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

Country Report: Czech Republic

Ecologic Institute

Authors team: Lucy O. Smith, Eike Karola Velten, Andreas Prahel, Matthias Duwe

eclareon

Author: Filip Jirouš

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Ecologic Institute

eclareon

Ecologic Institute, Berlin:

Pfalzburger Straße 43/44
10717 Berlin
Germany

www.ecologic.eu

eclareon GmbH

Giesebrechtstraße 20
10629 Berlin
Germany

www.eclareon.eu

Contact:

Eike Karola Velten,
Fellow Climate and Energy

Tel. +49 (30) 86880-165
Fax +49 (30) 86880-100
[eike.velten\(at\)ecologic.eu](mailto:eike.velten(at)ecologic.eu)

Contact:

Filip Jirouš
Consultant, Policy Department

Tel. +49 (30) 88 66 74 000
Fax +49 (30) 88 66 74 010
[fj\(at\)eclareon.com](mailto:fj(at)eclareon.com)

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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 from February 2013 to November 2013.

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

Short summary

Background: 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 its accession to the European Union. Currently a new document entitled "Climate Protection Policy" is being drafted, looking at both the short-, medium- and long-term horizons, and aimed at implementing the EU Climate and Energy package. The update of the State Energy Concept envisages significantly increasing the share of nuclear energy while reducing the share of coal.

Non-ETS emission reduction target: The Czech 2020 target is to allow for a limited increase of +9 % (comp. to 2005 emissions) while in actual fact emissions were reduced between 2005 and 2011 by 6%. According to the latest national projections and when existing measures are taken into account, the target is expected to be reached with a significant margin (of 16 percentage points): -7% in 2020 compared to 2005.

Key indicators:

GHG emissions	CZ	EU
ESD EU 2020 GHG target (comp. 2005)	+9%	
ESD GHG emissions in 2011 (comp.2005)	-6%	-9%
Total GHG emissions 2012 (comp.2005)	-12%	-12%
GHG emissions/capita (tCO ₂ eq)	12.7	9.0

→ **41% higher** per capita emissions than EU average

GHG emissions per sector	CZ	EU
Energy/power industry sector	47%	33%
Transport	13%	20%
Industry (incl. industrial processes)	22%	20%
Agriculture (incl. forestry & fishery)	6%	12%
Residential & Commercial	8%	12%
Waste & others	3%	3%

→ **Energy/power industry** sector followed by Industry

Energy	CZ	EU
EU 2020 RES target	+13%	
Primary energy consumption/capita (toe)	4.1	3.4
Energy intensity (kgoe/1000 €)	356	144
Energy to trade balance (% of GDP)	-4.1%	-3.2%

→ **23% higher** per capita consumption, around **150% higher** energy intensity, contribution of energy to trade balance around **one third above** EU average.

Taxes	CZ	EU
Share of environmental taxes (% of GDP)	2.3%	2.4%
Implicit tax rate on energy (€/toe)	78	184

→ **Slightly lower** share of environmental taxes and **57% lower** implicit tax rate on energy than EU average.

Key policy development in 2013: The second stage of the Czech Republic's environmental tax reform includes the introduction of a carbon tax component. It was supposed to come into effect on 1 January 2014, but negotiations over its structure are ongoing. The New Green Savings programme offered a new round of subsidies to promote energy efficiency in the building sector. The Act on Supported Energy Sources started the intended phase out of existing support systems for renewable power (feed-in tariffs, green bonus payments) from 2014 onward.

Key challenges: The shift of taxation from labour to housing and environmental taxes is seen as important. Still, negotiations over the reform and the use of the tax revenues remain inconclusive. Current proposals foresee exemptions for coal-fired electricity generation and district heating facilities from the carbon tax component. The high energy intensity of the Czech industry with recently deteriorating emissions levels needs to be tackled by introducing efficiency-targeted policies. The phase-out of renewable energy support systems and the turn towards nuclear energy may jeopardize the achievement of the renewable energy target in 2020 and the employment in the renewable energy industry while nuclear energy comes at even higher costs in the long run.

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I Background on climate and energy policies

Following the forced resignation of Prime Minister Nečas's government in June 2013, the caretaker government of Jiří Rusnok temporarily took office until the planned parliamentary elections could be held on the 25-26 October 2013. With regard to climate and energy policies, Prime Minister Rusnok follows the route of the previous government and is focusing mainly on nuclear power generation to meet the Czech Republic's emission targets.

The Czech Ministry of Industry and Trade (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 current levels which are at 16%. 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 coal fired plants is foreseen.

Meanwhile, previously strong political support for renewable energy has declined in 2013. The original support scheme to solar energy proved to be extremely inefficient and is viewed as having caused 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 Parliament adopted the proposal of the MPO to amend the Renewable Energy Act (*Zákon o podporovaných zdrojích energie*). According to the updated law, only new solar energy plants put into operation before 31 December 2013 will be supported. Wind, hydro or biomass plants put into operation before 31 December 2014 will be eligible for support only if the building permit was issued before the draft law enters into force. Furthermore, the renewable fee for consumers will be lowered and set at a maximum amount of 495 CZK per MWh.

2 GHG projections

Background information

In 2011, the Czech Republic emitted 133.5 Mt CO₂eq (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). From 2011 to 2012 total GHG emissions are expected to further be reduced (EEA 2013b).

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 CO₂, CH₄ and N₂O and on 1995 for F-gases. An evaluation of the latest complete set of greenhouse gas data (for the year 2011; there is only preliminary data for 2012) shows that the 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⁾. The latest data for 2012 (EEA 2013b) suggests that the Czech Republic is on track at present to meet the Annual Emissions Allocation ⁽²⁾ for the year 2013 as emissions were 8 percentage points below of the target. By 2020, national projections show that the country is expected to overachieve its target by about 16 percentage points: in a scenario with existing measures the country is expected to even reduce its emissions by 7% compared to 2005 levels (see Table 1).

¹Decision 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.

²Commission decision of 26 March 2013 on determining Member States' annual emission allocations for the period from 2013 to 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the Council. Online available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:090:0106:0110:EN:PDF>

Table I: GHG emission developments, ESD-targets and projections (in Mt CO₂eq)

	1990	2005	2010	2011	2012*	ESD target**		2020 Projections***	
						2013	2020	WEM	WAM
Total	196.0	145.3	137.4	133.5	127.7				
Non-ETS (% from 2005)		62.7	61.8	59.3	58.3 -7%	63.6 1%	65.7 9%	56 -7%	55 -9%
Energy supply (% share of total)	58.0 30%	61.2 42%	58.9 43%	58.4 44%					
Energy use (w/o transport) (% share of total)	80.5 41%	35.2 24%	31.6 23%	28.5 21%					
Transport (% share of total)	7.8 4%	17.9 12%	17.4 13%	17.3 13%					
Industrial processes (% share of total)	19.6 10%	13.0 9%	12.0 9%	11.8 9%					
Agriculture (% share of total)	16.2 8%	8.4 6%	8.0 6%	8.1 6%					

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

* national proxies for 2012 emissions summarised by EEA (2013b)

** The ESD target for 2013 and for 2020 refer to different scopes of the ETS: the 2013 target is compared with 2012 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 adjusted scope of the ETS from 2013-2020. 2005 non-ETS emissions for the scope of the ETS from 2013-2020 amounted to 60 Mt CO₂eq.

*** 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 May 2013 - have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most ⁽⁴⁾. An update on the status of the policies and measures is included in order to assess the validity of the scenarios. Below the tables, a summary assessment can be found.

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 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 2013GHG projections

Existing Measures (only important national measures)	Status of policy in November 2013
Energy Act No. 86/2002 Coll., on protection of the air and amending some other laws (the Air Protection Act), as amended	The new Clean Air Act entered into force, on 1 September 2012 (see Policy development)
Energy 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 <i>Act on Supported Energy Sources</i> entered into force. This law was amended in September 2013 (see Policy development).
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).
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.
Energy Efficiency Energy labelling of household electrical appliances	Implemented. A thorough inspection of energy labelling of appliances in shops, checking the information content of labels by testing the electrical appliances; Financial support for information campaigns promoting energy-saving electrical appliances
Operational Programme Enterprise and Innovation Promotion of energy savings and RES use within the priority axe 3 - Effective energy	Implemented for the period 2007-2013. The main programme offering subsidies enterprises and industries. It comprises promotion of energy efficiency and use of RES in enterprises. It replaces the Operational programme Industry and enterprise.
The Green Savings Programme	In 2013, the New Green Savings Programme was launched focusing on the support of heating installations utilising RES as well as investments in energy savings in reconstructed and new buildings. The first call under the new programme was opened in August 2013 with CZK 1 bln available.

	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 biofuels in gasoline and diesel in accordance with the EU Directive.	Biofuel content is stipulated in <i>Clean Air Act</i> , which entered into force on 1 September 2012.
Transport	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.

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, May 2013.

Additional Measures (only important national measures; w/o EU legislation)		Status of policy in November 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, May 2013.

The most important measures which were taken in the period from February to September 2013 include the amendment of the Act on Supported Energy Sources (described in more detail in Chapter 4) and the launch of the New Green Savings Programme which focuses on the support of heating installations utilising RES as well as investments in energy savings in reconstructed and new buildings.

3 Evaluation of National Reform Programme 2013 (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 ⁽⁵⁾.

The NRP of the Czech Republic focuses on policies for waste and water management as well as air protection measures. In the energy sector, priority is given to strengthening the transmission network for electricity. The support of renewable energy is only mentioned with regards to the transport sector.

⁵There 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).

In the following table, the main policies and measures as outlined in the NRP of April 2013 ⁽⁶⁾ 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 2013

Effective regulation of the electricity flow	
Status as stated in the NRP	TSO to install phase-shifting transformers on cross-border lines with Germany by 2017
Status as per Nov 2013	Not adopted yet
Description of policy or measure	Due to the repeated threats to the stability of the Czech transmission grid, caused by unscheduled flows of electricity from neighbouring countries, the TSO ČEPS plans to install phase-shifting transformers on cross-border lines with Germany by 2016. These will allow to effectively regulate the flow of electricity and will serve as a medium-term solution until the German side will sufficiently strengthen its power infrastructure (ČEPS, 2013).
Strengthening the transmission grid	
Status as stated in the NRP	ČEPS to strengthen the capacity of the transmission grid by 2020
Status as per Nov 2013	Not adopted yet
Description of policy or measure	The transmission system operator ČEPS will strengthen the capacity of the transmission network until 2020. For this purpose, ČEPS will also use funds from the new Connecting Europe Facility (CEF) (ČEPS, 2013).
Waste water management	
Status as stated in the NRP	Government plans to increase share of treated waste water
Status as per Nov 2013	Not adopted yet
Description of policy or measure	Considerable attention will be paid to further increasing the share of treated waste water and increasing the number of households connected to the sewerage system (NRP, 2013).
Reduction of water consumption	
Status as stated in the NRP	Government plans to reduce overall water consumption
Status as per Nov 2013	Not adopted yet
Description of policy or measure	The government will seek to reduce overall water consumption and increase the availability of quality drinking water. The measures will focus primarily on the recycling of industrial waste water and the reuse of household waste water (NRP, 2013).

⁶All NRPs are available at: http://ec.europa.eu/europe2020/making-it-happen/country-specific-recommendations/index_en.htm

Waste management	
Status as stated in the NRP	Government intends to use waste as replacement for primary natural resources
Status as per Nov 2013	Not adopted yet
Description of policy or measure	A major goal of the government is the maximum utilisation of waste as replacement for primary natural resources. This includes the introduction of compulsory collection of paper, plastics, glass and metal waste to facilitate their recycling (NRP, 2013).
Using alternative fuels	
Status as stated in the NRP	Government plans to adopt Clean Mobility Programme
Status as per Nov 2013	Not adopted yet
Description of policy or measure	<p>The government intends to adopt a Clean Mobility Programme focused on the use of alternative fuels, improved air quality, reduction of pollutants emissions, reduction of greenhouse gases from transport and on the fulfilment of obligations arising from the Roadmap to a Single European Transport Area.</p> <p>As a part of implementation of the updated State Environmental Policy 2012-2020, the government will seek to reduce emissions from road transport by fleet renewal and increasing the share of alternative fuel use. The government will also promote an increased share of clean and energy-efficient vehicles in the public and private sectors by promoting fleet renewal (if fiscally feasible) and by implementing reasonable and controllable incentives on the side of demand with respect to urban centres (NRP, 2013).</p>
Air protection	
Status as stated in the NRP	Government intends to improve air quality and reduce pollution
Status as per Nov 2013	To be adopted by end of July 2014
Description of policy or measure	<p>In the forthcoming Mid-term strategy for air quality improvement in the Czech Republic (2020), the primary objective of the government is to improve air quality in the Czech Republic, at least to the extent complying the target emission values for the protection of human health, ecosystems and vegetation and to propose measures to meet national emission ceilings by 2020, according to the revised Gothenburg Protocol (CLRTAP).</p> <p>Reduction of concentrations of pollutants in the air should generally be pursued not only in the industrial sector, but also in the energy sector, road transport and with regard to household heating (NRP, 2013).</p>
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 Nov 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 (SO ₂ , NO _x , NH ₃ , 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 Nov 2013	The Waste Act was amended on 19 March 2013.
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 Nov 2013	The Waste Management Plan will be updated by end of July 2014.
Description of policy or measure	Sets requirements for waste management at a national level, e.g. for municipalities
Continue implementation of Czech Energy Efficiency Action Plan	
Status as stated in the NRP	Ongoing
Status as per Nov 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

4 Policy development

This section covers significant developments made in key policy areas between February and November 2013. It does not attempt to describe every instrument in the given thematic area. In this timeframe, the government led by Prime Minister Nečas was forced to resign (June 2013) and was replaced by a caretaker government which led the country to early parliamentary elections in October 2013. However, the parliamentary elections failed to bring about a decisive winner. While the parties of the previous conservative government suffered a heavy defeat, the Social Democrats won 20% of votes but fell short of winning a majority. The forming of a coalition government is, therefore, expected to be lengthy and difficult (Deutsche Welle, 2013). Due to this situation, policy developments were rather limited in recent months.

Horizontal Issues

In October 2013, the Czech Government approved the Report on the Environment of the Czech Republic in 2012 (MŽP, 2013c: *Zpráva o životním prostředí České republiky v roce 2012*). According to the report, the state of the Czech environment improved over the last year. However, this development may also be related to the recent economic downturn. Even though emissions have steadily declined, air pollution remains high, especially in the region of Moravia-Silesia. Air pollution is closely linked to developments in the energy and industry, household heating and transport sectors. In the energy sector,

the production of electricity and heat from renewable sources increased in 2012, mainly from biogas. However, because of significant exports of energy, the electricity generated by coal-fired power plants and the associated environmental pollution decreases only slowly. Furthermore, household heating is still a major source of PM10 emissions. A positive development can be observed in the transport sector with railway passenger transport increasing and the modernisation of the motor vehicles fleet. On the other hand, freight transport is still dominated by road traffic and old vehicles are scrapped only slowly, causing a constant increase in the number of registered cars and trucks (Třetí ruka, 2013a)

Environment Taxation

The share of environmental tax revenues in comparison to total tax revenues in the Czech Republic was at 6.81% in 2011, a value above the EU average. However, compared to the GDP, the revenues amount only to 2.35% (Eurostat 2013a). The Czech Republic has no carbon tax in place but plans to implement a carbon tax on natural gas, other gases, solid fuels, and fuel oils from 2014 onwards (OECD 2013, p. 86). The Czech Republic has an implicit tax rate on energy, which amounted merely to 78.3 € per tonne of oil equivalent (toe) in 2011. The energy intensity of the Czech economy was the 4th highest in the EU in 2010. The share of energy tax revenues in total tax revenues is comparatively high, despite its low implicit tax rate (Eurostat 2013a).

The second stage of the Czech Republic's environmental tax reform is still under preparation by the Ministry of Finance in cooperation with the Ministries of Industry and Environment. The first phase consisted of a transposition of the Council Directive restructuring the Community framework for 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 which came into force on 1 January 2008. 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 the CO₂ content of the fuel (carbon tax).

The carbon tax component was supposed to come into effect on 1 January 2014 but negotiations over its structure are ongoing due to EU carbon market developments (Ekolist, 2012). Additionally, Prime Minister Nečas announced in February 2013 that no additional changes to the taxation system should be introduced before the end of his government's term, however, legislative changes could be expected after the parliamentary elections on 25-26 October 2013. 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. The Ministry of Finance and Ministry of the Environment rather envisage CO₂ tax levies of €12-14/tonne, but 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 reductions 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 has declined 18% between 2005 and 2011, and is thus

stronger than the EU average of 12%. The final energy consumption decreased as well by 5% between 2005 and 2011. The decrease was less steep from 2010 until 2011, when the consumption decreased by only 4%, but is still on the same level as the EU average (Eurostat, 2013a).

Energy efficiency was improving in the Czech Republic after 2004, but was set back by the economic crisis. As a result, the situation in the industrial sector has deteriorated since 2008, especially the energy intensive industries such as the paper, steel and chemicals. The household sector however still shows promising results. The efficiency has improved from 2000 to 2010 by around 16% (Odyssee, 2012).

On 12 August 2013, a new round of subsidy applications started under the New Green Savings programme. In the first day alone, some 1,213 candidates submitted applications for a total amount of subsidies worth CZK 275 million. The Ministry of Environment has earmarked CZK 1 billion (approx. € 40 million) for the first call and plans to add another CZK 800 million (approx. € 32 million) from the sale of emission allowances. The caretaker government in resignation promised to further provide CZK 1-2 billion from the state enterprise Lesy ČR. The first call focuses on energy efficiency and insulation measures, the construction of houses with very low energy consumption as well as the exchange of environmentally unfriendly heat sources. The Ministry plans to make the first payments in fall and will stop accepting applications when funds are exhausted or no later than 29 November 2013. A further source of financial support for energy efficiency is the State Environmental Fund (SEF), which consists of resources from the Cohesion 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 million) was allocated for this call (CZK 20 m from the budget of Moravia-Silesia and CZK 20 million from the State Environmental Fund) (MŽP, 2012a). In May 2013, the Minister of Environment announced that the above mentioned programme was extended to the whole country. All inhabitants of the Czech Republic are now eligible to apply for subsidies for the purchase of new boilers, provided that their region will join the programme. The aim of the programme is to reduce air pollution from heat sources. High levels of pollution in Moravian-Silesia mean that the region will still remain a priority. For the first call the Ministry allocated CZK 80 million (approx. € 3.4 million). The programme is also expected to replace a wider range of boilers. In addition to coal boilers, subsidies will also apply to boilers using pellets or gas (MŽP 2013b).

The allocated budget for the replacement of old household boilers in the region of Moravia-Silesia was exhausted in October 2013 (MŽP, 2013c). The call was announced on 1 July this year and a total of 1,204 applications received funding of CZK 60 million (approx. € 2.33 million). On 24 October 2013, the Ministry of Environment and the Deputy Governor of Moravia-Silesia have agreed to launch a fifth call for proposals on 1 January 2014, which will again offer CZK 60 million to households willing to replace old boilers with new eco-friendly ones (MŽP, 2013d).

In November 2013, the “New Green Savings” programme (*“Nová zelená úsporám”*) was approved by the Czech Government. Until 2020, the programme will offer grants in the total amount of CZK 27 billion (approx. €1.1 billion), which is expected to create around 70,000 jobs, especially in the fields of construction and services. Under the previous “Green Savings” programme, the thermal insulation of 36,000 single-family houses and 6,000 old apartment buildings was financed. The Ministry intends to finance the programme partly from the sale of emission allowances and expects revenues in the amount of CZK 1.2 billion (approx. €44 million) until the end of 2013 (EnviWeb, 2013).

Furthermore, the Czech Government also approved the new state programme “EFEKT” (*“Státní program na podporu úspor energie a využití obnovitelných a druhotných zdrojů energie 2014”*) to promote energy savings and the use of renewable and secondary energy sources for the upcoming year, 2014. According to the Ministry of Industry and Trade, the programme is one of the tools to ensure that the Czech Republic will meet its international commitments: in particular, reducing energy consumption by 1% of GDP unit per year; increasing the share of electricity from RES to 20% and reducing energy consumption by 20% in 2020. Even though only CZK 30 million (approx. €1.2 million) have been allocated for 2014, “EFEKT” shall play an important role especially in regions which are not eligible for support under the EU structural funds. Project applications can be submitted until 28 February 2014 (MPO, 2013).

With regards to measures to increase energy efficiency in the transport and industrial sectors, no additional measures were identified during last six months. The following policies are still under development:

- National Programme to Abate the Climate Change Impacts in the Czech Republic (*Národní program na zmírnění dopadů změny klimatu v ČR*) – 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, a carbon tax was supposed to come into effect as part of the Czech Republic’s environmental tax reform on 1 January 2014, but negotiations over its structure have been held up recently due to EU carbon market developments. Due to the fact that early parliamentary elections took place in October 2013 and as of November 2013 there had not been a new coalition government, no significant changes can be expected in the upcoming months.

Renewable Energy

The proportion of renewable energy in final energy consumption in the Czech Republic increased approximately 50% from 2005 to 2011 accounting for some 9.4%. Thus, solid progress has been made towards the 2020 goal of 13%. Likewise, electricity consumption from renewables more than doubled over the same time period, but at 10.6% in 2011, it still lies far behind the EU-28 average of 21.8% (Eurostat, 2013b).

On 1 January 2013, the Act on Supported Energy Sources (*Zákon o podporovaných zdrojích energie*) entered into force. According to the new law, 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 the general rule of a “15 year simple return of investment”. Whereas grid operators used to pay the tariff, it is now the responsibility of the owners of renewable generation

with the Ministry of Industry and Trade now selecting “obligatory purchasers” from electricity trading licence holders.

On 16 August 2013, the Czech Parliament adopted the amendment of the Act on Supported Energy Sources which primarily intends to halt the increase of electricity prices for consumers by implementing more strict subsidies and reducing the renewable fee for consumers which is set at CZK 495 per MWh. Only new solar energy plants put into operation before 31 December 2013 will be supported. Wind, hydro or biomass plants put into operation before 31 December 2014 will be eligible for support only if the building permit was issued before the draft law will enter into force. The remaining amount will be financed from the state budget. It was also decided to extend the “solar tax” for plants put into operation in 2010 which now has been set at 10% of the revenue from feed-in and premium tariffs (Třetí ruka, 2013). Because of the retroactivity of this measure, the Czech Republic could face arbitration proceedings from the side of the European Commission.

Energy Networks

The Ministry of Industry and Trade is still preparing an amendment to an existing *Decree on the State of Emergency in the Power Sector (Vyhláška o stavu nouze v elektroenergetice)*. 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). This measure is also mentioned as priority in the 2013 National Reform Programme. 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

Emissions from transport have increased between 1990 and 2011 but showed a downward trend since 2005. However, their proportion among the Czech Republic’s total emissions increased to 13%, indicating the need to address these emissions (Table 1).

Average emissions for newly registered cars are high in the Czech Republic with a level of 140.8 CO₂/km. The level is the 10th highest in the EU and has decreased at a lower rate than EU average between 2005 and 2012 (Eurostat 2013a). In the Czech Republic, registration fees are depending on the EURO emission class of a vehicle. Vehicles which fulfil EURO 3 or higher are not charged with extra fees, while vehicles below that standard have to pay a surcharge (ACEA 2012). An ownership tax is also in place, but levied only on vehicles for business use. For passenger cars it is based on engine size and for freight vehicles on weight and number of axles (ACEA 2012). Furthermore, a time-based vignette system, with uniform rates for passenger cars is in place. For HDVs a distance based fee has been introduced, which applies for selected parts of the road network (CE Delft 2012). Both tax rates for petrol and diesel are near the EU average, but diesel is taxed at a rate of around €75/1000 litres lower than petrol (European Commission 2013).

The Clean Air Act (*Zákon o ochraně ovzduší*) entered into force on 1 September 2012, requires that any gasoline or diesel fuel sold in the Czech market for the purposes of transport consists of a certain percentage biofuel - 4.1% for gasoline and 6.0% for diesel. The customs office imposes a fine on 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). The Clean Air Act represents Czechs primary emissions reduction policy next to taxation.

No new policies or measures could be identified in this sector in the past six months.

Waste

On 19 March 2013, the Czech Parliament adopted an amendment prepared by the Ministry of Environment to the nation's Waste Act (*Zákon o odpadech*) which effectively withdrew the obligation of individual waste producers to prepare waste management plans thereby reducing the administrative burden on business. 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 could 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 will fully enter into force on 1 January 2014. The existing Czech National Waste Management Plan is also currently being updated and is expected to be published by the end of July 2014.

Since 13 August 2013, purchasers of small electric household appliances and equipment are no longer obliged to pay the so-called fee for historical e-waste. Originally, this fee was charged in order to provide funds for the disposal of e-waste, which came on the market before 13 August 2005. Since this date, producers of electric appliances are obliged to take care of the ecological disposal of their products. As a result, they simply added the costs of disposal to the prices of their products. The fee for historical e-waste, however, was charged separately and applied to products which were introduced onto the market before this obligation. For larger appliances such as refrigerators, washing machines or dishwashers, this fee will apply until 2015 (Ekolist, 2013).

Land Use, Land Use Change and Forestry

On 23 October 2013, the Ministry of Environment announced a first call under a new programme for the development of green spaces in cities and their surroundings (*Program zeleň do měst a jejich okolí*; SFZP, 2013). The call offers a total of CZK 130 million (approx. € 5 million) with a maximum subsidy amount of CZK 10 million (approx. € 388,000) per project (MŽP, 2013e). Support under this programme aims to increase the

planting of greenery and the revitalisation of suburban forests. The project also includes measures related to general infrastructure such as restoration and construction of roads, bridges and sidewalks and water supply systems. The implementation of these activities will lead to the reduction of air pollutants, maintain and enhance biological diversity and increase the attractiveness of the urban landscape. Applications can be submitted to the State Environmental Fund of the Czech Republic (*SFZP - Státní fond životního prostředí ČR*) from 24 October to 17 December 2013 (or until funds are exhausted) (MŽP, 2013d).

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 2013 are listed, and their progress towards their implementation is assessed.

Existing Country Specific Recommendations	Progress
Shifting taxation to areas less detrimental to growth, such as [...] vehicle circulation taxes.	The second stage of Czech environmental tax reform is still under preparation, but negotiations over its structure have been set back recently (see Chp.5: Environmental Taxation). There are no news on considering a vehicle circulation tax targeting private cars (an ownership tax is in place only for company vehicles (see Chp.5: Transport).
Take further measures to improve energy efficiency in the buildings and industry sectors.	New round of subsidy applications started under the New Green Savings programme. The first call focuses on energy efficiency and insulation measures, the construction of houses with very low energy consumption as well as the exchange of environmentally unfriendly heat sources (see Chp.5: Energy Efficiency).

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