

PROMOTING GREENING AND GREEN JOBS THROUGHOUT THE CRISIS – THE CASE OF ROMANIA

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Abstract

The article focuses on the issues of green jobs and the promotion of green economy in Romania. It takes over several developments throughout the years of crisis pointing both to the progresses made as well as to the hindrances brought about by the economic depression to the efforts of developing a green sector in an emergent economy. A special part is dedicated to actions and initiatives financed via the structural and cohesion instrument as well as to the impact of various initiatives under the EU 2020 Strategy. An analysis is carried out on these initiatives, their number, their character and relative effectiveness. The article also focuses on general aspects relating to greening of the economy and the growing use of renewable resources.

Keywords: *greening of the economy, green jobs, structural and cohesion instruments, renewable*

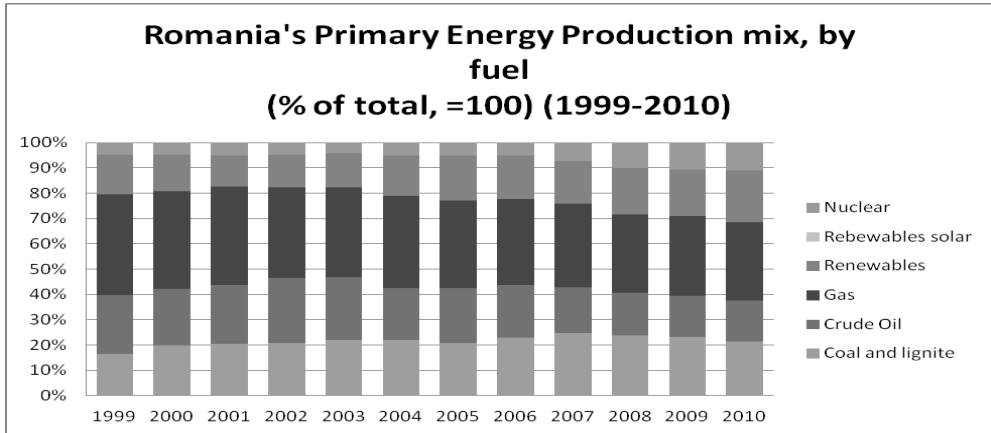
JEL Classification: J₂₁, J₄₀

1. Introduction: employment and the green(ing) of the Romanian economy

Back in 2009 we were arguing that for better or for worse, Romania has been a greener for the last 20 years or so since the fall of communism in 1989, albeit an inadvertent one. An intense process of industrial restructuring that accompanied the Plan to Market total greenhouse gas emissions (CO₂equivalent) have dropped as against their 1990 levels by 52% while for the whole of the EU27, using the same base year of 1990, in accordance with the Kyoto Protocol, emissions have dropped by only 15% being thus at 85% as against their 1990 levels. In terms of its mix of fuels currently used for primary energy production the country again scores relatively favourably when compared with the average for the EU27.

As such, primary energy production generated from renewable sources, which for Romania mainly means hydropower with the two power plants on the river Danube (the Iron-Gates #1&2/RO-Portile de Fier nr.1&2) counting for a large share, amounts to more than 20% of the total, on par with the EU27 average and on the rise as against 1999 levels when it only accounted for 15% of total primary energy production. In terms of gross final consumption of energy coming from renewable sources, Romania is already near its 2020 target, with 23.4% of this measures being accounted for by renewable, against a target set at 24%. However on the less brighter side it has to be noted that solar power in a country that doesn't miss sunshine, still accounts practically for nil in the total mix of fuels used for

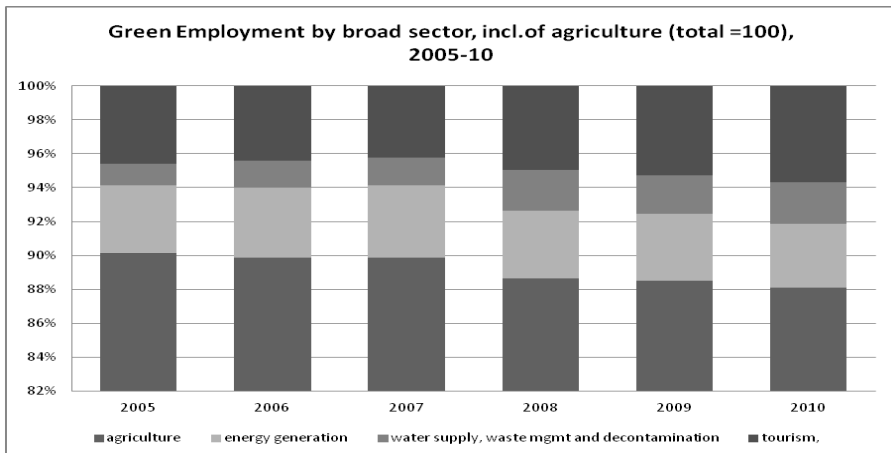
Chart no. 1



Source: EUROSTAT data, processed by the author

primary energy production, while the share of dirtier, though cheaper fuels such as coal and lignite (an even dirtier variety of coal coming from domestic production) has increased from 16% in 1999 to 21.3% in 2010. In what we might call a compensation of sorts, noteworthy nonetheless for Romania's rather poor economic capabilities and taking also into account the massive difficulties its economy had to cope with during the last two decades, the share of nuclear energy has increased in the country's energy production mix from 4.7% in 1999 to 10.8% in 2010 (the two reactors of the Cernavoda plant-app.120 km E of Bucharest).

Chart no. 2



Source: National Institute of Statistics of Romania-NIS, processed by the author

Green sectors broadly might account¹ for around 25% of total employment which would be an astounding figure if taken face-value. Most if it however is represented by agriculture, still undertaken mostly in small farms, with an average surface of less than 5 ha. While taking this as a starting point, when subtracting agriculture (still at around 1/3 of total employment in 2010) and also leaving aside the largest part of energy generation (1.30% of total employment in 2010) one would reach at more plausible share of total employment accounted for by “green sectors/activities” of around 4.7% of total employment or in absolute numbers around 376 thousand workers (2010 data-NIS), nonetheless on the rise from 350000 back in 2005. Sectors that would really account for environmental-related activities (“water supply, waste management and decontamination”) and which only appear as a distinct sector in official statistics starting with 2007 account for a mere 0.82% of total employment (in absolute numbers somewhere around 76 thou. workers) but clearly on the up as against the same base year of 2005, when their share of total employment did not make for more than 0.44% (in absolute values around 40,000 workers) thus marking an increase of 86% as against 2005 as a base year (=100).

This clearly shows that green sectors per se are at an early stage in the Romanian economy. In the meantime it shows that in terms of energy generation while progress is clear, the country still has a lot to do as in terms of energy-intensity of its economy which is still far above the EU27 average being actually one of the most energy intensive economies of the block. In the meantime, and this goes convergent with the country’s new governmental strategy of turning Romania into a regional energy-hub, its energy-dependency is only 21.6%, while for the whole of the EU27 its stands at a double of 52.68%.

2. Green employment promotion strategies and programmes with low-carbon / environmental objectives or activities

Our research for the purposes of this review has grouped strategic initiatives and policies with environmental objectives into four major strands of action:

- Strategies and action programmes aimed at improving the energy efficiency of the economy, reduce primary energy consumption and the level of emissions while in the meantime encourage the use of renewable (**Strand#1**);
- Policies and actions directed at improving the qualifications of personnel working in sectors of activity with significant environmental impact (e.g.: energy generation) a well enhancing the capacity of the public employment services in terms of managing the potential market for green jobs and encourage green jobs generation (**Strand #2**);
- Waste management initiatives (**Strand #3**).

¹ There is no official statistics on the number of individuals employed in green sectors/green jobs in the Romanian economy nor of their share as of total employment. Therefore we will make a conjecture for the purposes of this article and assume certain sectors as falling broadly into this category given their activity specifics.

– Programs directly aiming at encouraging the creation of green jobs in sectors with high potential (e.g.; agriculture) (**Strand#4**).

The first strand counts as the most developed to date as it includes rather large schemes directly connected with objectives such the reducing the primary energy consumption of the economy by 19% as well as ensuring that at least 24% of the final energy consumption comes from renewables. Inside this broad line of action one can count several programs initiated and financed from the so-called Environment Fund which finances initiatives of business and enterprises in terms of greening their energy generations sources (both power and heat). Initiatives like “Casa Verde” or the program for increasing the thermal efficiency of large multi-storeyed apartment buildings together with initiatives directed at better waste management and waste disposal as well as several program directed at improving water supply, sewage and canal have mobilized substantial financing, including from sources of the Sector Operational Program Environment. It is also here that one can record programs and actions directly aimed at modernizing large combustion plants, especially coal-fired ones in the energy generating complexes of Hunedoara and Oltenia. This strand of action has been the most active and apparently the most effective. Our calculations based on figures provided by the NRP Progress Implementation Report of last year shows that through its different actions this strand has made use of resources to the tune of RON 5.9bn. (approximately 1.3 bn. EUR) or in terms of the country’s GDP in 2010 an estimated 0.98%.

The second strand of action which aims more directly at developing skills and building qualifications for personnel (largely employees and managers as it focuses on sectors with a predominance of large companies) in sectors with a significant impact on environment is substantiated by initiatives funded from resources of the European Social Fund via the Sector Operational Program Human Resources Development (SOP HRD). It is very difficult to say how many initiatives of this type one can count as no reliable statistics to date are truly available but one may judge that more than 90% of them are concentrating in the energy sector, also in relation with the application of several European directives in the field as well as, and noteworthy, in direct connection with the introduction of new qualifications connected more directly with the use of renewables and their specifically associated technologies in energy generation. The total amount calculated by us is nonetheless small (at least compared to the previous strand) although we cannot here claim any kind of exhaustiveness as apparently no official document even attempts quantifying them distinctly), with possibly around 40 mln. RON divided amongst them, which would make for a very small percentage of the GDP.

The third strand is intimately related to Law 132/2011 on the selective management of waste. The legal norm is mandatory for public entities, which are now all obliged to provide for facilities whereby all types of waste produced is selectively disposed and collected while making also room for the disposal via recycling of various types of hardware, especially computers and other related office technique. Also here one may mention’s the country’s “Picnic Law”

(no.54/2012) which regulates the way in which citizens are to treat environment while out for leisure, making them liable in case of destruction or degradation.

The last and final strand is represented by programs devoted to the creation of what could be directly labelled as green jobs, with the main sector targeted here being agriculture and especially small semi-subsistence farms. Our calculations have shown that resources allocated here represent, when looking of course only at those programs that do have also a human resources component (green jobs-green skills) around RON mln.2936 (in EUR equiv. approx.: 667mln.). In GDP terms at 2010 prices it will make for around 0.5%.

A grand total would give thus around 1.3-1.4% of the GDP in allocations, most of them coming from European Funds for the four strands of environment-related programs we have identified and which also have a certain relation with the green job-green skills issue.

3. Best practices and examples

Into this section of the article we will develop further, along the lines of the template provided some of the initiatives briefly announced in the section above. We will do this while keeping also in line with the four “main strands” of strategic action at national level we have identified when it comes to greening and environmentally related actions, including here green jobs and green skills/qualifications

Strand #1 – The Green House/Casa Verde Initiative

1. The context for the policy: (a) Rationale: The initiative aims at promoting energy efficiency at the base level of households and business establishment by providing income support for the installation of renewable energy sources (RES) powered heating and power plants; (b) Relevance The measure encourages the use of RES while in the meantime supporting employment in a specific sub-sector of the construction sector and also providing an incentive for training into green qualifications;

2. Its specific aims and objectives; To support households and businesses willing to depart from traditional fuels and install RES powered heating and power systems, thus reducing emissions and increasing energy efficiency;

3. The types of policy measure enacted: A support scheme whereby households and businesses get a subsidy for the installation of RES powered systems;

4. The key characteristics of the policy (regulatory scope, budget, duration etc.): The scheme started in 2009 and it is on-going. In 2011 alone more than 11,000 households and 170 businesses benefited from it;

5. The stakeholders involved in policy formation and/or implementation: The Romanian, Government via the Ministry of Environment and the Environment fund;

6. An assessment of the potential or actual impact: (a) Employment creation (actual, intended): no employment targets have been ever fixed but it is apparent that the scheme is supportive of specific employment and especially self-

employment in construction; (b) Training opportunities generated: it created an incentive for training into green qualifications (see below); (c) Transferability: easily transferable and well received by all actors. It encourages individual and community initiatives and entices entrepreneurship;

Strand#1 – Thermal insulation scheme for large multi-storeyed apartment buildings (blocks of flats)

1. The context for the policy initiative: After 1950 the communist regime built scores of neighbours made out of large, multi-storeyed buildings, commonly as known as *blocks of flats* (RO: blocuri de locuinte). Built poorly and using centralized heating systems, these large complexes of building dotting the urban landscape are difficult to maintain and have become expensive to heat due to their lack of thermal insulation generating large losses of energy; (a) Rationale: to improve energy efficiency of large urban building, with many inhabitants, helping them in reducing the financial burden of energy bills, reducing emissions by reducing consumption of fossil fuel in coal and oil fired heating and power plants and bettering the urban landscape by the renovation of facades following thermal insulation operations; (b) Relevance: the scheme provides both support for families living in these building covering large swathes of the urban landscape by lowering the heating bills while also creating jobs in the construction sector, promoting green, energy saving technologies and finally reducing the consumption of fossil fuel in heating and power plants servicing urban agglomerations. It is thus a multi-purpose vehicle of high relevance;

2. Its specific aims and objectives: (1) to reduce heating bills for large number of households around the country, (2) to increase energy efficiency and reduce losses, (3) to support construction throughout a period of reduced activity due to the crisis and (4) to improve urban landscape as insulation brings also a renovation of facades of what were previously shabby-looking, grey, non-inviting neighbourhoods;

3. The types of policy measure enacted: A government scheme regulated via Government Emergency Ordinance no.18/2009; **Financial Support** is given to local authorities as well as to owner associations deciding to embark on such operations;

4. The key characteristics of the policy (regulatory scope, budget, duration etc.): only covers this particular type of building and thus targets urban areas, scheme is ongoing, more than 37000 apartments have benefited up to now, to the tune 136 mln. RON (EUR mln.31);

5. The stakeholders involved in policy formation and/or implementation: Romanian Government, local authorities, owner associations, construction companies;

6. An assessment of the potential or actual impact: (a) Employment creation (actual, intended): one of the objectives was also that of supporting the construction industry at a time of crisis (i.e.: the relevant piece of legislation issued in 2009 when construction industry at its trough). However it is not precisely known how much it has actually sustained employment in this particular sector as no assessments to date on this matter are available; (b) Training opportunities

generated: probably some have been generated as activity in the construction sector had to be supported by at least some basic training; Again however no particular assessment; (c) Transferability: Scheme has potential of transferability. It came in many variants according to the specificities of local communities. Some have provided it completely free of charge for dwellers of such buildings some have used certain co-financing arrangements with inhabitants paying a share of the cost. Some communities (e.g.: Bucharest, sector 1) are willing to expand it also to individual homes built before such technologies became widely available;

Strand #2 – Training of personnel for Renewable Energy Systems (installation of solar panels, installation of sun-powered heating systems etc), building specialized training capacities in the field of renewable energies and green qualifications, enhance the capacity of the Public Employment Services in servicing a newly emerging job market;

1. The context for the policy initiative including: A the drive for renewable is getting ever more intensive especially with regard to solar and wind energy, but also to biomass as well as, where possible, for the use geothermal energy substituting for fossil fuels. Accordingly a need for qualified personnel appeared on the market. Several specialized training providers (e.g.: FORMENERG, ICEMENERG) as well as universities (e.g.: Politehnica-Bucharest) have started accessing the ESF via the Sector Operational Program Human Resources Development (SOP HRD) to fund initiatives aimed at developing and running specific training programs. Development also included training of trainers, awareness raising and equipping of special laboratories and other specific training facilities; Initiatives of this sort have emerged mostly in the energy sector; (a) Rationale: To train technicians for RES-type technologies and related, responding thus to the needs of an apparently developing market and also cope with the requirements of EU regulation in the specific field of installation of RES powered plants; (b) Relevance: Responding to market demand and creating a new market, developing of green qualifications on a formal basis

2. Its specific aims and objectives: To equip personnel in sectors likely to have a significant impact on the environment (e.g.: chiefly energy production) with skills and eventually “green” qualifications, i.e.; qualifications related to the generation of energy from renewable sources; Building specific training capacities of specialized organizations, creating platforms for the exchange of green jobs and build systems for the identification and registration of green jobs, construct and formalize occupational standards for green qualifications;

3. The key characteristics of the policy (regulatory scope, budget, duration etc.): encouraging investment in human resources related to green sectors as well as in green skills and eventually qualifications; makes use mainly of resources from the ESF via the SOP HRD;

4. Involvement of EU Funding (*examples*): The Green Jobs project of the National Agency of Employment benefits from a total financing of around RON 13 mln, (EUR app.2.9 mln) having a duration of 24 months. It aims at training 83 staff of the public employment services in techniques specific for job market orientation in the field of green jobs, identify specific greening opportunities for the labour

market, identify and manage green jobs and qualification including for the benefit of the unemployed, encourage employers to generate and maintain such workplaces. Partners involved are the NAE jointly with two RO companies (CREARE Resurse Umane and Senior Interactive) and a transnational partner from Spain (see also at www.locuridemuncaverzi.ro);

The SUN initiative of the ICEMENERG aims at training 80 technicians for the installation of solar panels and sun-powered heating plants, equipping laboratories for training and training of trainers. It is run by ICEMENERG for a period of 12 months (start date June 2012) jointly with ECOSISTEMS Italy and the Romanian Chamber of Commerce and Industry. Financing is to the tune of 3 mln. RON (EUR 681 thou.) (see also at www.icemenerg.ro);

5. The stakeholders involved in policy formation and/or implementation: companies, research institutes, universities, training centres, social partners and government agencies (the National Agency for Employment);

6. An assessment of the potential or actual impact: (a) Employment creation (actual, intended): while no assessment at the moment (something is expected to be produced here by the GREEN JOBS project of the NAE however), these initiatives might have a certain impact if not on job creation at least on job churning thus activating the market for green jobs and qualifications; (b) Training opportunities generated: training opportunities have been generated for quite a number of individuals and directly, in terms of obtaining qualifications for occupations directly related with renewable energy sources (our estimates for all programs-not only the two examples above point to around 2,000 trained around the country in various technologies relating to renewable energy mainly); (c) Transferability: easy to transfer and well received by the public. Such initiatives are appropriate for industry as they provide it with qualified labour force.

Strand#3 – Waste Management

1. The context for the policy initiative: (a) Rationale: waste management is crucial for reducing pollution and increasing the cleanliness and health of inhabited areas, especially urban ones. Building a culture of selective waste management as a prerequisite for energy saving and environment cleaning needs also proper regulation. Moreover the state and its bodies have to provide a certain lead for both the public and the corporate community; (b) Relevance: Law no.132/2011 creates the necessary regulatory framework for state agencies and state companies to invest in environment cleaning as well as to recycle in a structured manner, making use of specialized providers. *It thus also creates a market for such services via public procurement, working as such on the principle of the public spending/budgetary multiplier and therefore stimulating the economy in times of crisis;*

1. Its specific aims and objectives: to create regulatory framework with waste collection, disposal and recycling;

2. The types of policy measure enacted: regulation, environment-specific.

3. The key characteristics of the policy (regulatory scope, budget, duration etc.): The measure has both regulatory scope as well as economic/budget stimulus scope. It is permanent being enacted by law (e.g.: Law 132/2011 – selective waste collection, Law 54/2012 – the picnic law);

4. The stakeholders involved in policy formation and/or implementation: state entities (i.e.: ministries agencies and state companies), specialized providers, state agency for the regulation of public purchases, the Court of Accounts (control of the application of the measure);

5. An assessment of the potential or actual impact: (a) Employment creation (actual, intended): no specific target but nevertheless the mandated character of this type of public purchases acts as a lever of maintaining employment in companies specializing in waste management (collection, disposal, recycling); (b) Training opportunities generated: not clear if any; (c) Transferability: Practice highly recommended for transfer. As in many cases the state has to lead by example. One can hardly expect corporations and households to behave responsible and act responsible if the state authority does not or is at best indifferent. It is also a way of returning money collected via taxes to the economy via public purchase.

Strand#4 – The Young Farmer initiative in the frame of the National Programme for Agriculture and Rural Development (PNADR)

1. The context for the policy initiative: (a) Rationale: Rural environment in Romania is increasingly depleted of its human resource. Lack of infrastructure and mostly lack of direct support for the establishment of viable farms make youngsters leave these areas in spite of their significant economic potential. It is a known fact that most of Romania around 2 mil. migrant workers come from the country's villages; (b) Relevance: It puts in place an incentive for youngsters to return towards rural areas and engage in agriculture; Encouraging small farms it also encourages a green-type of behaviour as well as what it can be labelled as a green type of job (at least potentially), i.e.: farmer;

2. Its specific aims and objectives; to encourage youngsters to establish and run small farms, in an efficient and environment friendly way;

3. The types of policy measure enacted: income support/grant type scheme for individuals below the age of 40, owners of a farm and registered as farmers (legal persons);

4. The key characteristics of the policy (regulatory scope, budget, duration etc.): It tackles the area of income support for small farmers using a budget of EUR mil 337 mln.EUR (app. RON bn.1.48) for the period 2007-13; Likely to continue also in the next budgetary cycle starting from 2014;

5. Where EU funding is involved, a basic description of the project (fund, partners, budget etc.): The scheme is financed from the European Agriculture and Rural Development Fund. Maximum payment per unit is of EUR 40,000;

6. The stakeholders involved in policy formation and/or implementation: The Ministry of Agriculture, the Agency for Payments in Agriculture-APIA, the National Program for Agriculture and Rural Development;

7. An assessment of the potential or actual impact: (a) Employment creation (actual, intended): The scheme which has started application kind of belatedly has a clear potential to generate new jobs and stabilize valuable, young workforce in agriculture; (b) Training opportunities generated: Applicants must either prove that they have agricultural skills/qualification or they MUST commit themselves obtaining them in accordance with the specific agricultural activity undertaken!; (c)

Transferability: Its potential or transferability relates to the potential of agriculture itself at the place of transfer. The higher this, the better. Scheme can nevertheless be replicated also in other sectors where one would like to stabilize and encourage employment, especially self-employment amongst youth; however modified variants would have to be adopted given its specificity for the farm sector.

Conclusion

Successful policies and initiatives pursued throughout the years since our last review on the matter in 2009, have based themselves on the following elements:

- A good connection between issues deemed sensitive by a sector-based community (i.e.: energy) and matters related to the greening of industrial processes as training of staff for green/renewable based technologies (e.g.; the energy sector);

- A strong appeal of policies implemented to local communities, which made them easily transferable (e.g.: the thermal insulation of large multi-storeyed apartment buildings) as well as to the general public, both households as well as entrepreneurs (i.e.: a sort of general-interest policies, e.g.: Casa Verde/Green House); Again these make for easy-transferable initiatives;

- Smart and simple legislation than tackled issues of general concern, was relatively easy to apply, enforce and control (e.g.: the law on selective waste management and the picnic law); These are practices that can be easily transferable;

- Finally a strong understanding that harnessing the country's natural resources has to go necessarily hand in hand with a green policy that would ensure the sustainability of such an approach (both energy sector as well as agriculture initiatives); Such an approach favours highly employment as well as human resources development (see the Young Farmer scheme) and thus makes it probe for transfer;

Amongst barriers one should mention:

- A relatively low capacity of accessing EU funds both by companies as well as by public entities, coupled with a relatively, from the point of view of green skills and green jobs,

- Deficient design from this point of view of the country's main sector operational program supporting HR development, the SOP HRD which lacked any specific structure aimed at green skills, green qualifications and/or green jobs; This helps explain why there are is a relative scarcity of initiatives in the area as well as why existing ones lack scale;

- A certain opacity of the corporate community, large multinationals aside, towards issues relating to environment and greenery and

- A relatively low involvement of social partners, safe for the energy sector, a fact not particularly helped by the attitude of successive governments between 2009 and May 2012 which practised a policy of neglect and dismissal towards social dialogue and social partners.

Therefore transferability goes hand in hand with: (1) simplicity in design and ease in enforcement and application of regulatory measures; (2) a strong support

from local and sector communities and involvement of social partners; (3) the ease of access and enticement towards the use of EU funds by earmarking green development, green jobs and green skills as priorities when designing schemes aimed at HR development; (4) Creating a link between economic development based on natural resources and greening also helps especially if such a development is conditioned on an up-keep of environment as well as on generating sustainable employment and making such employment condition at its turn on HR development.

Policies implemented or in course of being implemented by successive governments since 2009 have been rooted essentially into the country's own characteristics and have taken into account its endowment with natural resources which is not negligible by European standards, classifying even as moderate. This gives the country a comparative advantage which policies aiming towards greening can only transform into a competitive one. While there are many factors of success and progresses have been made since our last article on the matter in 2009, with success in most cases coming hand in hand with EU financing, it is clear that much remains to be done and that green business and obvious enough green skills and green jobs are just taking off in Romania.

Nonetheless that fact that a country keen to take up on a pathway that puts its natural and energy reserves to work is also apparently making the right steps, albeit still rather small and shy, into the direction of greening is in itself something of a good practice to be transferred. This in itself shows that an understanding has surfaced that resources, to matter, especially in a place where they are in scarce supply like Europe, have to be necessarily go greening.

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