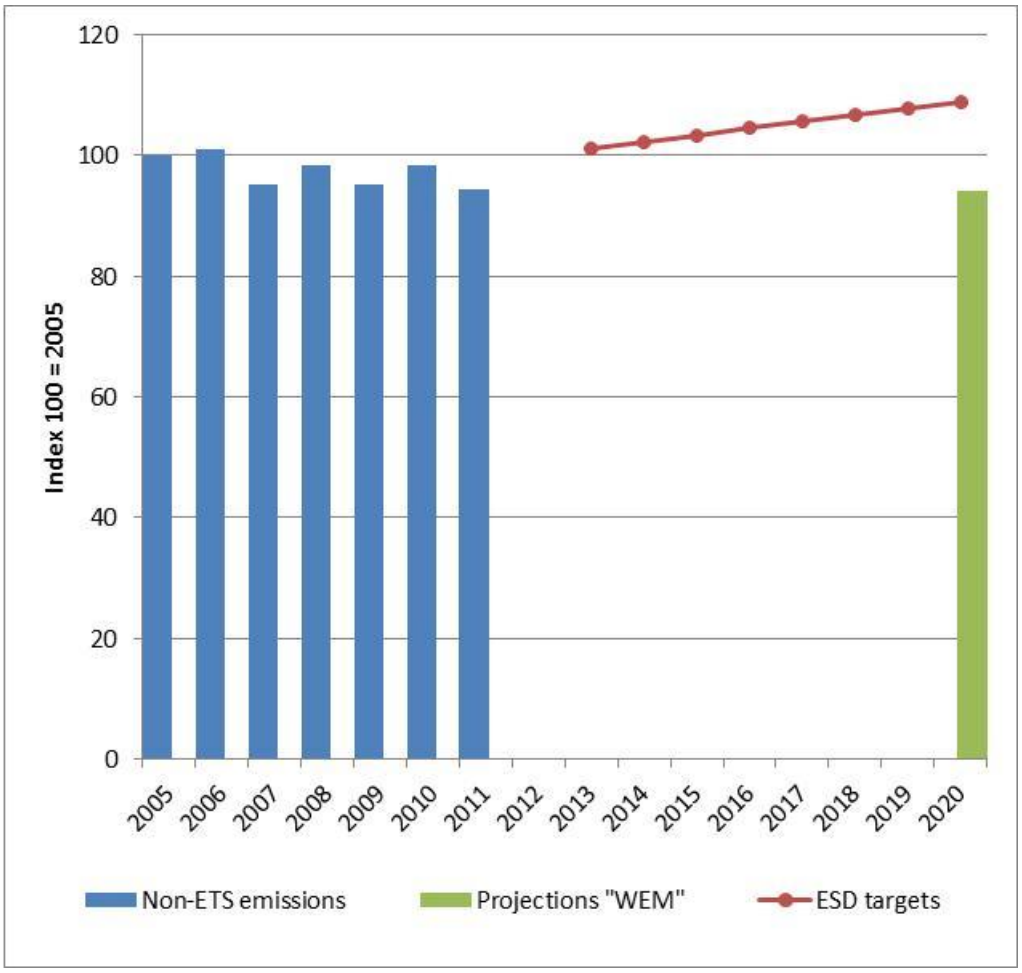
There are two sets of targets to evaluate: 1) the Kyoto Protocol targets for the period 2008-12 (which has just ended) and 2) the 2020 targets for emissions not covered by the EU ETS.

Under the Kyoto-Protocol the emission reduction target for Czech Republic for the period 2008-2012 has been set to minus 8 % based on 1990 for CO_2, CH_4 and N_2O and on 1995 for F-gases. The latest available greenhouse gas data (for the year 2011) show that Czech Republic's emissions have decreased on average by 31.3% compared to the Kyoto base year (EEA 2013a). Czech Republic is therefore expected to meet its Kyoto target through domestic emissions reductions directly.

By 2020, the Czech Republic is allowed to increase its emissions not covered by the EU ETS by 9% compared to 2005 according to the Effort Sharing Decision (ESD) ([1]). According to the 2011 inventory data Czech Republic's emissions in 2011 were 7% below the Annual Emissions Allocation (COM 2013) for the year 2013. National projections show that the country is expected to overachieving its target significantly. In a scenario with only existing measures Czech Republic is expected to reduce its emissions by 2020 by 6% compared to 2005 levels, and in a scenario with additional measures by 8% ([2]) (EEA 2013b).

Figure 1 shows Czech Republic's non-ETS emissions until 2011, targets under the ESD for the period 2013-2020, and the projections with existing measures for 2020.

Figure 1: Non-ETS emission trends and projections compared to the ESD targets



Source: EEA. Projections are based on 15/04/2013 draft GHG inventory submissions under the UNFCCC and MS projections submitted

[1] Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.

[2] Calculations are based on domestic emissions only, without accounting for possible use of flexibility options. The 2020 targets and 2005 non-ETS emissions are all consistent with 2013-2020 ETS scope, i.e. they take into account the extension of the ETS scope in 2013 and the unilateral inclusion of installation in 2008-2012.

Table 1: GHG emission developments, ESD-targets and projections (in Mt CO_2eq)

					ESD target*		2020 Projections**	
	1990	2005	2010	2011	2013	2020	WEM	WAM
Total	196.0	145.3	137.4	133.5				
Non-ETS emissions		62.8	61.8	59.3	63.6	65.7	56.8	55.6
(% from 2005)				-6%	1%	9%	-6%	-8%
Energy supply	58.0	61.2	58.9	58.4				
(% share of total)	30%	42%	43%	44%				
Energy use (w/o transport)	80.5	35.2	31.6	28.5				
(% share of total)	41%	24%	23%	21%				
Transport	7.8	17.9	17.4	17.3				
(% share of total)	4%	12%	13%	13%				
Industrial processes	19.6	13.0	12.0	11.8				
(% share of total)	10%	9%	9%	9%				
Agriculture	16.2	8.4	8.0	8.1				
(% share of total)	8%	6%	6%	6%				

Source: UNFCCC inventories; EEA (2013b); COM (2013), Calculations provided by the EEA and own calculations.

** The ESD target for 2013 and for 2020 refer to different scopes of the ETS: The 2013 target is compared with 2011 data and is therefore consistent with the scope of the ETS from 2008-2012; the 2020 target is compared to 2020 projections and is therefore consistent with the scope of the ETS from 2013-2020. Non-ETS emissions in 2005 for the scope of the ETS from 2013-2020 amounted to 60.3Mt CO_2eq.*

*** 2013 projections with existing measures (WEM) or with additional measures (WAM).*

Legend for colour coding: green = target is being (over)achieved); orange = not on track to meet the target

Total greenhouse gas emissions (GHG) and shares of GHG do not include emissions and removals from LULUCF (carbon sinks) and emissions from international aviation and international maritime transport.

National projections of GHG emissions up to 2020, summarised by the EEA, need to be prepared by the Member States in accordance with the EU Monitoring Mechanism ([3]) every two years, and the latest submission was in 2013. Projections need to be prepared reflecting a scenario that estimates emissions reductions in line with policies and measures that have already been implemented (with existing measures, WEM), and an additional scenario that reflects developments with measures and policies that are in the planning phase (with additional measures, WAM) may also be submitted.

In the following two tables, these measures - as outlined by the Czech Republic as basis for the projections as of April 2011 ([4]) - have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most ([5]). An update on the status of the policies and measures is included in order to assess the validity of the scenarios.

[3] Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

[4] The respective policies and measures were not available at the time of the preparation of this country report. Thus, policies and measures as outlined in April 2011 are given here.

[5] The implementation of the EU-ETS has not been included. Other EU Directives have only been considered if they have been outlined in the projections as one of the main instruments to reduce GHG emissions.

Table 2: Existing and additional measures as stated in the 2011 GHG projections

Existing Measures (only important national measures; w/o EU legislation)		Status of policy in January 2013
Cross-cutting	National Programme to Abate the Climate Change Impacts in the Czech Republic	The Programme was active from 2004-2007. It focused on reducing GHG emissions and increasing the share of RES.
	Territorial planning measures	Act No. 183/2006 Coll. on Territorial Planning and Building Regulations was adopted on 14 March 2006 and is still in force.
Energy	Act No. 86/2002 Coll., on protection of the air and amending some other laws (the Air Protection Act), as amended	In force, updated on 1 September 2012
	Act No. 180/2005 Coll., on the promotion of production of electricity from renewable energy sources and on amendment to some laws (Act on Promotion of Use of Renewable Energy Sources) (feed-in tariffs)	In 2012, the Czech government merged all support measures for energy in general (RES, secondary energy sources, CHP) into one single act of law. On 1 January 2013, the *Act on Supported Energy Sources* entered into force.
	State Programme in Support of Energy Savings and the Usage of Renewable Energy Sources	On 27 November 2012, the Ministry of Industry and Trade published the programme framework for 2013. “EFEKT 2013” supports energy savings and the use of RES and serves as a supplement to programmes supported through the Structural Funds of the EU. The programme budget for 2013 is CZK 30 million (ca. € 1.2 m).
	Promotion of Co-generation	See: *Act on Supported Energy Sources*
Energy Efficiency	Act No. 406/2000 Coll. on energy management, as amended (measures to improve energy efficiency in electricity production (and promotion of CHP), requirements on eco-design of energy-using products, energy auditing, energy performance of buildings	On 19 September 2012, the Czech Parliament approved an amendment to the Act. From 1 January 2013, the amendment imposes additional obligations for new buildings, as well as on owners of certain buildings already in use, including the obligation to assess their environmental performance.
	The Green Savings Programme	The Green Savings programme supported heating installations utilising RES as well as investments in energy savings in reconstructed and new buildings. CZK 25 bln were allocated for the first round of the programme, which started in April 2009 and was concluded in Dec 2012.

	Promotion of biofuels (act on protection of the air 86/2000 Coll. and its amendments and the consecutive governmental decree No. 66/2005 Coll. stipulating the increasing minimal shares of bio fuels in gasoline and diesel in accordance with EU directive.	Biofuel content is stipulated in *Clean Air Act*, to which amendments entered into force on 1 September 2012.
	charging the use of the transport infrastructure for freight vehicles (Road Traffic Law 13/1997 and its amendments)	Vignettes are required for the use of motorways and expressways by all vehicles of up to 3.5 tons. Vignettes for heavier vehicles were replaced with electronic toll collection in 2007.
	road tax reduction for the "purer" vehicles (Road Tax Law 190/1993 and its amendments)	In force since 1 January 2009: electric or hybrid cars, vehicles with LPG or CNG drive as well as vehicles with an engine for the combustion of E85 are exempt from road tax.
	excise tax on fuel (Excise Law 353/2003) which supports alternative fuels with lower CO_2 emissions (e.g. compressed natural gas – CNG, bio fuels – tax free)	Still in force: pure biofuels as well as the biofuel content of mixed fuels are exempt from consumption tax.
Transport	Introduction of the integrated transport system (IDS)	There are integrated transport systems in almost all larger cities of the Czech Republic. Most of them are organised through companies or contributory organisations and are members of the Czech Association of Organisers of Public Transport.
	Introduction of the "Park and Ride" and "Bike and Ride" systems	Ongoing: In Prague, for instance, there are currently 17 P+R car parks next to 12 metro stations and 3 train stations. Almost all of them also provide B+R systems.
	Systems of combined freight transport	Combined transport is defined as a system of transportation of goods in the same loading unit or road vehicle, which also uses rail or water transport. In 2011, combined transport in the CR amounted to 9 million gross tonnes and contributed 5.15% to the international freight.
	Support of comprehensive network of bike trails	The National Cycling Strategy is a programming document, in which the Czech Republic commits itself to support cycling and to build bike trails. It was created by Government Resolution on 7 July 2004. The guarantor of the strategy is the Ministry of Transport, the executor is the Transport Research Centre in Olomouc.

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011.

Additional Measures: Still to be implemented (only important national measures; w/o EU legislation)		Status of policy in January 2013
Energy Efficiency	Support of voluntary commitments to energy savings	No introduction of voluntary commitments yet

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011.

3 Evaluation of National Reform Programme 2012 (NRP)

In April of each year, Member States are required to prepare their National Reform Programmes (NRPs), which outline the country's progress regarding the targets of the EU 2020 Strategy. The NRPs describe the country's national targets under the Strategy and contain a description of how the country intends to meet these targets. For climate change and energy, three headline targets exist: 1) the reduction of GHG emissions, 2) the increase of renewable energy generation, and 3) an increase in energy efficiency ([6]).

In the following table, the main policies and measures as outlined in the NRP of April 2012 ([7]) have been summarised, and their current status (implemented, amended, abolished, or expired) is given, with specifics on latest developments.

Table 3: Main policies and measures as outlined in the NRP, April 2012

Climate Protection Policy	
Status as stated in the NRP	To be adopted by the Czech Government by the end of 2012
Status as per Jan 2013	Not adopted yet
Description of policy or measure	Comprehensive climate plan

New Clean Air Act	
Status as stated in the NRP	Expected to enter into force on 1 July 2012
Status as per Jan 2013	Approved by parliament on 2 May and entered into force on 1 September 2012
Description of policy or measure	The Act requires that any transportation fuel sold in the Czech market consist of a certain percentage biofuel, with fines on every fuel supplier failing to meet the obligatory volume.

[6] There are specific targets for all MS by 2020 for non-ETS GHG emission reductions (see section 2) as well as for the renewable energy share in the energy mix by 2020 (see section 4, renewable energies). Specific energy efficiency targets will be defined (or revised) by the MS until the end of April 2013 in line with the methodology laid out in Article 3 (3) of the Energy Efficiency Directive (Directive 2012/27/EU).

[7] All NRPs are available at: http://ec.europa.eu/europe2020/documents/related-document-type/index_en.htm

New National Emission Reduction Programme (NERP)	
Status as stated in the NRP	To be implemented within one year after the new Clean Air Act enters into force
Status as per Jan 2013	This programme has not been updated
Description of policy or measure	The existing NERP was last updated in 2005 and regulates pollutants for which national legislation sets emission ceilings or limit values in the ambient air (SO2, NOx, NH3, CO, Pb, Cd, Ni, As, Hg, VOC, benzene, polycyclic aromatic hydrocarbons) and also covers greenhouse gases.

New Waste Act	
Status as stated in the NRP	Had been submitted to the government on 31 September 2011
Status as per Jan 2013	Approved by Parliament on first reading on 26 October 2012, is now heading to its second reading, set to enter into force on 1 January 2014
Description of policy or measure	Releases major individual waste producers (except municipalities) from the obligation to prepare a waste management plan, incentivises waste incineration over landfilling.

National waste management plan	
Status as stated in the NRP	To be prepared by 2013
Status as per Jan 2013	Has not been published yet
Description of policy or measure	Sets requirements for waste management at a national level, e.g. for municipalities

Update National Action Plan for Energy from Renewable Sources of 2010	
Status as stated in the NRP	To be prepared in 2012
Status as per Jan 2013	Updated on 8 August 2012 - update was approved by the Czech government in November 2012
Description of policy or measure	Aims to reduce the further development of renewable energy to minimise consumer power prices while still fulfilling the EU target

Adopt Act of Supported Energy Sources	
Status as stated in the NRP	Was in legislative process
Status as per Jan 2013	Entered into force on 1 January, 2013
Description of policy or measure	Merges rules applicable to all supported energy sources for electricity and heat production (renewables, secondary energy sources, combined heat and power) into one single act of law

Update State Energy Concept	
Status as stated in the NRP	To be completed in 2012
Status as per Jan 2013	Was updated in July 2012
Description of policy or measure	The new state energy concept prioritises nuclear energy

Continue implementation of Czech Energy Efficiency Action Plan	
Status as stated in the NRP	Ongoing
Status as per Jan 2013	The second Action Plan was published in August 2011, the 3rd shall be submitted to the European Commission by 30 June 2014
Description of policy or measure	MS are required to submit plans describing the energy efficiency improvement measures planned to reach EU targets, and to comply with the provisions on the exemplary role of the public sector and provision of information and advice about energy to final customers

Implement Directive 2010/31/EU on the energy performance of buildings	
Status as stated in the NRP	To be done in 2012
Status as per Jan 2013	The *Energy Management Act* was amended in July 2012 and entered into force on 1 January 2013
Description of policy or measure	New buildings must adhere to new stricter energy efficiency standards and must obtain Energy Performance Certificates before being constructed – the EPC requirement now also pertains to existing buildings

Implement amendment to Act No. 76/2002 concerning integrated pollution prevention and control, which will take account of the requirements of the new EU Industrial Emissions Directive (IED)	
Status as stated in the NRP	To be done in 2012
Status as per Jan 2013	The amendment was approved by Parliament on 16 December 2012
Description of policy or measure	The amendment implements provisions of the IED and changes permitting rules for large industrial plants that pollute the environment. The amendment puts greater emphasis on the use of best available techniques and clarifies conditions for exemption.

Implement a law on the conditions of greenhouse gas emissions trading permits	
Status as stated in the NRP	To be done in the first half of 2012
Status as per Jan 2013	The law was adopted on 24 October 2012 and came into effect on 1 January 2013
Description of policy or measure	The law addresses rights and obligations GHG emission permit trading, the procedure for issuing GHG emissions permits, and the allocation of allowances.

4 Policy development

This section covers significant developments made in key policy areas between May 2012 and January 2013. It does not attempt to describe every instrument in the given thematic area. The time-frame was chosen based upon the release of the National Reform Programmes (in the section above) in April 2012, which contain the status quo for policy on most topics.

Environment Taxation

The implicit tax rate on energy in the Czech Republic was among the lowest in the EU at an equivalent of 80.7 € per tonne oil in 2009. However, the Czech economy is also very energy intensive - 4th highest in the EU in 2010 (Eurostat, 2013) - which helps boost revenues from energy taxation. Revenues from energy taxation as a percentage of GDP ranked 6th in the EU in 2010 with 2.2%, although the same figure for environmental taxation with 2.4% was below the EU average of 2.6% (Eurostat, 2012).

The second stage of the Czech Republic's environmental tax reform is currently being prepared by the Ministry of Finance in cooperation with the Ministries of Industry and Environment. The first phase consisted of a transposition of the EU directive on the taxation of energy products and electricity (2003/96/EC), and introduced taxes on natural gas, solid fuels and electricity to supplement the existing excise duty on mineral oils. Those taxes became effective on 1 January 2008, and the current second phase of reform involves dividing them into two components – one that takes into account the energy content of the fuel (energy tax in its current form) and one that takes into account the CO_2 content of the fuel (carbon tax).

The carbon tax component is planned to come into effect on 1 January 2014 (Ekolist, 2012) but negotiations over its structure have taken a step back recently due to EU carbon market developments. Additionally, the Prime Minister announced in February 2013 that no additional changes to the taxation system should be introduced by the end of the government's term. Czech policymakers had originally intended to link their carbon tax level to the price of allowances in the EU ETS (EUAs), but abandoned that idea since the EUA price has dropped precipitously in recent months (below €5/tonne) due to oversupply of EUAs. Czech authorities rather envisage CO_2 tax levies of €12-14/tonne – no decisions have been made as to the use of this potential revenue, although a strongly green-growth-oriented agenda would see it earmarked for emission reduction or other environmental initiatives. As planned, the new tax would not apply to operators of installations already covered by the EU ETS.

Energy Efficiency

As mentioned above, the Czech Republic's economy is one of the most energy intensive economies in Europe, but this intensity declined between 2005 and 2010 by 13.4%, almost double the EU average of 7.7%. Compared to the 2001-2005 average, final energy consumption remained more or less steady in 2010, increasing less than 0.5%. Declining energy consumption in industry was partially offset by increases in residential and transport consumption (Eurostat, 2013).

Recent policies to address those consumption increases in the residential sector include stricter standards for energy efficiency in buildings. On 19 September 2012, the Czech Parliament approved an amendment to the *Energy Management Act*. Starting on 1

January 2013, permits to construct a new building are issued only if the resulting structure will comply with energy performance requirements stated in the Energy Management Act. Compliance must be proven by a positive binding opinion of the state energy inspection. This obligation also applies to owners of existing buildings undergoing major reconstruction (Schönherr, 2012).

A further expansion of building energy efficiency regulations concerns Energy Performance Certificates (EPCs). Since January 2009, anyone who builds a new building (or fundamentally reconstructs an existing one) has had to obtain an EPC elaborated and issued exclusively by energy experts authorised and listed by the Ministry of Industry and Trade (Schönherr, 2012). As of 1 January, 2013, an EPC must be obtained prior to any purchase or lease of a whole building or its parts – this applies to all buildings with a floor area of more than 1,000 m². Exceptions include small buildings, those used for recreational or religious purposes, or industrial and agricultural buildings with very low energy consumption (Hypoindex, 2012).

In addition to these regulations, subsidies are available for projects that increase energy efficiency in homes. The Czech Ministry of Environment is proposing a new version of the country's Green Savings Programme, which started in April 2009 during the economic downturn. This measure should additionally stimulate the domestic economy, especially construction jobs. Nevertheless, the programme relies on uncertain resources as it is highly dependent on the income from ETS allowances auctioning.

The new round of subsidy applications is scheduled to start in August 2013, and projects that have started after 1 January 2013 are eligible. The specific terms and conditions of the Green Savings Programme are still under review, but as of April 2013, it appears that the first call will focus exclusively on the insulation of residential buildings with obligatory replacement of heating sources utilizing solid fossil fuels. Moreover, buildings which have already been insulated are eligible for further support to reach the passive house standard ([8]). A total of CZK 1.4 billion (ca. €56 m) will be made available for family home reconstruction as part of the first call; the money comes from the sale of emission permits within the EU emissions trading scheme, which is done via auctions conducted regularly by the European Energy Exchange. The revenue from these permit auctions goes to the member states, and the Czech Republic expects total auction revenues of CZK 28 billion (ca. €1.12 bn) through 2020. The Environment Ministry has proposed allocating 70% of the total Green Savings Programme to subsidising efficiency upgrades in private buildings, while the remaining 30% is meant for public buildings.

A further source of financial support for energy efficiency is the State Environmental Fund (SEF), which consists of resources from the Cohesian Fund, the ERDF, the Czech state budget, and fees collected from polluters. The SEF administers loans and grants for green projects, including energy efficiency and renewables, but also includes more general initiatives in natural resource protection and environmental education. In the context of the SEF, the Ministry of Environment and the region of Moravia-Silesia opened a joint call for tender to promote exchanging existing solid fuel boilers for new low-emission automatic coal or biomass boilers in family homes. CZK 40 million (ca. €1.6 m)

[8] For more information see: JakNaZelenou.cz. Předběžný harmonogram výzev a uzávěrek žádostí o dotace. Online Available: http://www.jaknazelenou.cz/kdy-mohou-ziskat-dotaci/

was allocated for this call (CZK 20 m from the budget of Moravia-Silesia and CZK 20 m from the State Environmental Fund). The receipt of applications commenced on 1 November 2012 and will end on 28 June 2013 or when funds are exhausted. Boilers will be supported if they meet the standards and minimum efficiency of emission class 3 and have a maximum output of 50 kWt. Grants will be provided in the amount of up to CZK 40,000 (ca. €1,600) per boiler and shall not exceed the eligible project costs (MŽP, 2012a).

With regards to measures to increase energy efficiency in the transport and the industry sectors, no additional measures were identified. The following policies are currently under development:

- National Programme to Abate the Climate Change Impacts in the Czech Republic – currently under preparation; to be submitted to the Government for approval in 2013.
- New National Emission Reduction Programme (NERP) – no recent developments; last updated version from June 2007 (MŽP, 2007).
- As previously mentioned, on 1 January 2014, a carbon tax is planned to come into effect as part of the Czech Republic's environmental tax reform, but negotiations over its structure have been held up recently due to EU carbon market developments .

Renewable Energy

The proportion of renewable energy in final energy consumption in the Czech Republic increased by approximately 50% from 2005 to 2010 to 9.2%. Thus, solid progress has been made towards the 2020 goal of 13%. Likewise, electricity consumption from renewables almost doubled over the same time period, but at 8.32% in 2010, it still lies far behind the EU average of 19.94% (Eurostat, 2013).

Several existing Czech policies aim to promote use of energy from renewable sources, including the aforementioned feed-in tariff, a so-called green bonus for renewable power paid on top of the market price for electricity (plant operators can decide each year whether they want to use the feed-in tariff or the green bonus), and funds from the SEF. In 2012, the Czech government completed planned efforts to consolidate these by merging all support measures for energy in general (renewables, secondary energy sources, combined heat and power) into one single act of law.

On 1 January 2013, the *Act on Supported Energy Sources* entered into force. The Act lays out new parameters for feed-in tariff eligibility that lessen its attractiveness compared to the green bonus option: Only operators of plants with an installed capacity less than or equal to 100 kW (or 10 MW in case of hydro power) are eligible for the feed-in tariff, and the tariff rates are now determined in accordance with a "15 year simple return of investment" general rule. The act also changes who pays the tariff. Whereas grid operators used to pay the owners of renewable generation, the Ministry of Industry and Trade now selects "obligatory purchasers" from electricity trading licence holders.

The Act also maintains a "solar tax" which has been in place since January 2011. The tax is controversial because it aims to slow down the rapid development of the photovoltaic industry. Operators of PV installations put into operation after 1 January 2009 are charged a tax of 26% on their guaranteed feed-in tariff (or 28% of their green bonus), with the exception of building and rooftop installations up to 30 kW. A group of senators filed a petition to the Constitutional Court, demanding the tax to be cancelled for retroactively infringing the investors' property rights (Radio Praha 2012). In May 2012, the court ruled

that the tax was not unconstitutional because falling prices of solar collectors indicate that the technology's guaranteed amortisation timeframe remains 15 years (TZB-info 2012).

Energy Networks

The Ministry of Industry and Trade is preparing an amendment to an existing *Decree on the State of Emergency in the Power Sector*. The Czech Government is worried about unscheduled power flows from windfarms in northern Germany endangering the stability of its grid. According to the Ministry, the amendment would be a short-term remedy to prevent overloads or blackouts on the Czech transmission grid (ICIS, 2012b). In the long term, transmission grid operators from the Czech Republic and Poland (ČEPS and PSE) are planning to install so-called phase-shifter transformers in the trans-border area with Germany by 2017 to regulate power flows and protect their transmission networks (Bloomberg, 2012). According to ČEPS, such a transformer is planned to be built close to the city of Kadaň in northwest Bohemia. Costs are estimated at around CZK 2 bln (ca. €80m) and could be partially funded by the European Union (iDNES, 2012).

Transport

Though greenhouse gas emissions showed an overall decline in the Czech Republic from 2005 to 2011, the decrease in emissions from the transport sector did not match the overall pace. Hence, the share in total emission remained stable at 12%-13% (see Table 1). Taxation of transport (fuel charges excluded) is almost non-existent, equivalent to only 0.1% of GDP and ranking 25th in the EU in 2010 (Eurostat 2012). Newly registered cars emit on average 144.6 gCO_2/km which is an improvement compared to the period from 2005 to 2009 where emission efficiency was more or less constant at about 155 gCO_2/km driven. The emission efficiency is, however, still 4% above the EU average; thus, the Czech Republic is in the lower third of the EU Member States (EEA 2012e).

The areas in which the Czech Republic's new *Clean Air Act* pertains to transport represent the primary ways the country is addressing emissions from this sector. The Act entered into force on 1 September 2012 and requires that any gasoline or diesel fuel sold in the Czech market for the purposes of transport consist of a certain percentage biofuel - 4.1% for gasoline and 6.0% for diesel. The customs office imposes a fine to every fuel supplier failing to meet the obligatory volume of biofuels. The fine amounts to CZK 40 (€1.6) per litre of unfulfilled biofuel content and may be paid no later than 30 days after receipt. Every year on 31 January, suppliers are obligated to submit a report to the competent customs office proving that minimum biofuel volumes have been met (TZB-info, 2013a).

Waste

During a first reading on 26 October 2012, the Czech Parliament approved an amendment to the nation's *Waste Act*, as prepared by the Ministry of Environment and sent the legislation for further discussion to the Committees for Environment and Economy. As of February 2013, the amendment is heading to its second reading in Parliament (Poslanecká sněmovna, 2013). It releases major individual waste producers (except municipalities) from the obligation to prepare a waste management plan, aiming to reduce the administrative burden on businesses. However, it is questionable if these new provisions will not have negative environmental consequences. According to the Ministry of Environment, the reduction of bureaucracy will increase the competitiveness of Czech businesses and save CZK 186-199 million (ca. €7.5-8 m) annually as the cost of

carrying out a waste management plan range from CZK 20,000 to 100,000 (ca. €800-4,000) per company. A simplified registration process for hazardous waste transports by means of an electronic information system is expected to save an additional CZK 160-173 million (ca. €6.4-6.9 m) (MŽP, 2012c).

This new Waste Act also envisages gradually increasing fees for landfilling of waste, to encourage waste incineration instead. This would have a positive impact on the GHG profile of the Czech waste sector, as incineration (especially with energy recovery) generally emits less than landfilling, even with landfill gas (methane) recovery and combustion. Nevertheless, the recycling rates should still be improved. The law is scheduled to enter into force on 1 January 2014. The existing Czech national Waste Management Plan is also currently being updated and is expected to be adopted in 2013, even before the new Waste Act enters into force (Envigroup, 2012).

5 Policy progress on past CSRs

As part of the European Semester, Country Specific Recommendations (CSRs) for each MS are provided by the EU Commission in June of each year for consideration and endorsement by the European Council). The recommendations are designed to address the major challenges facing each country in relation to the targets outlined in the EU 2020 Strategy. In the following table, those CSRs that are relevant for climate change and energy that were adopted in 2012 are listed, and their progress towards their implementation is assessed.

Existing Country Specific Recommendations	Progress
Exploit the available space for increases in taxes that are least detrimental to growth. Shift the high level of taxation on labour to housing and environmental taxation.	The second stage of Czech environmental tax reform is currently under preparation, but negotiations over its structure have been set back recently.

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