

European Employment Observatory

**EEO Review: The Employment Dimension of Economy
Greening**

Czech Republic

Daniel Münich

CERGE-EI

December 2009

1. Introduction

In the Czech Republic, debate about the impact on the labour market of climate change and energy policies occurs almost only in a closed circle of activists, experts and officials of the Ministry of Environment (MŽP, or MoE). (There is, of course, a lively public debate on the extent of climate change where the Czech President is actively arguing that there is no damage to the planet, local or global; this is perhaps crowding out useful discussions about specific adaptation and mitigation policies.) On the positive side, the former government of Prime Minister Topolánek, which collapsed in March 2009, included members nominated by the Czech Green party, which entered the Parliament for the first time in 2006. The Minister of Environment did engage in useful public debate about climate change and he made some visible progress on environmental policies.

The opinion of the general Czech public on climate change is gradually being formed, but climate change remains relatively unimportant relative to economic issues that dominate public awareness during the economic crisis and political instability. Public opinion surveys regularly document that environmental issues are at the periphery of societal interests. The surveys of the well-established CVVM agency show that environmental issues rank 14th among the high priority issues, as perceived by an average citizen, the most pressing issues being the danger of unemployment (No.1), social security (No. 4), and living standards (No. 7).¹

The MoE has been running awareness-raising campaigns and operates some important policy programs, the most visible being the Operational Programme Environment (Operační program Životní prostředí, OPŽP or OPE). It provides subsidies to individual households and apartment building owners to improve thermal insulation of the buildings and to introduce energy savings.

Overall, the policy debate that exists about environmental issues ignores the labour market ramifications almost completely, with the sole exception of promotional slogans of the MoE, claiming that certain number of green jobs would be supported by its programmes (the way these effects were estimated is not generally known). Similarly, exaggerated estimates of job losses are being used by anti-environmental-regulation groups (think tanks), arguing that the costs of reducing pollution is prohibitive, especially given the rapidly rising level of unemployment.

¹ CVVM (Public Opinion Research Centre of the Institute of Sociology of the Academy of Sciences of the Czech Republic). Various related press releases can be found at:

- Iva Chludilová, Životní prostředí v České republice
http://www.cvvm.cas.cz/upl/nase_spolecnost/100037s_chludilova-prostredi.pdf
- Hodnocení činnosti v oblasti ochrany životního prostředí
http://www.cvvm.cas.cz/upl/zpravy/100934s_oe90707.pdf
- Miluše Rezková, Co nám říká životní prostředí
http://www.cvvm.cas.cz/upl/nase_spolecnost/100031s_Rezkova%20-%20ekologie.pdf
- Hodnocení stavu životního prostředí v ČR a v místě bydliště
http://www.cvvm.cas.cz/upl/zpravy/100929s_oe90619a.pdf

Meanwhile, the largest company in the country, the state-owned² electricity-generation giant CEZ is making investment decisions about remodelling coal power generating plants and that will predetermine future environmental policies for decades (i.e., new land will have to be opened up for coal mining despite strong opposition, because these investments would otherwise lead to large future losses for the company and, hence, the government). There are also plans to build new nuclear reactors in the country. However, there is little debate on the employment dimension of the *de facto* decision (made by the state owned CEZ) to continue the current policy of the Czech Republic being an energy exporter, using mainly coal and nuclear power generation. Foreign workers constitute a significant share of coal mining employment; on the other hand, skilled foreign workers would have to be involved in the potential expansion of nuclear generation, given the growing scarcity of local engineers (and ageing of the local workforce) for such a large project.

2. Labour market policy developments and labour market outcomes

Policy developments are here discussed jointly with labour market outcomes because it is difficult to estimate the possible implications of ‘green’ measures, which have been adopted thus far in the areas of environmental, energy, transport and infrastructure policies. We are not aware of any serious analytical study, publicly available, which would map this issue and provide us with at least some relevant estimates. Hence, we rely on the MoE descriptions of key policy developments in this policy area, which also sometimes include the corresponding labour market ramifications. But even the key documents of the MoE mention only rarely the link between green policies and employment, and, when estimates of the employment effects are provided, they are hard to evaluate and/or are not publicly available. In addition to the MoE programmes discussed below, the extensive and overarching spending on transportation infrastructure must have supported some employment in the construction sector, but estimates are not available. The sector has absorbed much foreign labour in recent years. Below, three key policy agendas are discussed - (i) the National Strategic Reference Framework (NSRF) for 2007-2013, (ii) the OPE of the MoE, and, in particular, (iii) the *Green Savings* programme of the MoE. Finally, we discuss the Environmental Tax Reform (ETR).

2.1 National Strategic Reference Framework of the Czech Republic 2007-2013

The framework document describes in detail the current (in 2007) environmental situation and the expected country-level environmental needs in the future. However, it does not explicitly link environmental policies to sectoral economic developments

² When the European Commission ordered a raid of ČEZ offices (i.e., opened a formal anti-trust investigation), the news of the regulator’s team coming to Prague on a secret surprise mission to check for potential market manipulations by ČEZ was shared only with the Czech anti-monopoly regulator, a day in advance of the raid, but it leaked to ČEZ within hours, a major failure of the Czech state. Along similar lines, in June 2009, the Lower House of the Czech Parliament suddenly gave the electricity generating giant almost CZK 70 billion (EUR 2.7 billion) worth of emission credit exemptions, citing vague support for energy-efficient investments. This kind of a gift, given in a country that fights enormous budget deficits, has been publicly called “a theft” by the then Minister of Environment Bursík.

or labour market implications. Reviewing the NSRF, we therefore summarise our assessment of the labour market implications: future spending and potential net job creation effects are likely to occur in sectors that are responsible for the key environmental targets discussed in this Framework document.

First and foremost, the degree of air pollution in the Czech Republic has been stagnating, but remains relatively high. The related adverse impact on public health and the violation of national and EU legislation imply the need for future policies to improve the situation. The ability to reach desirable outcomes is perceived to be closely dependent on the sources of funding. If funding is made available (see details on OPE provided below), it can be expected that new investments into pollution reduction in energy generation and the introduction of less energy intensive manufacturing will generate new jobs in related sectors and occupations.

The Czech economy and manufacturing in particular is characterised by high energy use per unit of output and a low utilisation share of renewable resources. Energy production and transportation contribute the most to emissions polluting the air. An important segment potentially allowing for sizeable energy savings is housing.

The NSRF also discusses at length the inefficient waste management (e.g. illegal waste dumps), the high level of noise pollution, the inherited ecological burdens caused primarily by past mining (coal and uranium) and chemical (toxic) production. The removal of ecological burdens inherited from central planning will be a costly and long process; in fact, a public tender to this effect, worth in excess of CZK 100 billion (EUR 3.85 billion), is currently being discussed as possibly leading to corruption and massive over-charging, which would lower potential employment effects. Unfortunately, these key policy needs are not discussed in the Framework document in terms of their employment impact.

The outlook offered by the Framework is as follows. In line with the National Energy Plan, the Framework argues for supporting effective utilisation of energy inputs. All qualitative parameters of the energy production segment are to be improved and the energy dependence of GDP is to decrease. In 2030, the energy intensity of Czech GDP should reach 37.5 % of its 2000 level. The structure of primary energy sources is also to change: brown coal use will decrease by 40 % during 2000 to 2030 and crude oil consumption is expected to drop by a half, while the consumption of natural gas and the use of nuclear fuels and renewable energy resources in particular are all to increase, together with the diversification of energy sources.

It is difficult to disentangle the net job creation effect of these green policies. The job-creation effect is likely to be stronger, of course, in times of low labour market demand, while crowding out of 'non-green' employment is likely to be more significant during boom periods. The current economic downturn therefore offered an ideal opportunity for efficient implementation of these policies.

2.2 OPE - Operational Programme Environment

Judging from the amount of financial resources made available, the Operational Programme Environment (OPE) is the second largest Czech Operational Programme.

Between 2007 and 2013, this programme should offer almost EUR 5 billion from the Cohesion Fund and the European Regional Development Fund, and an additional EUR 300 million from the National Environmental Fund of the Czech Republic and the state budget. The Operational Programme's main goal is to protect and improve environmental quality throughout the country.

Within the discussion of the anti-crisis measures in early 2009, the MoE argued that OPE will support consumption during the recession and will create 180 to 230 000 new (mainly skilled) jobs during 2008-2013. The programme focuses on seven main areas, where one can therefore expect (and try to detect) such employment effects:

1. The improvement of water management infrastructure and reduction of flood risks.
2. The improvement of air quality and reduction of emissions.
3. The sustainable use of energy sources.
4. The improvement of waste management and the rehabilitation of old ecological burdens.
5. The limiting of industrial pollution and environmental risks.
6. Improving the state of nature and the landscape.
7. The development of infrastructure for environmental education, consultancy and awareness.

However, we are not aware of any strategy being implemented for ex post evaluation of the net job creation effect of the OPE, or its impacts on skills within the labour market.

We discuss below one particularly large specific programme aimed at improving energy efficiency in residential housing - the *Green Savings* policy. Other policy targets include electricity and heat production based on renewable resources, complex wood processing (which may support employment in SMEs in high-unemployment border areas), the growing recycling sector, public transportation (with much employment in railroads and extensive city-funded bus/tram systems), and environmentally-oriented innovation and R&D (a proposal to decrease VAT on some activities performed by public research institutes has been suggested together with higher depreciation rates in specific areas).

2.3 Green Savings – a programme funded from OP Environment

This OPE-co-funded project was launched in early 2009. It supports heating installations utilising renewable energy sources and energy savings in reconstruction and new construction. The most widely publicised type of support aims at insulation of permanent-residence family houses or apartment buildings and the replacement of environment-unfriendly heating with biomass-fired boilers and efficient heat pumps. A subsidy may be applied for before or after implementing the measure, but support for measures completed before the programme's launch cannot be granted.

The Czech Republic has raised funds for this programme from the sale of emission credits under the Kyoto Protocol on greenhouse gas emissions. According to new legislation, the funds generated by the sale of emission credits will be collected by the State Environmental Fund, which co-funds the *Green Savings* programme. The overall anticipated programme allocation during 2009-2012 is about CZK 25 billion (EUR 960 million), making it the largest Czech 'green' programme. More than 250 000 households are expected to access the programme. The MoE expects the programme to create or maintain up to 30 000 jobs mainly in SMEs in the construction sector in all regions of the country. As such, the MoE also publicised the programme as one of the government's anti-crisis stimulus measures.

2.4 Environmental tax reform

The MoE also have led an extensive environmental tax reform (ETR) with the aim of reducing environmental damage and its impacts on public health. The reform was expected to result in no increase in the overall tax burden, as additional revenues from newly introduced taxes under the ETR were supposed to be accompanied by an adequate decrease in other taxes or government expenditures. The Government had accepted the principles of the ETR in 2007 and the reform has been scheduled to take place in three stages until 2017. The first stage of the ETR consisted of introducing new taxes in January 2008 on natural gas, solid fuels and electricity (these taxes supplemented the existing excise duty on mineral oils). These new taxes were imposed at the lowest rates allowed by the relevant EU Directive and the government had promised to decrease social insurance contribution rates of employers. The plan was that the volume of additional annual tax revenues would be estimated by the middle of 2008 and social security rates would be decreased accordingly from January 2009. However, this plan did not materialise in part because it was found that the revenue intake from these new taxes was well below the original expectations. Furthermore, the MoE argued that the tax burden neutrality of the ETR was maintained because there was a simultaneous decrease in the overall tax quota, due to declines in personal and corporate tax rates in January 2008. More importantly, the MoE argues, in line with, for example, the OECD, that a general shift from direct to indirect taxes should occur in the Czech Republic and that such a shift should allow for future increases of energy taxes, together with compensatory declines in the tax wedge on labour.

Unfortunately, the short-term impacts of the ETR on employment have been completely obscured by the onset of the economic downturn. The MoE, in one of its reports, claims that a Regulatory Impact Assessment (RIA) has been performed for the first phase of the ETR. However, the RIA is not available publicly and our experience suggests that it is unlikely to contain an employment effect estimate. For example, the 97-page key document *The Assessment of the National Programme to alleviate the impact of climate changes in the Czech Republic – A Summary*³ does not

³ Assessment of the National Program to mitigate the impact of climate change in the Czech Republic – Summary [Vyhodnocení Národního Programu na zmírnění dopadů změny klimatu v ČR – shrnutí]. Ministry of Environment, http://iris.env.cz/AIS/web-pub2.nsf/cz/vyhodnoceni_narodniho_programu.

include any discussion of the link of green policies to employment and the word 'employment' appears only once in the entire document.

The second stage of the ETR, aimed at reducing air pollution emissions, is currently under preparation. The plan of the previous government was to establish a special tax in 2010, imposed on CO₂ emissions. Such a tax would be established on the grounds of the current pollution fee and the expected revenue from this new tax in 2010 was estimated in the range of CZK 10 to 40 billion (EUR 0.385 – 1.53 billion), i.e., at 0.5 to 1.0 % of GDP. Naturally, these estimates were made based on outlook made before the crisis.

2.5 R&D and fiscal policy, which might have an impact in the labour market

A key visible measure falling under fiscal policy is the huge project discussed above to remove the ecological burden (damage) inflicted during the central planning period. The total cost of the project is still not clear, but it will possibly exceed CZK 100 billion (EUR 3.85 billion). Given the ongoing discussion about the extent of over-charging within this government-funded project, it is difficult to discuss the potential employment effects in construction, toxic-waste-removal and landscape building companies.

Main challenges on the labour market (if any) identified in the transposition of EU Directives implementing the 20-20-20 targets

To the best of our knowledge, there has been no discussion or analysis of the effects of the 20-20-20 targets in the Czech Republic to date. Of course, the *Green savings* project (which improves energy efficiency in housing) is bound to support some jobs in construction, but labour market bottlenecks have not been discussed in relation to the higher use of renewables (although many cite lack of engineers for the planned nuclear expansion).

There are no studies in the Czech Republic on the impact of the greening of the economy on the levels of employment, composition of employment (including skill demand) and quality of jobs.

In relation to the effects of climate change on specific regions and sectors, this is a difficult question to answer. With the exception of the *Green Savings* programme that benefits the construction sector and the three largest planned investment projects in energy and green-related areas (i.e., the ecological burden removal project (which is most likely to benefit one firm hugely), the remodelling of coal-based electricity generation and the potential building of additional nuclear reactors (both project benefiting technology firms, potentially non-Czech employers the most)), other programmes seem too minor currently to make a visible impact. Of course, wind energy is likely to continue its expansion in the (high-unemployment) mountainous border regions. The Czech Republic, with its strong manufacturing base, should be able to absorb some production of sun-based energy technology. As for climate

change, it can, of course, affect the agriculture, but forecasting which activities would benefit and which would be hurt is very difficult at this point.

The low territorial mobility of the labour force may have repercussions for the labour market effects of a green restructuring. The main population flows in the last decade were those of sub-urbanisation and they led to major decreases in agricultural land available close to major cities. The ongoing construction boom in family housing is likely to come to an end in the near future; however, construction workers are some of the most mobile in the country.

There surely is a shortage of highly skilled and experienced ‘green’ professionals in the country, stemming from decades of neglect of environmental issues, at least relative to natural demand levels in a country with many environmental problems. Several years ago, there was almost a complete lack of environmentally focused curricula⁴ at universities and research institutions. Recent cross-country comparisons of research output⁵ suggest that earth and environmental sciences in the Czech Republic lag behind the more developed parts of the EU.

The National Climate Programme⁶ (NKP - Národní klimatický program ČR) of the Czech Republic carries out activities resulting from the World Climate Programme (WCP), coordinated by the World Meteorological Organization (WMO). However, the research undertaken does not include employment and labour market issues.

Pieces of interesting research relating both green policies and the labour market are undertaken, for example, by the Environment Centre at Charles University.⁷ Among others, it implemented a project ‘ETR: Impacts and Relation of Environmental Tax Reform on Environmental Policy, Basic Macroeconomic Parameters, Public Funding Systems, Selected Sectors of Economy and Households’ (VaV MŽP, 2003–2004) and is undertaking current projects ‘EXIOPOL: A New Environmental Accounting Framework Using Externality Data and Input-Output Tools for Policy Analysis (6th FP, 2007–2010)’ and ‘Monitoring and Assessment of Relations Between the Environment, Economy and Society by Means of Progress Reports’ (VaV MŽP, 2007–2011).⁸ In relation to the research on the regulatory impact of green policies and tax policies, there is ongoing project MODEDR (Modelling of Environmental Tax Reform Impacts: Second Phase of the ETR), funded by the Czech Ministry of the Environment between November 2007 to December 2010.⁹

One of the few fiscal areas that were not negatively affected by the economic downturn was the construction of highways and railway corridors. Assuming that

⁴ Charles University Environment Centre, <http://www.cozp.cuni.cz/COZPENG-1.html>

⁵ Office of the Government, Analysis of the state of the art of the R&D and innovations in the Czech Republic and international comparison in 2009, [Analýza stavu výzkumu, vývoje a inovací v České republice a jejich srovnání se zahraničím v roce 2009], Prague, 2010, <http://www.vyzkum.cz/FrontClanek.aspx?idsekce=549508>

⁶ <http://www.chmi.cz/nkp/nkpeo.html>, <http://www.cozp.cuni.cz/COZPENG-14.html>

⁷ <http://www.cozp.cuni.cz/COZPENG-27.html>

⁸ <http://www.cozp.cuni.cz/COZPENG-21.html>

these funds are well spent in terms of value for money (assuming little over-charging and corruption), such investment is likely to have positive environmental as well as economic consequences. The government did present the *Green Savings* programme as one of its anti-crisis unemployment-fighting measures, but the timing was simply a co-incidence.

3. Conclusions

Overall, the Czech public debate about green policies is dominated by ideology and concerns about corruption and market-manipulation (decisions made by the CEZ that drive the government's policies, potential corruption in public procurement). The Minister of Environment from the Green Party did make much progress in supporting useful public debate of environmental policies, but the Topolánek government collapsed perhaps too soon to see sufficient progress on this front.

Bibliography

Anti-crisis green policies: http://www.mzp.cz/cz/news_tz090212MZP_proti_krizi

Environmental tax reform: http://www.mzp.cz/en/environmental_tax_reform

Green savings programme: http://www.mzp.cz/cz/news_tz090407zelena_usporam
www.zelenausporam.cz

Ministry of Environment, Information on green jobs activities:
http://www.mzp.cz/cz/articles_priorita0902greenjobs

NSRF - National Strategic Reference Framework

<http://www.businessinfo.cz/cz/clanek/zdroje-financovani-z-eu-2007-2013/navrh-nsrr-vzaty-na-vedomi-7-6-2006/1001573/40788/>

Operational Programme Environment: <http://en.opzp.cz/>

⁹ MODEDR: Impact modelling of environmental tax reform: 2nd stage EDR, [Modelování dopadů environmentální daňové reformy: II. etapa EDR (VaV MŽP, 2007–10)], <http://www.cuni.cz/COZP-222.html>