

European Structural and Investment Funds 2014-2020:**Supporting the shift towards a low-carbon economy**

European Commission Non-paper

I. EUROPE'S CLIMATE AND ENERGY POLICIES: AN AMBITIOUS FRAMEWORK

Addressing climate change is a strategic priority for the EU and a comprehensive legal framework is in place to underpin the far-reaching **EU climate and energy targets for 2020 and 2030**. This paves the way for meeting EU's long-term 2050 greenhouse gas reductions target. On this basis, Europe's strategic vision for secure, affordable and climate-friendly energy for households and businesses has been reconfirmed in the **Energy Union Strategy**¹.

The legal framework is matched with investment support to expedite Europe's transition to a low-carbon economy. Over 2014-2020, the **European Structural and Investment Funds (ESIF)**² provide substantial funding – €45 billion³ – for **supporting the shift towards a low-carbon economy** (Thematic Objective 4, "TO4"), and mainstreaming of climate change aspects is becoming a key instrument in driving investment.

ESIF are not only about funding opportunities. They are a **policy framework for integrated territorial development**, and as such particularly well suited to address climate change, low-carbon and energy issues, working in partnership with actors on the ground in a holistic approach, while in addition offering capacity-building, technical assistance, cross-border cooperation, and support for rural and coastal communities.

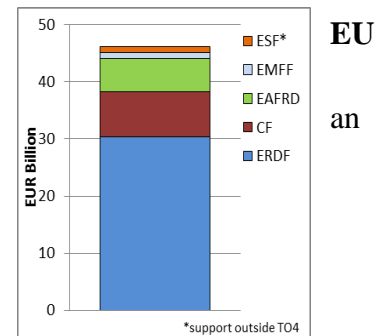
¹ COM(2015) 80 final, 25.2.2015.

² European Regional Development Fund (ERDF); European Social Fund (ESF); Cohesion Fund (CF); European Agricultural Fund for Rural Development (EAFRD); European Maritime and Fisheries Fund (EMFF). Cohesion policy includes ERDF, ESF and CF.

³ All data are based on adopted or draft operational programmes as of October 2015.

2. €45 BILLION OF EU FUNDING TO DRIVE THE LOW-CARBON TRANSITION

With this €45 billion, ESIF represent the **largest allocation⁴ of the budget for 2014-2020 to support low-carbon investments**. This is complemented by significant public and private co-financing, to reach estimated total of at least €60 billion. Consequently, ESIF play a central role in delivering the Energy Union. By helping Member States **achieve EU climate and energy targets**, ESIF investments **tackle energy poverty and enhance energy security**, while also **benefitting regional development, competitiveness, growth and jobs**.



Indeed, there has been **considerable job creation** in the environmental goods and services sector – often labelled as "**green jobs**" – even during the economic crisis. Employment in the EU in this sector increased from 3 to 4.2 million between 2002 and 2011, including by 20% during the recession years⁵. The potential of employment creation linked to renewable energy production and energy efficiency is significant and **resilient to changes in the business cycle**.

While ESIF within TO4⁶ primarily focus on durable investments in sustainable energy and multi-modal urban transport by the ERDF, CF, EAFRD and EMFF, complementary ESF investments are essential for the labour market to adapt to the transition to a low-carbon economy, ensuring a workforce with the necessary skills. This represents a further allocation of at least €1 billion for supporting the shift towards a low-carbon and resource-efficient economy.

In addition to allocations dedicated to TO4, ESIF also contribute – directly and indirectly – to the low-carbon transition and sustainable growth of EU economies through investments under other thematic objectives. In particular these include an important contribution to **climate change adaptation and risk prevention** (€29 billion overall for the whole TO5), but also investments in a wide range of other areas such as **research and innovation** (€44 billion overall for TO1), **information and communication technologies** (€14 billion overall for TO2), **competitiveness of small and medium-sized enterprises** (€63 billion overall for TO3), **environmental protection and resource efficiency** (€60 billion overall for TO6), and **sustainable transport and smart energy infrastructure** (€59 billion overall for TO7, of which around €24 billion for low-carbon transport such as rail and multimodal transport).

⁴ Compared to other instruments, such as Horizon 2020.

⁵ Eurostat data on the environmental goods and services sector, see COM(2014) 446 final, 2.7.2014.

⁶ See Annex for a complete list of investment / Union priorities directly related to TO4.

3. CLIMATE CHANGE MAINSTREAMING – ESIF SUCCESS STORY

The ambitious political objective that climate change-related action will represent at least 20% of EU budget spending in the 2014-2020 period has been strongly supported by the ESIF.

Preliminary data indicate that the overall share of climate-related expenditure in the ESIF budget for 2014-2020 will be about 25%.

This will result in **more than €110 billion⁷ spent from ESIF on climate-related actions in the EU – both for mitigation and adaptation – across all thematic objectives.** These actions target both climate and energy objectives, directly (for example development of renewable energy sources, energy efficiency, sustainable urban mobility and climate change adaptation) and indirectly (for example reducing emissions from waste and landfills, promoting ecosystem services, sustainable agriculture and forestry, climate-related innovation, business development and green jobs). They work in complementarity with the EU Emissions Trading System (ETS) by targeting the ERDF and CF support to activities that are outside of ETS scope⁸.

Furthermore, the new regulatory framework introduces a **legal requirement for the horizontal integration of the sustainable development principle in all ESIF investments.**

This includes the promotion of climate change mitigation and adaptation. It is the responsibility of both Member States and the Commission to ensure that these considerations are incorporated in programme implementation, for instance during the appraisal of project applications.

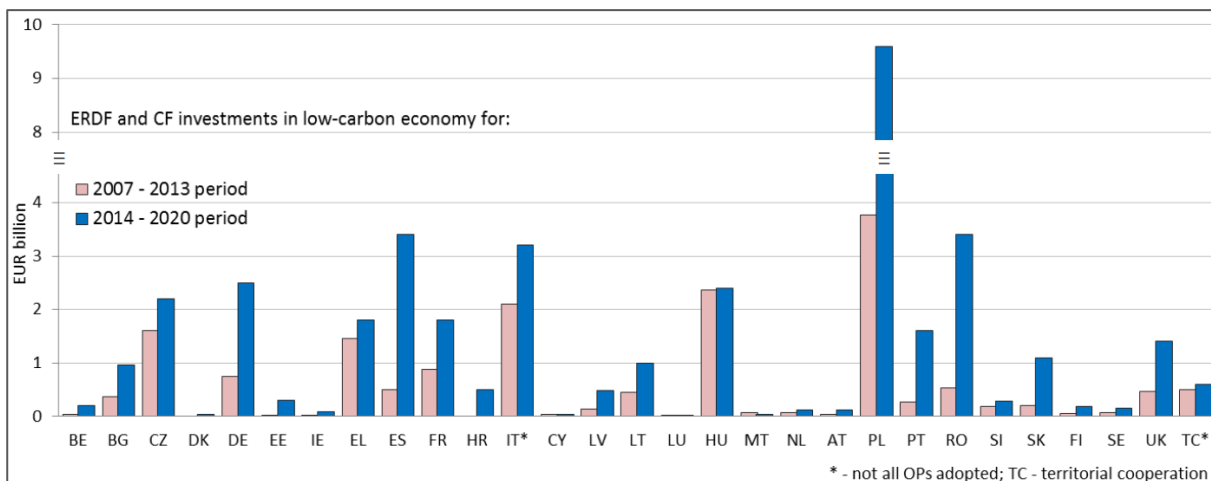
⁷ Preliminary data, based on the climate change tracking methodology presented in Commission Implementing Regulation 215/2014, OJ L 69, 8.3.2014 p. 65-84.

⁸ Both the ERDF and the CF regulations exclude support to “*investment to achieve the reduction of greenhouse gas emissions from activities listed in Annex I to Directive 2003/87/EC*”, i.e. the Emissions Trading System (ETS) Directive. The rationale for this exclusion is that ERDF/CF investments would just foster a reduction in the price of emission permits, without achieving additional decreases in the volume of emissions (as the number of permits remains fix, so does the volume of greenhouse gas emissions).

4. GOING BEYOND THE THEMATIC CONCENTRATION REQUIREMENTS

For the first time, the 2014-2020 ERDF Regulation requires a **mandatory minimum spending for the low-carbon economy**⁹. This area was specifically selected for two reasons. First, to ensure a better alignment with the EU's policy objectives and to contribute to the overall climate mainstreaming target for the EU budget. Second, the related investments provide important benefits for regional development, competitiveness, growth and jobs, as well as alleviation of energy poverty.

In fact, **Member States committed far beyond the legal minimum**, confirming the importance they attach to investments in this area. Almost 50% more than required has been allocated to these objectives from the ERDF and the CF¹⁰. As shown in the graph below, this represents a more than doubling of funding in the low-carbon economy compared to an estimate of similar allocations in the 2007-2013 period.



This is complemented by a specific focus chosen by cities for the shift towards a low-carbon economy: 40% – or about €6 billion – of the funds earmarked for integrated actions for sustainable urban development under the ERDF will be spent on TO4. This is of key importance, as 80% of the energy consumption in Europe is linked to urban activity¹¹ and urban areas account for some 23% of all CO₂ emissions from transport¹².

⁹ For low-carbon economy investments, a minimum of 20% of ERDF resources in more developed regions, 15% in transition regions and 12% in less developed regions (increased to 15% if CF resources are also allocated to investments in this area) needs to be allocated.

¹⁰ €40 billion of ERDF and CF, out of the total €45 billion mentioned in section 2 (which, in addition to the ERDF and CF allocations, also includes the EAFRD and EMFF allocations).

¹¹ Covenant of Mayors data.

¹² COM(2013) 93 final, 17.12.2013.

5. STRATEGIC PLANNING, DETERMINED IMPLEMENTATION AND SUPPORT – ESSENTIAL FOR SUCCESS IN DELIVERING ON THE POLICY OBJECTIVES

The development and implementation of **high quality low-carbon projects is crucial to the success** in delivering on the policy objectives. Following the adoption of the Partnership Agreements and the programmes, all efforts must now be focused on their implementation.

To this end, the **continued involvement from local, regional and national energy authorities and stakeholders** is essential. The **partnership principle** – one of the key principles for managing the ESIF – facilitates this, identifying the key needs, the priority projects and the means to make them successful. Partners – regional and local authorities, economic and social partners and a multitude of organisations representing civil society – should be actively and closely involved throughout the whole programme cycle, including preparation, implementation, monitoring and evaluation.

Moreover, ESIF provide a **strategic, integrated and comprehensive framework for these investments**, as well as a **link to policy-makers in regions and cities, rural and coastal areas**. This stretches beyond the national level – extending also to **macro-regional, cross-border and interregional levels**. This brings more consistency between planning on various related topics at different levels, ensuring more targeted and consistent action. Reaching out to a wide range of businesses, organisations, energy consumers and producers across the EU, the cohesion, rural development and fisheries policies help steer change, raise awareness and build capacity which is related to planning and implementation of ESIF investments, but also spills over to other areas. It bridges the gap between the ambitious framework set by the EU leaders and the changes needed on the ground to accomplish effectively the shift towards a low-carbon economy and the realisation of an Energy Union.

High quality implementation is further helped by the fact that the reformed policy framework requires a better alignment with **national strategies**. For example, the investments need to be planned according to the national action plans on energy efficiency and renewable energy. This sort of strategic planning results in differing investment allocations among Member States, making sure that it accurately reflects national and regional needs and priorities.

The pre-conditions for the funding, the so called '**ex ante conditionalities**', ensure efficiency and effectiveness of the investments, contributing to provide the best possible framework for the preparation of high quality projects. They have also shown to be drivers for faster transposition of the *EU acquis*, for example for the relevant parts of the Energy Performance of Buildings Directive in several Member States. Nevertheless, around one third of the Member States have not yet fulfilled the ex ante conditionality related to energy investments in buildings, and action plans have been agreed with the Commission to ensure fulfilment by the end of 2016 at the latest. If still not fulfilled by that date, the Commission can suspend the related interim payments. The other ex ante conditionalities under TO4, on high-efficiency cogeneration and renewable energy, were fulfilled already at the programme adoption stage in almost all Member States planning such investments with ESIF support.

The Commission is also undertaking a number of initiatives to help Member States implement low-carbon investments, including:

- The **Energy and Managing Authorities (EMA) network**, launched by DGs Regional and Urban Policy and Energy to bring together national energy and cohesion policy managing authorities and provide implementation support by acting as an informal platform for exchange of information, sharing of good practices, experiences and latest developments, to ensure the best possible use of the significant funding.
- The **Smart Specialisation Platform on Energy**, established by DG Regional and Urban Policy, DG Energy and the Commission's Joint Research Centre to support regional energy innovation and broad adoption of cohesion policy energy projects, including both policy advice and analysis as well as matchmaking and dissemination.
- The **EU Urban Agenda**¹³ focuses on concrete challenges in cities, including topics such as energy transition, and defining concrete actions on which the Commission, Member States and cities will work together, in synergy with the **European Innovation Partnership on Smart Cities and Communities**.
- The **European Network for Rural Development** and the **European Innovation Partnership** – both play an important role in shaping the implementation of rural development programmes and sharing good practices on climate-related topics.
- The **European Investment Advisory Hub**, a partnership between the Commission and the EIB, provides a single-entry point to a number of advisory and technical assistance programmes and initiatives; project promoters, public authorities and private companies can receive support on technical and financial questions.

¹³ The EU Urban Agenda is currently being developed by the Commission, Member States and cities. Concrete work on the priority themes is envisaged to start in the first semester 2016 under the Dutch EU Presidency.

urthermore, the **European Territorial Cooperation** and regional cooperation in wider geographic areas under the **EU macro-regional strategies**¹⁴ can also play an important role in promoting and supporting low-carbon issues, not the least with a strong contribution in terms of networking, and development of joint initiatives. Cross-border programmes incentivise better cooperation among actors in different Member States and establish partnerships for low-carbon investment, e.g. cross-border research clusters. Macro-regional strategies provide 'tailor-made' responses to specific challenges in wider geographic areas, beyond national borders, and can in this way place investments in a wider framework and contribute to overall efficiency gains.

6. ATTRACTING PRIVATE INVESTMENT THROUGH EU FUNDING

Alone, EU funding and national public co-financing cannot close the much higher investment gap for moving to a low-carbon economy. Only through cooperation with the private sector can the volume and range of financing products needed to reach the 2020 and 2030 climate and energy targets be achieved. Public funding needs to complement and encourage private investment – leverage it and not crowd it out.

EU funds should be used to attract the much needed private investments and to help establish viable markets. A new investment culture, different from traditional schemes, is needed in order to achieve the low-carbon economy transition and more ambitious targets for a low-carbon economy. The **use of financial instruments** (FIs) is strongly encouraged for investments generating revenue (e.g. renewables) or reducing energy bills (energy efficiency).

In this respect, the **Investment Plan for Europe envisages that 20% of ESIF support in low-carbon projects will be delivered through FIs**. Member States have in particular expressed their political commitment to allow FIs to play a more important role over the 2014-2020 period.

According to current estimates, **about €4.6 billion of ERDF and CF resources are going to be allocated to FIs in the 2014-2020 period** mainly addressing energy efficiency and renewable energy, but also investment in other low-carbon related sectors. This is about 12% of the total ERDF/CF allocations to TO4. Although this is a significant increase compared to the previous period – where around €400 million of ERDF resources were allocated to FIs for energy efficiency and renewable energy – more efforts are needed.

According to the current estimates for the **EAFRD**, in total €430 million are planned to be channelled via FIs, supporting also low-carbon investments in agriculture, forestry and the rural economy. This is more than in 2007-2013 and volumes are expected to increase with Member States focusing their efforts on undertaking relevant ex ante assessments.

¹⁴ Baltic Sea, Danube, Adriatic-Ionian and Alpine.

The preliminary information as regards the **EMFF** also shows some progress in the envisaged use of FIs compared to the previous period as more Member States have declared their intention to use them. However, EMFF resources allocated to FIs in the 2014-2020 period so far are below expectations.

This shows that there is **scope for further use of FIs for all four funds and further commitment on their use is needed.**

By providing support through FIs, e.g. loans, guarantees and equity, EU funding **leverages additional public and private financing.** A further advantage of FIs, particularly loans and equity, is that their revolving nature provides support well beyond the end of the programming period. Grants can still be used as a complement, for example to support 'deep' building renovations that exceed minimum energy performance requirements, development of innovative technologies or addressing social issues.

It is particularly important to start off with well-designed schemes as experience shows that it can be challenging to move later on from grant-based schemes to financial instruments¹⁵. For countries with pre-existing grant schemes, these challenges can be overcome via information and awareness raising campaigns and a careful consideration of the incentives created by the instruments.

To encourage further increased use of financial instruments, the Commission provides Member States with:

- support via the *fi-compass* platform for advisory services, together with the EIB, on the implementation of FI; it also provides targeted fund-specific and country-specific advice and campaigns, including seminar series in the Member States;
- **off-the-shelf instruments**, readily available templates that may be deployed in order to facilitate the use of FIs by the managing authorities; this includes the 'Renovation loan' for loans for energy efficiency and renewable energies in the residential building sector.

ESIF can complement the **European Fund for Strategic Investment (EFSI)** in delivering Investment Plan objectives. ESIF and EFSI can be combined through a financial instrument or Investment Platform set up at national, regional or supra-regional level. In order to ensure a higher value-added, they could also be combined at the project level.¹⁶

¹⁵ Based on the conclusions of the *'Ex-post evaluation of ERDF and CF energy efficiency investments in public and residential buildings in 2007-2013'*, forthcoming.

¹⁶ See also the non-paper for the Informal Energy Council of 23 September 2015 on *'European Fund for Strategic Investments – Opportunity to boost Energy Efficiency in Europe'*.

7. WHAT MEASURES WILL BE SUPPORTED AND WHAT WILL BE ACHIEVED?

ESIF provide a **strategic and comprehensive framework** – in partnership with the key local and regional stakeholders – for investments regarding overall **integrated territorial development**. In addition to allocations dedicated to TO4 as such, ESIF also contribute to the low-carbon transition through other thematic objectives. This makes ESIF well suited for investments in a complex area such as climate change and low-carbon which require support across many sectors ensuring a systemic transition of the whole economy.

The information below includes all allocations to the main areas targeted by TO4, even when, in some cases, these are partly foreseen under other thematic objectives¹⁷. The indicator target values represent the current aims. In certain cases, the level of ambition might be increased, in particular with the increased use of financial instruments, but also with the advancement of implementation.

Energy efficiency: Attracts the highest attention

Treating energy efficiency as a source in its own right, representing the value of energy saved, is a fundamental principle of the Energy Union. We should think how to use energy wisely first – not least due to climate change issues – before considering new production capacity. The ESIF programmes are well aligned with this principle, contributing by:

- €13.3 billion from ERDF and CF for **energy efficiency in public and residential buildings**¹⁸, leading to almost 1 million households with renovated dwellings and reduced energy bills for public buildings;
- €3.4 billion from ERDF and CF to support **energy efficiency in enterprises, with a focus on SMEs**, leading to over 50 000 enterprises with improved energy performance;
- €870 million and €113 million respectively from EAFRD and EMFF for **energy efficiency measures in rural development and in fisheries**, both on-board investments and aquaculture, leading to over 20 000 farm holdings with improved energy efficiency, and a significant number of more energy efficient fishing vessels;
- €1.7 of ERDF and CF support for **high-efficiency cogeneration**.

¹⁷ For this reason, the detailed information on activities planned for financing by the ERDF and CF in the text below, up to and including in the Box on p. 9, corresponds to an amount to €43 billion, and there is no complete match with the ERDF and CF allocation of €40 billion to TO4 as such.

¹⁸ Buildings are responsible for 40% of energy consumption and 36% of CO₂ emissions in the EU.

This will help achieving the EU's energy efficiency targets¹⁹ and lead to lower energy bills, better living and working conditions, local jobs and more competitive businesses. ***Decarbonisation of transport: investing in sustainable multimodal urban transport***

With **transport** responsible for approximately 25% of the EU's greenhouse gas emissions²⁰, significant public and EU support is still needed for **achieving a modal shift and to decarbonising the sector**, in particular:

- €15.9 billion from ERDF and CF will be provided, focusing on **public transport infrastructure, multimodal travel facilitation, intelligent transport systems, cleaner vehicles and alternative fuels as well as cycle tracks and footpaths**, and will among other things result in over 740 km of new or improved tram and metro lines.

It is important that such transport investments, whenever undertaken within TO4, fully focus on supporting the shift towards a low-carbon economy, taking climate change issues into account, and that they are part of integrated low-carbon strategies.

Renewable energy and smart distribution grids: Aid for transforming energy systems

Important funding has also been allocated to investments in **renewable energy and smart distribution grids**²¹, i.e. smart grids at local level allowing better interconnected and modern, better manageable grids:

- €5.8 billion from ERDF, CF and EAFRD²², and €1.0 billion from ERDF and CF, respectively. This, for ERDF and CF alone, will contribute to around 7 500 MW of additional capacity of renewable energy production, which is almost equal to the total existing installed electricity capacity of Croatia and Slovenia²³, and some 4 million additional users connected to smart grids.

More generally, this will contribute to the Energy Union goal for the EU to become the world leader in renewable energy, thereby also assisting in climate change mitigation.

¹⁹ The EU has set itself an indicative 20% energy savings target by 2020 when compared to the projected use of energy in 2020. In October 2014, the European Council agreed on a new indicative energy efficiency target of at least 27% by 2030.

²⁰ <http://ec.europa.eu/transport/facts-fundings/statistics/doc/2014/pocketbook2014.pdf>, p. 125.

²¹ Electricity distribution is the 'final mile' in the delivery of electricity, the link between the transmission system and electricity customers.

²² €9 billion of ERDF and CF and €1.0 billion of EAFRD, totalling €5.8 billion due to rounding effects.

²³ Energy/climate data for 2012. EU energy in figures, Statistical pocket book 2014, DG ENER.

Research and innovation: Central for the low-carbon transition

Putting the EU at the forefront of low-carbon research and innovation is essential to the objective of turning the Energy Union into a motor for growth, jobs and competitiveness. Particularly:

- €2.6 billion from ERDF is currently allocated to **research and innovation and adoption of low-carbon technologies**, with **possible increases in the future**.
- €370 million from ERDF is allocated to **Urban Innovative Actions**, to test innovative solutions for urban challenges, such as the energy transition.

Well over 100 regions or Member States have identified such priorities in their **smart specialisation strategies**, which will form the strategic basis for their overall use of ERDF for research and innovation investments. This means that allocations to low-carbon research and innovation might increase further in line with the evolving content of these strategies. To achieve the best possible investments in this area, ensuring complementarities and synergies with Horizon 2020 is crucial.

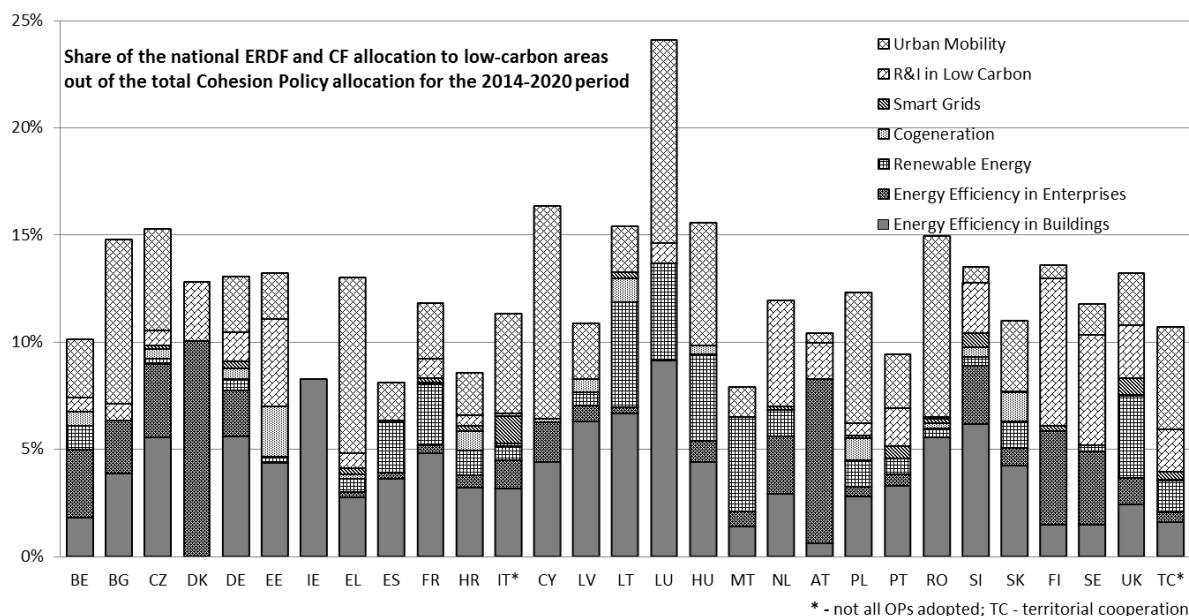
Greenhouse gases and ammonia reductions in rural areas: Important funding opportunities

The transition towards a low-carbon economy requires investments also for reduction of the greenhouse gases from agricultural and forestry activities. To this end:

- €2.5 billion will be invested from EAFRD for **carbon sequestration and conservation**, which involves 3.6 million hectares in agricultural and forestry areas.
- €1.5 billion from EAFRD are reserved for operations aiming at greenhouse gas **and ammonia emissions reduction**.

BOX: Funding suited to the local needs

Each region has different needs and challenges and ESIF allow that these are addressed. The figure below illustrates how different low-carbon measures are prioritized within the ERDF and CF allocations by the Member States. It also shows that low-carbon receives a significant part of the cohesion policy funding – ranging from about 8% to 24%.



It is not yet possible to provide a breakdown for the EAFRD or the EMFF, pending adoption of remaining operational programmes and data availability.

Training and capacity: Also targeted to provide a comprehensive support

Although the ESF will not invest in TO4 as such, it is estimated that its investments in employment, social inclusion, education and institutional capacity will contribute at least €1.1 billion to the challenges related to the shift to a low-carbon, resource-efficient economy. This is for **improving education and training systems necessary for the adaptation of skills and qualifications** and for the creation of **new jobs in sectors related to energy and the environment**. This is crucial as more than 3 million workers in Europe will require training on energy efficiency or renewable energy sources by 2020²⁴. The ESF can support trainings schemes on qualifications related to the low-carbon economy in several sectors, e.g. construction industry).

²⁴ Estimate of Build Up Skills, http://ec.europa.eu/energy/intelligent/files/build_up_skills_publication.pdf.

Large smart energy infrastructure and decarbonised transport: Complementary funding available

To complement the picture, further significant ERDF and CF investments with the main objective of promoting sustainable transport and removing bottlenecks in key network infrastructures – rather than low-carbon as such – will also **strongly contribute to the Energy Union and to reduced greenhouse gas emissions**, and as a consequence to addressing climate change issues more effectively. In this context, better energy connections in Europe are supported. Six Member States (BG, CZ, EL, LT, PL, RO) plan to use about €2.0 billion from the ERDF for **smart energy transmission and storage infrastructure**, in complementarity with the Connecting Europe Facility. This covers usually large infrastructure investments related to both electricity and gas, which need to contribute to the development of smart systems and be complementary to investments for supporting the shift towards a low-carbon economy. A further estimated €23.7 billion of ERDF and CF will be invested in supporting the move towards an **energy-efficient, decarbonised transport sector**, including rail, seaports, inland waterways and multimodal transport.

8. CONCLUSIONS

The **political commitment to accomplish the shift to a low-carbon economy – and to contribute substantially on climate change issues – is clear and the ESIF are becoming a key instrument** to support Europe in reducing its greenhouse gas emissions.

Now a **strong commitment for implementation** is required – delivering high-quality low-carbon projects quickly on-the-ground is key for success. This needs to be underpinned with **good governance** ensuring **effective coordination** between the EU, national, regional and local levels, **low administrative burden** and **strong engagement of all actors** based on partnership and cooperation. This commitment also needs to address the missing policy framework elements, including the timely completion of the action plans related to the unfulfilled ex-ante conditionalities. All available support – from technical assistance allocations but also from the specifically established tools by the Commission – should be used as needed to help the implementation.

In view of the much higher needs for achieving the low-carbon economy transition and to reach the ambitious climate and energy targets, it is **a must to achieve a much higher leverage of public funds through wider use of financial instruments**. This is an effort that needs a **clear political commitment and ownership by the Member States and the Commission**.