

**European Employment Observatory**

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

**Slovakia**

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## **1. Introduction**

Slovakia is a country with a strong environmental movement, the roots of which date back to the 1970s and 1980s when it embodied a platform of political resistance and the efforts to resolve urgent environmental burdens. The ecological enthusiasm was one of the driving forces behind the social and political changes of 1989 and the general support translated into a strong position of green parties in the newly emerging political system. In the past twenty years, however, the level of society 'greening' gradually diminished and Slovakia became a standard market economy, where environmental impacts of economic and other policies are still proclaimed as important, yet in reality are paid relatively low attention. The economy underwent substantial structural changes, the effect of which – even if not intended in the first place – was a reduction of ecological burdens. The EU accession implied the adoption of new commitments in response to today's environmental challenges.

Climate change constitutes an important topic for political debate, and as suggested by surveys<sup>1</sup>, it resonates soundly also in the society. Slovakia acceded to all commitments following from EU's new energy and climate change package and participated actively in the negotiations at the European and global levels. Yet, the national policy debate is dominated by the energy policy, where fossil fuels and nuclear power continue playing a key role. By joining the international energy and climate packages, Slovakia in fact confirmed the efforts to green the economy. For the time being, this endeavour is a product of international agreements rather than a resolution of national policy makers to promote a low-carbon economy. A discussion about the impacts of green restructuring on the local labour market has not taken place. In this respect, the policy response to the current economic crisis indicates some progress, as part of recovery measures aim, in line with the EU's Economic Recovery Plan, to address energy efficiency with positive effects on employment. However, it is too early to consider these partial steps as a coherent strategy.

## **2. Labour market outcomes**

Although negotiations in the EU-27 resulted in a revision of the original energy and climate change package of January 2008, the overall 20-20-20 targets put forward by the European Commission have been kept.<sup>2</sup> The EU package builds on international commitments (1997 Kyoto Protocol) and is liable to additional adjustments, providing an international agreement is reached on more ambitious targets for emission reductions (referring mainly to the outcomes of the December 2009 Copenhagen climate summit).

Concessions negotiated in 2009 at the EU level are meant to reduce economic and social impacts of the package (notably, the risk of "carbon leakage"). Slovakia is

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<sup>1</sup>For example, the 2009 special issue of the Eurobarometer. [http://ec.europa.eu/slovensko/news/slovaci\\_a\\_klimaticke\\_zmeny\\_sk.htm](http://ec.europa.eu/slovensko/news/slovaci_a_klimaticke_zmeny_sk.htm)

<sup>2</sup> Targets include a 20% cut in emissions of greenhouse gases by 2020, compared with 1990 levels; 20% share of renewables in energy consumption by 2020; and a 20% cut in energy consumption.

currently in the stage of drafting measures for the implementation of the package. A draft set of measures entered the legislative process in December 2009.<sup>3</sup> For the time being, the document does not include an impact assessment of proposed measures on public finances, the business environment or employment.<sup>4</sup>

As targets are known, the question about the economic and social cost comes into the foreground. Background analyses prepared for the implementation strategy by competent departments focus almost entirely on technical issues related to the transposition of the EU directives. Key documents, which form the domestic legislative framework in the area of energy efficiency and emission cuts<sup>5</sup> (including the aforementioned draft set of measures) have not identified any concrete impacts on the labour market (if not considering a general comment found in several documents stating that ‘the measure will positively influence employment in the given area’).

The Slovak economy experienced a historically unparalleled restructuring process in the past two decades. The country moved from heavy industry, inefficient agriculture, and undeveloped services to an economy with competitive industries and ever growing services sector. The process was accompanied by the closure of ineffective energy-intensive productions, mainly in the mining industry, and the conversion of certain productions (notably, the arms industry) into new manufacturing programmes. Inflow of foreign capital played a decisive role, bringing technical investments and new standards of corporate governance and human resource management. The restructuring process reflected inevitably in decreased environmental burdens and, not least, changes in employment. Following are some trends in this process, which also have some reference for a future green restructuring:

- New jobs have emerged, particularly in sectors driven by foreign investments, which in some cases implied the emergence of new industries (e.g., cars).
- Unemployment grew as a direct result of structural changes, yet it was influenced also by other factors linked with the transition to market economy and the delayed reforms of the social system, labour market, and education.
- Employment in agriculture shows a distinct downward trend, in part the result of more efficient technologies and increased productivity, but also due to the

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<sup>3</sup> The draft was submitted for a review process on 7 December 2009.

[https://lt.justice.gov.sk/\(S\(ilztubr3gout1n55kgdr2d45\)\)/Material/MaterialDocuments.aspx?instEID=53&matEID=2309&langEID=1&AspxAutoDetectCookieSupport=1](https://lt.justice.gov.sk/(S(ilztubr3gout1n55kgdr2d45))/Material/MaterialDocuments.aspx?instEID=53&matEID=2309&langEID=1&AspxAutoDetectCookieSupport=1)

<sup>4</sup> The Ministry of Finance and the Republic Union of Employers criticised the absence of an impact assessment. Employers expressed also complaints about the short review process (5 days), which disables a due participation of social partners and the public in the drafting of this crucial strategy.

<sup>5</sup> Essential documents and legislation include the National Sustainable Development Strategy, Strategy of Higher Use of Renewable Energy Sources, Energy Policy, National Programme on Reduction of Emissions of Basic Pollutants until 2010, Transport Policy until 2015, Green Paper on the Use of Renewable Energy Sources, Act on Support to Renewable Energy Sources and Highly Efficient Combined Production, Clean Air Act, Clean Water Act, Act on Energy Efficiency, Act on Charges for Environment Pollution, Act on Environmental Impact Assessment, Act on Regulation in Network Industries.

overall decline of farming in favour of other industries (e.g. construction) and the increased import of agricultural commodities.

- Total employment in industry remained relatively stable, but several noteworthy shifts occurred within and between industrial sectors (such as a drop in the number of employed in mining, moderate decreases of jobs in energy and water supply, manufacturing of chemicals and petroleum products, and heavy machinery, accompanied by a significant increase of jobs in the automotive industry, electronics, and metallurgy<sup>6</sup>), while several sectors maintained strong employment position (wood processing industry, rubber industries).
- The number of jobs in construction recorded a new boom in the last decade after a temporary downturn in the 1990s as favourable employment trends have been reported from infrastructure and building construction.
- Employment in transportation moderately decreased, mainly due to a significant drop in railway transport.
- The global economic crisis negatively impacts on overall employment, but affects mainly industries sensitive to foreign demand.

**Table 1 Employment trends in selected sectors (number of employees)**

<b>Sector</b>	<b>1997</b>	<b>2003</b>	<b>2008</b>
Agriculture	119,084	58,892	38,370
Industry	608,874	558,418	593,888
<i>of which</i>			
Mining and quarrying	21,492	11,060	9,037
<i>of which</i>			
Mining of coal and lignite	10,332	6,562	4,732
Extraction of crude petroleum and natural gas	2,611	1,338	827
Wood and wood products	20,426	30,592	39,828
Pulp and paper	19,430	9,045	8,038
Coke, refined petroleum products and nuclear fuel	5,499	4,087	2,642
Chemicals and chemical products	28,244	15,888	13,282
Rubber and plastic products	18,178	19,856	29,077
Non metallic mineral products	29,447	27,385	25,639
Basic metals and metal products	77,577	85,563	108,871

<sup>6</sup> Shift from basic metals to manufacture of fabricated metal products, partly driven by the boom in the automotive industry.

Sector	1997	2003	2008
Machinery and equipment n.e.c.	74,916	47,696	53,399
Electrical and optical equipment	49,769	68,603	86,523
Motor vehicles	13,876	22,414	38,156
Recycling	3,029	1,582	2,890
Electricity, gas and water supply	47,947	45,074	33,682
Construction	150,885	131,154	181,526
Transportation	105,156	89,220	93,912
<i>of which</i>			
Railway transport	49,517	41,627	33,347
Road freight transport	8,516	6,327	13,347
Road passenger transport	14,568	11,448	8,663
Urban transport	5,656	5,251	4,731
Air transport	333	315	886

Note: For some sectors data available from 1993 (agriculture) and 1995 (transportation, construction). Employment data by main NACE sectors are also available from the Labour Force Survey for the period 1994-2008; however, no breakdown by sub-sectors is available.

Sources: Statistical Office of the Slovak Republic, enterprise statistical reports.

Attempts to outline potential effects of economy greening on employment are faced with many information gaps. First and foremost, a green transition process is unique in many ways, which makes it tricky to draw parallels to any past developments. While structural changes in the past two decades in Slovakia were driven mainly by market forces in a newly established institutional and regulatory framework, the idea of green restructuring involves obviously a more decisive role to be played by government policies and regulations, which will likely collide with the market-driven forces in many ways. Secondly, green restructuring projects (in the sense of a controlled policy process with documented effects on employment) have not been implemented thus far in Slovakia, so that there is no relevant policy experience. Employment impact assessment of existing and planned climate/energy measures is, for the time being, wishful thinking (some exceptions to be found among the recovery measures). Forecasting of future skill needs with respect to green-collar jobs is non-existent.<sup>7</sup> Statistics on employment in new green sectors (such as

<sup>7</sup> The Economic Institute of the Slovak Academy of Sciences prepared, in 2009, a macroeconomic forecast of economic developments with focus on labour demand until 2020. The prognosis includes a sectoral breakdown of labour demand forecasts by main sectors of the economy (SK NACE). The model takes into account the current economic crisis and envisages a decreasing employment trend in mining (by 50 % in 2020 compared to 2008), and to a lesser extent in energy and water supply. Manufacturing shall experience a revival in labour demand in a mid- to long term horizon, following a fall in the initial period. Construction should attain 2008 employment figures by end of the forecasted period. For more details see:

renewable energy supply) are not available, which applies equally to information about green processes in conventional industries. Lastly, the broad definition of green jobs raises some question marks about the classification of sectors and occupations. Nevertheless, some suppositions may be formulated for the future employment situation in Slovakia:

- Increased investments and regulation may lead to an increase of jobs created in new green and greened sectors.
- Changes in the occupational structure are envisaged, but shifts from ‘brown to green’ will be neither rapid nor large in terms of job numbers.
- Structural changes will cause some occupations and, possibly, also sectors to disappear; transition will require immense technological investments but equally investments into the adaptation of the workforce.
- Structural unemployment may grow in energy-intensive and labour-intensive sectors as a result of job cuts and insufficient or late adaptation to new skills requirements.
- The overall employment level will most likely not be affected; the opposite would make economy greening politically impossible.
- Quality of jobs should presumably grow and/or at least not suffer; this is, however, conditioned by the structure and character of jobs created (changes may generate new jobs with increased qualification requirements, but green jobs are expected also in sectors such as construction and forest management with prevailing manual professions, where above-average work and pay conditions are hardly assumable).

In a situation of missing in-house evidence, foreign experience may provide some hints. The existing international discussion on green jobs takes place in an optimistic spirit, referring to the immense job potential of economy greening. This standpoint is in many aspects and with respect to many good practices justifiable. Yet, even the clearly pro-green standpoints anticipate considerable job shedding and high transition costs.<sup>8</sup> A recent study on employment effects of public support to renewable energy sources in Spain<sup>9</sup> suggests that high subsidies to renewable energy resulted in a significant loss of jobs in other sectors. The reasons are obvious. The cost of new energies is still much higher than that of conventional energies and the regulatory framework has many flaws. This leads off to the conclusion that green efforts will inevitably require a strong investment plan, proper mix of public policies, and broad support from all stakeholders, but mainly the private corporate

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<http://www.rokovania.sk/appl/material.nsf/0/7B8025AD688168D2C12576470048DA84?OpenDocument>

<sup>8</sup> See for example UNEP, ILO, IOE, ITUC: Green Jobs: Towards decent work in a sustainable, low-carbon world. September 2008.

<sup>9</sup> Gabriel Calzada Álvarez et al: Study of the effects on employment of public aid to renewable energy sources. Universidad Rey Juan Carlos, March 2009. Draft version available under: <http://www.juandemariana.org/pdf/090327-employment-public-aid-renewable.pdf>

sector. These requirements will have to be met not only at the national level, as this is a global initiative. With respect to the small and highly open economy (three quarters of production are exported), the pace of changes will be decisively influenced by foreign demand. Based on these assumptions, a scenario with gradual and moderate green restructuring seems feasible, in which changes take place in established industries, rather than in newly emerging green sectors.

Not many employment changes are to be expected in energy supply in the near future. The current use of renewable energy is relatively low, at around 7 % of final energy consumption,<sup>10</sup> and the 2020 target of 14 % implies that equal efforts will have to be made to increase energy efficiency from conventional sources (fossil fuels and nuclear power) and step up utilisation of renewable energy sources. The greatest (unused) potential in renewable energy sources, according to official assessments, lies in biomass, solar and geothermal energy. There is, however, a range of unresolved technical and financial issues, which impede a wider application of new sources (notably in solar and geothermal industries, which are practically non-existent so far) and limit the overall employment potential in the renewable energy sector.

Gradual spread of green employment is likely to occur in critically important branches of the industry. This applies, for instance, to the car industry, where a long-term trend towards alternative fuels and low-emission technologies is evident. It is therefore beyond doubts that car producers (VW, Peugeot Citroen a Kia Motors) and the network of accessory manufacturers will adapt their production and job portfolio to fuel-efficient and alternative engines, presumably having a neutral effect on the overall employment in the sector. Closely linked is the steel industry, where endeavours for more energy efficient manufacturing processes may be expected, along with increasing importance of recycling. This may have negative employment effects, multiplied by problems of unsustainable competitiveness vis-à-vis countries with lower environmental standards. A similar trend may be envisaged in other energy-intensive productions, such as aluminium, paper, chemicals, rubber and plastics.

The construction sector could become a forerunner of 'greener' employment. Retrofitting the existing housing stock still offers vast employment opportunities with relatively low cost of skill adaptation. Energy-efficient new housing construction is slowly taking roots in Slovakia, potentially generating new and modified jobs. A state supported programme on thermal insulation of residential buildings was initiated by the government in 2009 within the national recovery package, aiming to increase energy efficiency in the housing sector and create and/or retain at least 8 000 jobs.

There are also ample opportunities in specific sectors such as the recycling industry, forest industry, and urban transportation, which, however, require solid investment strategies and incentive schemes.

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<sup>10</sup> Renewable energy is currently dominated by hydropower and biomass.

### 3. Review of labour market policy developments

Labour legislation refers to green aspects of employment only marginally. The 2007 revision of the Labour Code enlarged the possibility to perform work at home by a new form – telework, which enables employees, using information technologies in their work, to arrange working time and location individually, without the need to commute to the official workplace. There is no available information on the application of such work schemes, yet the traditionally low participation in flexible work arrangements implies that only a minor number of workers are working from home. However, the potential benefits for employees and employers (e.g., reduction of costs, energy use, greenhouse gases, traffic congestions; improved family-work balance and access to work for vulnerable groups) could act as important stimuli for a more widespread use of home-based work in the near future.<sup>11</sup>

Labour market policies in Slovakia are not designed to explicitly support green employment. The active labour market policy scheme includes two measures, which subsidise work carried out by job seekers to improve environmental conditions:

- *Contribution for activation works performed by way of minor communal services.* A financial contribution is granted to a municipality to compensate part of expenses related to the performance of activation works by a long-term unemployed (e.g., to cover cost of protective work equipment, accident insurance of the job seeker performing activation works, etc.) and to compensate part of the total labour cost of the employee, organising the activation works of job seekers. Activation works are carried out to improve economic, social and cultural condition, to create, protect, maintain and improve the local environment, and to improve other communal conditions specified by the law.
- *Contribution for activation works performed by way of voluntary work.* Similarly, a financial contribution is granted to a legal entity for the organisation of voluntary work for a job seeker aimed to maintain and improve the environment or to provide assistance in case of natural and ecological disasters. The job-seeker is, moreover, entitled to receive a monthly benefit in the sum of minimum subsistence to cover expenses, including sustenance, lodging, and transportation to the workplace for a maximum period of six months.

There is no data available on the application of the policies for green purposes. Other active measures, including education and training programmes, are, by definition, indifferent to green employment. The social inclusion and social protection systems do not include instruments conducive to going green.

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<sup>11</sup> Another aspect of work organisation affecting the environment is work-related travel. Legislation enacts the obligation of an employer to provide a contribution for transportation to work to employees who use public transport means and whose monthly earnings are below 50 % of the average nominal wage in the economy. Apart from these provisions, employers and employees may agree compensation of travel costs individually and/or in collective agreements. Transport providers offer a variety of discounts that favour regular travellers. A number of large companies organise travel for employees from more distant areas by use of own and/or public transport fleet. High travel costs and the partly undeveloped transport infrastructure result in many companies providing rather accommodation for weekly commuters (typical for construction firms from remote regions, obtaining contracts in the capital city).

ESF supported national projects on identification and forecasting of labour market needs and the National System of Occupations, currently under preparation, should help to establish a comprehensive information system on skill requirements, employers' needs, and a better linkage with education and training systems. Although no specific green employment aspects have been mentioned so far, the system could, with some adjustments, provide also valuable information on green job prospects.

ESF funding is not allocated to support the greening of the economy. The European Regional Development Fund and the Cohesion Fund provide co-financing of green activities (such as support to higher renewable use, support to railway transport) under Operational Programme Environment (ERDF and CF), Operational Programme Transport (ERDF and CF), and Operational Programme Competitiveness and Economic Growth (ERDF) in the programming period 2007-2013.

The tax system includes excise taxes imposed on the use of mineral oil, electricity, coal and natural gas. The adoption of special tax legislation on energy sources was induced by the transposition of Council Directive 2003/96/EC of 27 October 2003, restructuring the Community framework for the taxation of energy products and electricity. Slovakia negotiated a transitional period (2007-2010) for electricity and gas and (2007-2009) for coal/coke, for which 50 % of the minimum tax rate stipulated by the Directive have been agreed. The effect of the regulation is hampered by an array of tax exemptions. Along with reasonable stimuli, such as electricity generated from renewable energy sources, the regulation also frees important polluters from taxes (e.g., producers of electricity and coke, and households are freed from paying the tax on coal). There are no recent policy efforts to shift taxes from taxing labour to taxing energy consumption.

The system of charges imposed for environmental pollution may be regarded as pollution taxes. Polluters are categorised into three groups of operators of small, middle-sized and large sources of pollution. The annual fee ranges from EUR 34 to 33 314, based on the volume of pollution and the structure of pollutants, classified into four tariff groups in relation to the environmental impact.

Environmental protection is pursued by a number of other policies, which seek to motivate businesses and households to adopt environment-friendly attitudes. These include, for example, measures in the tax schemes (e.g., "green" tax deductible items, exemptions on other indirect taxes such as road tax, real estate tax, etc.), state aid policy (subsidies to alternative energy use, energy saving in construction, car scrapping schemes), waste management regulation, awareness raising measures (e.g., eco-labelling, environmental impact assessment, codes of ethics).

Labour market policies are thus far not supportive to green trends. There are some policy options how this can be addressed:

- Incorporation into the ALMP scheme of green components (e.g., green job training, preferable support to the creation of jobs in green sectors, shifting support to commuting to work by public transportation means, etc.);

- Development of a comprehensive skill identification and forecasting system;
- Adjustment of labour market statistics to better capture green employment;
- Greater involvement of social partners in drafting relevant legislation and policies (which calls for a change in the government attitude), in improving the environmental context of social dialogue, and in awareness raising;
- Referring to the tax and subsidy policies, refinement of existing schemes in order to stimulate environment-friendly entrepreneurship and employment, and penalise the opposite (calls for a reduction of tax exemptions for polluters);
- Referring to the business environment policies, further reduction of administrative burdens, improved public procurement, law enforcement;
- Minimising the negative effects of green restructuring on existing employment by a mix of policies (refraining from unreasonable and hasty adopted regulation, improved impact assessment, support to pilot projects, adjusted social and education policies).

#### **4. Conclusions**

The article attempted to outline the green dimension of employment and labour market policies in Slovakia in a time of growing concerns about climate change. The response to the global challenges is sought in measures to improve energy efficiency and reduce emissions. It is acknowledged that these policies will induce structural changes in favour of a more environment-friendly economy and impact also on labour markets.

The potential of green employment in Slovakia in the near future is mainly in the 'greening' of traditional industries and occupations and, to a lesser extent, in newly-emerging green sectors. This is suggested by the existing structure of the economy, by the lack of green knowledge, and not least by fiscal restrictions.<sup>12</sup> Nonetheless, shifts in employment towards greener jobs are likely to take place in several industries and possibly induce some growth of structural unemployment.

The current set of labour market policies is neutral to economy greening and their potential is somewhat limited. Tax and state aid policies are playing a crucial role at present. Labour market policies could improve their role in promoting green employment by adjusting employment services, while the highest impact is to be achieved in conjunction with other economic and social policies.

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<sup>12</sup> The Ministry of Finance pointed out in the review process to the draft measures for the implementation of the energy and climate change package that financing of measures must be kept within the approved limits for particular budgetary chapters. In other words, a "green" reallocation of the budget should not be expected in the near future (at least not in the next three years).

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