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FOCUS ON The Effects of Sustainable Energy Investments on Employment and Growth

EDITO



Didier Dousset

Energy investments: A source of job creation and economic development

Innovation in the interest of territories: locally rooted projects focused on energy and the environment are assets for the economic development.

According to a report of 2012 commissioned by the Directorate-General for the Environment ("The number of Jobs dependent on the Environment and Resource Efficiency improvements" by Ecorys), 2.7 million individuals were employed in eco-industries in 2008. The study estimated that by 2012 this number would rise to 3.4 million jobs. The implementation of energy efficiency measures has indeed the potential of creating or maintaining 2 million jobs in the energy transition by 2020, and the development of renewable energy could generate up to 3 million jobs for the same period.

Developing a territorial strategy based on projects with ambitious objectives in terms of air quality, support to innovation, reduction of inequalities and environmental performance, contributes to the development of local jobs in the field of energy technology from research and development to the installation and maintenance, as well as in the development of renewable energy sources or biobased materials for construction.

Many regions in Europe have developed centres of excellence and clusters based on their particular history, geography and culture. Urban metropoles and rural territories can engage in their own adapted strategies: urban renewal, eco-districts, 100% RES communities, development of third places, circular economy, urban greening, water management or the development of smart grids are leads that should be explored and implemented.

For instance, the Region lle-de-France strongly engaged in the energy and environmental transition through a set of measures for the period 2016-2020, including a regional plan for air quality, a Grenelle (an open multi-party debate in France that brings together representatives of national and local government and organisations) on energy precarity and a plan for 100 innovative eco-districts which are to contribute to job creation and economic development.

In Catalonia, the project 22@barcelona in the city of Barcelona, of which the general objective was to re-boost economic and social activity in the district of Poblenou, allowed the transformation of industrial sites in an innovation district, composed with several clusters including one focusing on energy issues.

Another good example is the cluster from Upper Austria which deals with energy efficiency and renewable energies including photovoltaic, wood energy or hemp for insulation. Created in 2000, it gathers nearly 175 enterprises developing their activity in the region and worldwide.

Many more regional and local initiatives in the field of energy and environmental transition in which FEDARENE members bring their expertise and advice remain to be discovered and shared.

> Didier Dousset, President of ARENE Île-de-France, Vice President of FEDARENE

INTERVIEW FRANCESCO PIGLIARU



Francesco Pigliaru Committee of the Regions President of the Autonomous Region of Sardinia

Francesco Pigliaru is an Italian economist, politician, and professor. He was prorector of the University of Cagliari and became President of the Autonomous Region of Sardinia in 2014. He is Chair of the Commission for Environment, Climate Change and Energy (ENVE) of the Committee of the Regions and rapporteur on 'Delivering the climate agreement – a territorial approach to COP22 in Marrakesh'.

To what extent do you think EU policy related to sustainable energy can impact growth?

Committee of the Regions

Renewable energy policy is expected to deliver in three areas: energy security, climate change mitigation, and economic development (job creation). However, studies undertaken by international organisations such as the OECD show that this might not always be the case. By its very nature, renewable energy generation is usually a capital-intensive activity, and energy as a whole represents a small share of employment in regional economies.

The OECD has stressed that in the case of small-scale installations, labour and equipment is often sourced from international suppliers, so the impact at the community level in terms of job creation is rather limited.

That being said, the EU sustainable energy policy should go hand in hand with the cohesion policy and ideally, also have close links with research and innovation policies. It is the responsibility of national and regional management authorities for the implementation of the EU's Structural Funds to negotiate national programmes for investment in a way which would sufficiently consider public policy goals such as employment, in accordance with the specific assets and needs of each region. It is also possible for regional authorities to support the transfer of innovative ideas from research to marketable products.

What do you respond to arguments pointing out the costs of sustainable energy development measures? Sustainable energy means both energy savings/ energy efficiency, and generation of renewable energy. From this perspective, it is clear that reducing energy consumption by households and businesses alleviates pressure on their budgets: it generates cost savings on account of energy which they no longer need to use because they have improved their habits, the insulation of their buildings or the efficiency of their production.

Indeed, the recent Copenhagen Economics Study on Multiple Benefits of Investing in Energy Efficient Renovation of Buildings has found that gross annual investments of €41 to €78 billion per year would bring on-going annual returns of €104 to €175 billion in total, across the EU.

Nevertheless, energy efficiency investment should have

realistic payback periods which should not be measured in decades, even when multiple benefits are expected to accrue for example, from deep renovation of buildings. The projects must be commercially viable, so as at least, to attract private capital in addition to public guarantees and grants. For this purpose, Member States should introduce well-designed risk-sharing programmes to help governments and private building owners to realise cost savings with reasonable costs. Experience of local and regional authorities in several EU Member States have shown that Energy Service Companies are able to provide comprehensive technical and financial solutions, for example, by making use of revolving funds, without the need to recur to public money, except such cases as social housing, where the EU Funds continue to play an important role.

Concerning renewable energy, I think that the case is even more obvious: locally produced renewable energy generates local wealth without the need for draining our resources to pay stratospheric amounts to fossil fuel suppliers from third countries, which moreover do not always share our goals and values.

What employment outputs can we expect from more investments in the sector of sustainable energy?

In terms of employment, the growing sector of sustainable energy needs a range of specific, and sometimes new skills ranging from project finance and management to technical and operational implementation tasks. The necessary capacity, both in local and regional authorities and in the private sector can be developed with the help of EU money, for example using the European regional development fund.

In a seminal study a couple of years ago, the UK's Energy Research Centre has analysed job creation claims made by proponents of renewable energy and energy efficiency, looking at the figures and projected figures for the EU from a number of angles. It came to the conclusion that "in the short run, moving to renewables and ramping up energy conservation would create more jobs than the fossil fuel sector, at a rate of about one job per gigawatt hour of electricity saved or generated by a clean energy source, with the long-term picture murkier because of

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ABOUT FEDARENE

European Federation of Agencies and Regions for Energy and the Environment

FEDARENE is the premier European FEDARENE organises and develops FEDARENE is a non-profit association network of players (agencies, depart- exchanges of experience, partnerships established in 1990 at the initiative of 6 ments ministries and/or administrators, and collaboration between its member European regions. It now has 75 memetc.) charged with the implementation, co-ordination and support of energy and environment policies at regional and local levels.

promotes local and regional dimensions Union to the European institutions and in debates related to energy and the environment at EU level.

regions and agencies. It represents and bers in 20 countries in the European



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FEDARENE Info: Chief Editor: Julije Domac - Editorial Board: Michael Geissler - Secretariat: Dominique Bourges, Elodie Bossio, Filip Dumitriu

factors in the economy and government policy that are hard to predict."

What is needed above all things by the EU, its member states, local and regional decision-makers and citizens, is policy predictability for the investors, clear industrial policy in the years ahead, based on ambitious CO2 emission reduction targets and with stable regulatory conditions. This is one of the key

issues we are dealing with in the Committee of the Regions when we are consulted on the European Commission's proposals in the area of energy policy. I believe that the absence of binding national targets could have a detrimental effect on national policies to support renewable energy in some EU Member States, and the same holds true for the lack of binding national energy efficiency targets.

PODRAVJE: INVESTING IN PUBLIC BUILDINGS

The study on "Multiple benefits of investing in energy efficient renovation of buildings" previously mentioned by Mr. Pigliaru, quantified these benefits in terms of job creation and growth. The results suggested that "by harvesting the investment opportunities provided by energy efficiency renovations in the existing building stock, the EU Member States can stimulate economic activity at an appropriate time, which can give rise to jobs for 760,000 – 1,480,000 people, and bring benefits to GDP of €153 - 291 billion depending on the level of investments". In Slovenia, the financial and economic crisis hit the construction sector particularly hard and according to the European Employment Observatory (Review: Promoting green jobs throughout the crisis, 2013) the employment in construction has declined in recent years. However the potential for restructuring resides in the transition from a conventional construction sector to a green building sector. Some municipalities already engaged in this transition.

The Municipality of Maribor is the second biggest city in Slovenia with around 115.000 inhabitants. It is regional centre and a Covenant of Mayors signatory. The local energy concept for sustainable energy development of the city has been already accepted in 2009. The City is committed to putting a lot of efforts in rational energy use in public buildings to meet the 2020 targets. The action plan for building refurbishments has been prepared.

One of the projects in this field has been implemented in 2013 and 2014, when 9 public buildings – schools and kindergartens – amounting altogether to 25.570 m2, has been retrofitted. Different measures have been implemented: insulation of envelops, insulation of the attic and cellar, new energy efficient windows, renovation of the heating system. Some oil heating systems have also been replaced with renewable energy systems such as wooden biomass and heat pumps.

The investment was EUR 4,5 million. The project was co-financed through the Cohesion fund. The results are outstanding: 1,9 GWh of energy and 490 tonnes of carbon emissions per year were saved, and 35 MWh of renewable energy was used instead of heating oil. The project created directly and indirectly many jobs in the region since many local

and regional companies and craftsmen took part in it. The municipality planned to save as much energy as possible in renewed buildings and a green public procurement also took place. It was therefore the opportunity for workers to improve their knowledge and skills towards zero or plus energy buildings. At the same time working and living conditions inside improved a lot. Through such investment the municipality shows to the community that sustainable energy commitments are seriously taken into account.



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SKÅNE: THE EU FUNDED PROJECT "SOL I SYD"

According to a study from November 2015 commissioned by the European Photovoltaic Industry Association, the level of jobs and the Gross Value Added (GVA) have fallen since 2008. In 2008, the photovoltaic industry supported a total workforce of 178.879 full-time equivalents (FTE) and EUR 10.044 M in GVA. The photovoltaic market grew constantly between 2008 and 2011, when it reached its highest level in both job support and GVA. Since 2012, jobs and GVA in the photovoltaic industry have fallen to 109.650 FTEs and EUR 5.662M in GVA in 2014. In this context, regional initiatives such as "Sol I Syd" in Sweden are crucial in order to consolidate the photovoltaic market.



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The number of installed photovoltaic systems in Sweden is increasing rapidly, but solar power still accounts for a marginal share of total energy production. Interest in the technology and the long-term potential is great. The EU project "Sol I Syd" aims at stimulating the number of solar investments in Skåne and Blekinge, by further efforts towards the business community.

Skåne Energy Agency, has received financial support from the European Regional Development Fund for the project "Sol i Syd" (area 3 – Sustainable growth – low carbon economy) for a three year project period, and with a total budget of EUR 560 000.

The project is a collaborative project with Skåne Energy Agency as a leading partner. Other partners are Energy Agency of Southeast Sweden, The Country Administrative Board of Blekinge, Lund University, The Country Administrative Board of Skåne. The main purpose of the project is to strengthen the PVindustry and the business sector. Project activities are going to stimulate an increase in investments in renewable electricity generation in the form of solar power. A survey of the PVindustry will map the number of companies and other actors active in the PV-industry and the number of employees working full time within the industry today. Annual follow-up in statistics from Solar Region Skåne showing increases in installed capacity, green certificates generated and granted subsidies for PV in Skåne and Blekinge, and an interactive PV map will be created. A dialogue regarding the preparedness among the network companies to handle heavy boost of the market for PV installations. Among the project activities to be performed includes a number of training and workshops for the PV-companies, architects, energy companies, fireand rescue services and SME interested in investing in PV-systems. Activities will strengthen knowledge, increase business opportunities with new concepts and design. Regional environmental targets for solar power will be introduced if found possible. An analysis of the solar power industry showing the number of employees in Skåne and Blekinge will be performed. A similar network for solar power as in Skåne (Solar Region Skåne) will be set up in Blekinge. Exchange of information between the project Sol i Syd and the project IEA SHC Task 41 "Solar Energy and Architecture", and also the project IEA SHC Task 51 "Solar Energy in Urban Planning".

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STREETLIGHT-EPC

In the framework of the Streetlight-EPC project, an Energy Performance Contracting (EPC) facilitation service is available in all 9 partner regions. This services offer support to municipalities and (potential) ESCOs in preparing and implementing streetlight refurbishment projects with EPC. Quick checks, guides and FAQs on streetlight EPC are available in the respective languages and information events are held.

The practical support to the establishment of EPC markets in the partner regions is one of the key activities of the project partners. Since the start of 2015, the facilitation services have been delivering information and specific support in the 9 partner regions and several projects have already been implemented (non-comprehensive list):

Antiesenhofen, Upper Austria

- Retrofitting of the street lighting (main road, residential area)
- Number of lighting points: 54 (before), 58 (after renovation)
- Electricity consumption reduction from 20,700 to 10,100 kWh/y
- 15,900 Euro investment is financed by the electricity savings

Kilkenny City, Ireland – LED street lighting in Ireland

- Retrofitting of 5 streets and housing estates in Kilkenny City
- Number of lamps: 59
- Electricity consumption reduction from 27,743 to 12,132 kWh/y
- Investment costs: 50,000 €

More: www.streetlight-epc.eu



ENERGY EFFICIENCY WATCH

The core objective of Energy Effichency Watch (EEW) is to establish a constant feedback loop on the implementation of European and national energy efficiency policies and thus enable mutual learning on effective policy making across the EU. EEW screens progress of national policies, looks into legislative documents, seeks experts' knowledge via an EU-wide survey and creates new consultation platforms with a wide spectrum of stakeholders (EU and national parliamentarians, regions, cities, business and expert stakeholders). Publications with new findings are available on the website:

 EEW conducted an EU-wide survey on the implementation and progress of national energy efficiency policies. More than 1000 experts from all 28 Member States took part in this survey. The report indicates the progress in the EU Member States for the last three years.

 28 country reports outline specific national energy efficiency policies and their implementation in every EU Member State. The country reports are based on the screening of National Energy Efficiency Action Plans (NEEAPs) and survey results.

More publications: www.energy-efficiency-watch.org



DATA4ACTION REGIONAL ENERGY & GHG EMISSIONS OBSERVATORIES

Regional Energy and GHG Emissions Observatories are a powerful tool for implementing efficient strategies at the local level. Most of the structures are governed by a local consortium gathering at least several public authorities and energy data suppliers. They are very often supported by public authorities and integrated within existing regional organizations such as energy agencies or public department. The added value of this kind of structure is its high level of technical skills in data gathering and analysis, and in energy planning.

In the framework of Data4Action, 7 new Observatories were created:

- Alba Local Energy Agency Energy Observatory Romania
- Energy Observatory Torino, Italy

- Regional Observatory for Energy, Environment and Climate - Plovdiv, Bulgaria
- Regional Energy Observatory Carlow Kilkenny, Ireland
- Energy Monitoring Centre Zlin Region, Czech Republic
- Technical Chamber of Greece's Energy Observatory
- Energy and Environmental Observatory of Kent United Kingdom

More Observatories: www.data4action.eu

