European Employment Observatory

EEO Review: The Employment Dimension of Economy Greening

Austria

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1 Introduction

The Kyoto Protocol stipulates the European Community should, over the period 2008-2012, reduce its greenhouse gases (GHG) emissions by 8 % in relation to the levels recorded in 1990. In the climate and energy package adopted in December 2008, the EU agreed to the aim to have reduced its greenhouse gases emissions by 20 % by 2020. Austria must reduce its emissions by 16 % compared with 2005 levels. However, according to most recent projections from the European Commission, Austria is expected to have difficulties in achieving this commitment (European Commission 2009a). Furthermore, the EU climate and energy package stipulates a 20 % reduction of energy consumption by increasing efficiency and increasing the share of renewable energies by 20 %. With regards to the latter point, it is envisaged that Austria will increase the share of renewable energies by 34 %.

To reach these targets, several initiatives to make the economy greener have been launched in the past few years. Nevertheless, to ensure the achievement of the target, further steps are necessary in addition to the measures that have been planned and implemented to date.

In the last government programme (Programme of the Austrian Federal Government 2008 – 2013), the Austrian Federal Government committed itself to a social, environmentally sustainable market economy. It announced the development of a new overall energy and climate strategy for Austria, which is expected to be finalised in 2010, see Internet: (www.energiestrategie.at). Different stakeholders, like federal states and municipalities, social partners and the civil society, are involved in this process, which aims to develop 'a suitable implementation strategy for an enhanced development of renewable energy entities, a stabilisation of the energy consumption and a consistent increase of the energy efficiency aimed at the entire objectives spectrum of the energy policy and national economy' (NRP Implementation Report 2009, 15; Bundesministerium für Wirtschaft, Familie und Jugend 2009).

In general, the Austrian Federal Government, as well as the major political actors and social partners, stress, albeit in different contexts, that the greening of the economy may substantially help to create and secure jobs. As a result, it should be noted from the outset that the greening of the economy is a horizontal issue in Austria and its implementation falls within the responsibility of various ministries and authorities. However, despite the general consensus on the importance of this issue, neither a clear and common definition of green jobs/green economy, nor exact and comprehensive data and information about labour market outcomes are available. This paper therefore reviews the data, information and research results available, although it is not a full analysis, given the context of this short contribution.

2 Labour Market Outcomes

Taking into account the relatively flexible and dynamic concept of green jobs/economy, the precise number of green jobs in the Austrian labour market is not known. Depending on the definition and concept applied, the number of green jobs identified differs significantly. For example, according to the Austrian Economy Report 2009, in 2008, 260 000 people worked in the renewable energy sector, the

energy-efficient construction sector and in public transport. This corresponds to around 7.5 % of the total number of individuals in dependent active employment. Statistic Austria estimated that in 2007, 84 200 people were employed directly in pollution management, which includes goods and services that are clearly supplied for an environmental purpose only and which have a significant impact in reducing pollution emissions (Petrović 2008). Based on surveys of firms, Kletzan-Slamanig & Köppl (2009) concluded that over a period of round 15 years the environmental industry has shown a very dynamic development. Since the beginning of the 1990s the average economic growth in the environmental sector has been 12 %. Moreover, the number of employees in the sector has doubled during this period; in 2007, 22 000 people worked at 375 environmental technology enterprises. A market development study on the technology behind photovoltaics, solar thermal systems and heat pumps in turn shows that in 2008, around 11 000 individuals were employed in these business sectors (Biemayer et al. 2009). In general, when looking to the future a significant growth potential is predicted for green jobs.

Overall, the quantitative dimension addressed above requires a differentiated approach, which should also take into account several further questions:

- **Employment effects**: There is much debate on potential positive employment effects in general, as well as in respect to specific questions. Going green may cause not just direct employment effects, but will also affect workplaces in supplier industries. Furthermore, it is expected that other positive effects could realised. For instance, there is hope that, through the procurement and supply of biomass, new jobs could be created in the primary sector – especially in economically less developed rural areas (IHS Kärnten 2008). A good practical example within this context is the town of Güssing, located in one of the poorest regions in Austria. The aim of its energy concept (decided in 1991) was to meet the energy demand of the city by using local resources. By successfully establishing a new power station (based on a biomass gasification procedure using water vapour) the ambitious aim of developing Güssing as an energy-self-sufficient region could be realised. Since then the region has shown an economic upswing, which was accompanied by the creation of about 1 000 jobs. At the new Centre for Renewable Energy, research projects, financed by international automobile companies, are carried out. These results may have an influence on the development of cars with fewer GHG emissions.

  Nevertheless, restructuring processes promoting a greener economy may also have negative consequences on jobs (e.g. rising costs, discontinuation of the production of non-sustainable products) or may lead to a substitution of existing jobs (e.g. in the transport sector) or a distribution of employment across sectors (e.g. job transfer from private transport to public transport).

  An assessment of net employment effects is not yet possible, due to a lack of comprehensive and reliable research. However, it is worth noting that different research results point to (slightly) positive net employment effects. To give two examples: firstly, a study carried out by Steiniger et al. (2007), which analysed climate-relevant transport policy measures in Austria – amongst

other things – with regard to employment effects until 2010, concluded that overall such measures would result in positive net employment effects. Put simply, creating transport infrastructure (e.g. rail infrastructure) and measures that improve the attractiveness of public transport show positive effects. Only for selected measures like truck-road-pricing or the expansion of urban public transport (bus, trams and underground railways) does the calculation show negative employment impacts. Research carried out on the solar energy sector also concluded that there are slightly positive employment effects. Through investments in solar systems in Austria and exports, as well as by the operation of such systems in 2003, around 3 600 jobs have been created, which corresponds to a net effect of 900 jobs (Weiss, Isaksson &Adensam 2005).

It should be mentioned that climate change will have an impact on all sectors of the economy. In the case of Austria, this is probably best seen in the case of the tourism and leisure industry. Winter tourism will be negatively affected by climate change; whereas summer tourism may benefit. According to climate scenarios charting the period until 2050, the number of summer days could increase by about 40 % (Fleischhacker & Formayer 2006); in contrast, the likelihood of snow in the Austrian ski areas will decrease (OECD 2006). As a result of the changes predicted, it is vital that sustainable environmentally friendly tourism concepts are developed.

- **Are green jobs good jobs?** In the political debate questions of atypical employment, social equity and opportunities, as well as quality of jobs in the green sector also play a role. Employees´ representatives are expressing concerns about the quality of jobs. They argue that positive employment effects will only be achieved if social security minimum standards are guaranteed and atypical employment like temporary work is widely avoided. As yet, research addressing this question is not available. Furthermore, in the context of job quality, research shows different results. For example, an AK Vienna study (2000) concluded that, in general, positive effects of environmental protection can be observed regarding employment quality. On the other hand, Steiniger et al. (2007) expected, in the context of climate-relevant transport policy measures, that many newly created jobs will be of average quality (e.g. working conditions, remuneration).
- **Skills demand, occupational profiles:** Existing jobs may be confronted with new requirements, such as new working methods, new skills, an upgrading of skills needed and may also lead to new occupational profiles (see below for more detail).

Creating a competitive, greener economy will require a package of measures. The different types of measures introduced in Austria to promote green growth are listed below with a general overview supported by selected examples.

- **Financial incentives and support for consumers and companies and R&D**: Public investments and incentive schemes are an important tool to push the economy in a greener direction. There is a wide range of environmental

funding schemes at federal and regional levels for different target groups (companies, administrative bodies, natural persons) – an overview of environmental support schemes can be found through Kommunalkredit Public Consulting, see Internet: www.public-consulting.at). To give an example: The Energy and Climate Protection Fund, see Internet (www.klimafonds.gv.at), founded in 2007, is intended to contribute to a sustainable energy supply, increased energy efficiency and climate protection through different measures. The Fund was allocated EUR 121 million in 2009 to finance research and technology development activities related to: sustainable energy technologies and climate; transport (public transport, multimodal transport system, goods traffic); and market launch and market penetration (e.g. solar thermal energy, model regions for climate & energy). In 2008, 10 000 cases (with funding of EUR 145 million) have been supported within the Fund.

Recently, in the context of the recovery packages, the issue of the green economy has been addressed through a EUR 100 million package for the thermal upgrading of buildings of private households and companies. This measure has led to a high demand; for instance, the planned budget of EUR 50 million for private households was exhausted within 10 weeks.

- **Standards:** Setting standards is another important tool to promote the greening of the economy. For example, in 2008 the central government and the nine federal provinces reached an agreement (15a-Vereinbarungen), which sets minimum standards of energy efficiency and heat insulation as a condition attached to grants for new homes. The agreement also covers standards for public buildings.
- **Awareness-raising:** Several awareness-raising initiatives have been launched for different target groups, see Internet (www.klimaschutzpreis.at; www.umweltnet.at).

Klima:aktiv, see Internet (www.klimaaktiv.at), implemented in 2004, is another government initiative for domestic reduction measures. The programme covers a number of different sectors: construction; energy efficiency; renewable energy sources; and transport and mobility. It uses a variety of the measures mentioned above (e.g. public awareness, consultation, training and investment subsidies).

- **Tax Reform**: An ecological tax reform is a permanent issue on the political agenda. According to the European Commission, environmental taxes in Austria are below the EU-27 average (2007: 2.4 % of GDP, EU-27 2.7 %). EU-wide, Austria is ranked in 16th position. Since 2003, environmental taxes have gradually been increased but have since fallen back to their 2000 level, despite the increase in mineral oil taxes on gasoline and diesel in July 2007 (see European Commission 2009). Austria also has a relatively high proportion of non-wage labour costs. Therefore, a shift towards a higher tax burden on energy consumption could be a step towards promoting job creation. A higher tax on energy will have an important impact on distribution and competitiveness. Exemptions have to be provided for energy-intensive

companies and compensation through a reduction of social security contributions and income taxes.

3 Labour market policy developments

The dynamic potential of green jobs is, according to recent research, linked to a lack of skilled workers, primarily in technical occupations (see, for example, IHS Kärnten 2008; Heckl et al. 2008). Based on this, there is a growing public perception of the demand for new skills, knowledge and competences. Despite this, Austrian Active Labour Market Policy does not as yet explicitly refer to green jobs. Neither the Labour Market Policy objectives provided by the Minister of Labour, nor the objectives of the AMS (Arbeitsmarktservice - Labour Market Office) point to this issue. In addition, in the framework of the coverage of the regional demand for skilled workers, which is a major topic of the AMS plans, jobs in the environmental sector are not an explicit issue.

3.1 Skills and occupational demands

A major challenge is the forecast of skills and occupational demands. In general, only a relatively small amount of data is available on skills and occupational profiles in the green economy. The prediction of the skills demand in green jobs is part of the general skills anticipation system. This system is characterised by a variety of different single instruments and an absence of a coherent and integrated approach, which leads to a lack of concrete and, in terms of policy implementation, transferable results. Nevertheless, two AMS instruments could be highlighted: the skills barometer and a specific survey of employers. The skills barometer provides information on the skills demands of individual occupations at micro level, based on vacancies published in daily and weekly newspapers across Austria and on vacancies reported to the AMS. Expert opinions complement the data analysis. The classification of occupations categorises environment related occupations as a separate category, which includes six occupations: environmental manager; environmental counsellor; ecologist; environmental analyst; environmental technician; and waste and recycling manager. Future mid-term skills demands are specified for all these groups of occupation. In contrast, the survey of employers provides information on short-term skills demands for all occupations, including environmental related professions.

In general, the AMS classification system of occupations is highly differentiated and able to cover nearly all environment related occupations and skills. For example, the classification of occupations – which includes 1 800 occupations – makes a distinction between two main groups of environment related jobs: (1) environment and technology and (2) environmental consulting. Among these main groups, another 13 occupations are grouped. And for each single occupation, a range of specialised occupations are mentioned (e.g. ‘waste consultant’ and ‘refuse dump attendant’ under the single occupation of ‘waste and recycling manager’). In addition, for each occupation the relevant skills profile is described.

Another system of occupation classification from Statistics Austria is more general. The ISCO-08 classification system, which will be in use from 2010 onwards, only includes 436 occupational classes. This system is used for employment related

statistics, such as for the Labour Force Survey. However, this classifications system does not reflect the broad variety of environment related occupations. Therefore, for the skills anticipation system, the comprehensive AMS classification system should be used.

3.2 Active labour market policies

The scope of the labour market measures implemented, such as training or subsidised employment, includes a broad variety of occupations, generally also in the field of green jobs. However, this is done occasionally and not systematically. Within the context of rising awareness of the potential of green jobs, several different initiatives over recent years can be mentioned. For example, the Federal Minister of Labour has announced a third labour market package for 2010, which focuses on qualification measures and setting particular priority on occupations currently dealing with a lack of skilled personnel (namely 'green technologies' and (health) care professions). According to the government programme 2008-2013, climate protection, energy efficiency, renewable energies and innovative construction will be more strongly anchored in the relevant syllabuses and training courses. Furthermore, a pilot project has currently been established, providing vocational training for the newly defined occupation of biomass technology. In addition, the new employment package for long-term unemployed, 'Action 4000', which aims to create jobs in municipalities and with charitable organisations, mentions environmental protection directly as one of the possible employment fields.

In addition to these initiatives, several studies of the skills demands of companies in the field of environmental technology point out that the training system needs to be readjusted. The choice of initial and continuous vocational training courses is confusing and often differences are hardly distinguishable. The training provided should be more integrated and should include technical competences, as well as soft skills, such as strategic competences, cooperativeness, customer orientation and skills necessary in related occupations, such as management and business administration.

In order to prepare the workforce for the transition to a green economy, the apprenticeship system also needs to provide more training offers for highly skilled workers in the environmental sector. In the province of Styria, a special programme for the promotion of green jobs for apprentices is planned. In the future, the creation of apprenticeship places in the energy and environmental technology sector will be subsidised by EUR 200 per month in the second and third apprenticeship years.

3.3 The role of ESF funding

The Austrian Operational Programme for Employment 2007-2013 does not include any reference to the issue of the green economy. Nevertheless, there are some priorities which could allow for a reference to training and employment promotion in the field of green jobs. For example, in the framework of training for employees (priority 1) and training for unemployed people (priority 2) a reference to green jobs may be introduced. Up until now, the scope of vocational training for employees and unemployed individuals is broad and is not focussed on any occupation. Increasingly,

in order to be able to use ESF funding for going green in vocational training, the priority of going green would have to be included into programme objectives.

Apart from ESF, the Austrian Programme for the Rural Development 2007-2013 (ELER) includes measures to promote sustainable agricultural production. The scope of measures includes subsidies for the implementation of ecological farming, as well as training for farmers to use environmental friendly production engineering and thus to support climate protection.

3.4 Intervention level of active labour market policies

Environmental policy is an important part of a growth and employment strategy and it tackles all activities of production and consumption. Thus, environmental policy has to be treated as a cross-sectional issue and not a stand-alone policy. Parallel to the integration of environmental policy into all policy fields, it is necessary to ensure terms of reference, a common approach and clear definitions of green jobs and the green economy. This means, on the one hand, a common set of environmental policy objectives and, on the other hand, a regulatory framework. This has to be elaborated at national policy level and include actors from different levels, e.g. in the framework of 'Energy Strategy Austria', which is currently under preparation. This structural change is a prerequisite for the development of a greener active labour market policy, which should start with the integration of environmental issues into the Labour Market Policy Objectives, issued by the Minister for Labour, and should in consequence be integrated into the objectives set by the AMS head office. Such a clear commitment to environmental strategy on the top level would be a major step towards greening ALMP.

The implementation of ALMP, which promotes and supports the development of green jobs, must include the enterprise-level as well as local and regional levels. A precondition is to find out about the environmental skills demand in various fields, such as environmental technology, energy supply, transport sector etc. On the one hand, the scope of relevant occupations has to be known. On the other hand, the required competences in these occupations must be clear. The implementation of relevant training courses for unemployed individuals or the subsidised job creation in relevant fields cannot be started before the demand is known. In this sense, as already mentioned before, efforts to develop a coherent system of anticipation and matching of skills and labour market needs should be further strengthened.

4 Conclusion

So far, research on green jobs indicates slightly positive net employment effects and a high future potential. Nevertheless, the green job rhetoric has not up to now really been backed up by coherent planning, programmes and active labour market policies, nor by sufficient data. For this, we recommend that the topic should be brought on the agenda in a more structured way, including research and data collection on the labour market impacts of initiatives toward greening the economy and further intensifying the prediction of skills and occupational demands. The current economic crisis should be used to open up new possibilities for green jobs and innovative and sustainable businesses. It is too soon to be able to tell to what extent the new energy strategy that

has been announced will take this into account. In any case, it is obvious that a clear framework and objectives are necessary for going greener.

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