



Brussels, 30.11.2016
COM(2016) 860 final

ANNEX 1

ANNEX

Accelerating clean energy in buildings

to the

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE, THE COMMITTEE OF THE REGIONS AND THE EUROPEAN
INVESTMENT BANK**

Clean Energy For All Europeans

The initiative launched today by the Commission treats buildings as an essential part of Europe's clean energy transition.

Focusing on the places where we live and work, the goal is develop a comprehensive, integrated approach that puts energy efficiency first, contributes to the EU's global leadership in renewables and delivers a fair deal to consumers in a way that helps Member States to deliver their energy and climate targets for 2020 and 2030.

The benefits of such an integrated approach are clear:

- mobilizing investments, at national, regional and local level, and driving growth and jobs, while promoting innovation and skills;
- energy savings, leading to lower running costs, a healthier living and working environment for citizens;
- alleviating energy poverty, with a special focus on tackling energy-inefficient social housing and public buildings;
- gradual decentralisation of Europe's energy system through the use of sustainable energy in buildings;
- plugging buildings into a connected energy, storage, digital and transport system that will contribute to Europe's low-emission mobility strategy;
- empowering households, businesses and energy communities; and
- contributing to the circular economy.

The construction industry alone provides 18 million direct jobs in Europe and creates 9% of GDP.¹

The European construction industry has the potential to respond to a number of economic and societal challenges such as jobs and growth, greater urbanisation, social network and digitized communication, demographic changes and globalised value chains, ecological pressures and, at the same time, energy and climate change challenges. Buildings can be one of the drivers for modernisation of the sector and its work force.

The EU is already a global leader in innovation systems for buildings. Integrating energy efficiency, renewables, storage and connecting to digital and transport systems through buildings allows further expanding on this leadership and making the most of the favourable regulatory framework.

Today, buildings account for 40% of Europe's total energy consumption. Around 75% of the building stock is energy inefficient. At the current 1% annual renovation rate it would take around a century to decarbonise the building stock to modern, low-carbon levels.²

To realise the sustainable energy potential in buildings, a number of **social, financial, technical barriers or administrative challenges** need to be overcome. For instance, whereas buildings are regularly maintained or improved, sustainable energy investments are often

¹ European Commission, The European construction sector – A global partner, 2016.

² Impact Assessment for the amendment of the Energy Performance of Buildings Directive, SWD(2016) 414; see also the JRC's report "Energy Renovation: The Trump Card for the New Start for Europe" available at <http://iet.jrc.ec.europa.eu/energyefficiency/publication/energy-renovation-trump-card-new-start-europe>

disregarded because they face a competition for scarce capital, a lack of trustworthy information, lack of skilled workers or doubts on the possible benefits.

In addition, many project developers still face obstacles in raising the necessary up-front costs for their projects and lack access to attractive and adequate financing products from the market. This market failure is mainly due to a lack of understanding of the risks, multiple benefits and business case of sustainable energy investments, especially energy efficiency, by financiers and investors. In addition, the small-size of investments and the lack of turnkey solutions increase implementation cost; and the lack of capacity and skills to structure bankable projects keep finance demand low.

It is the role of sustainable energy policy to help consumers undertake these investments more easily and to create more favourable investment conditions. When renovating their homes, consumers should be enabled to choose the more efficient solutions relying on transparent, clear and timely information on consumption and related costs. When refurbishing public buildings such as hospitals, schools, social housings or offices, public authorities should have the possibility to access attractive financing solutions and benefit from innovative energy services in the form of e.g. energy performance contracting.

Next to setting the right regulatory framework, in particular with the proposed revision of the Energy Efficiency Directive and the European Performance of Buildings Directive, there is a need for complementing actions to support rapid changes in the real economy and to address the question of financing now.

1. Smart financing for smart buildings

Sustainable energy renovation in buildings is an area where pooling of projects and public guarantees can make a huge difference. As part of the Investment Plan for Europe, the European Fund for Strategic Investments (EFSI) 2.0³ is key to unlock private financing for **energy efficiency and renewables in buildings at a greater scale**.

Already now, energy efficiency and renewables are prominent in EFSI projects. For instance, the vast majority of energy projects approved for financing so far (accounting for 22% of €154 billion worth of overall investment) concerns energy efficiency and the renewable energy sector. Building on the success of EFSI, the Commission has proposed to extend its duration until the end of 2020 and to require that **at least 40% of projects in the EFSI infrastructure and innovation window** should contribute to climate, energy and environment action in line with the **COP21 objectives**. This is a major opportunity and a concrete contribution to leverage public and private money to support the transition to the low-carbon circular economy. The support from the European Fund for Strategic Investments can complement, or be combined with support, in the form of **grants or financial products**, from other EU funds, including the European Structural and Investment Funds.

Over the period 2014-2020, the **European Regional Development Fund and the Cohesion Fund** will invest EUR 17 billion in energy efficiency in public and residential buildings and in enterprises, with a focus on SMEs⁴. This is three times more than in the previous period,

³ Communication "Europe investing again – Taking stock of the Investment Plan for Europe and next steps", COM(2016) 359.

⁴ Note: In addition, there are allocations of EUR 870 million and EUR 113 million respectively from the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF), also part of the ESIF.

and it confirms the commitment and the importance Member States and regions attach to energy efficiency. It has a potential to leverage a much larger amount of national public and private co-financing, reaching an estimated total of around EUR 27 billion⁵. One of the objectives of the Investment Plan for Europe is to at least double the use of financial instruments under the European Structural and Investment Funds to mobilise additional private financing and to help establishing viable markets. Member States and regions already plan to invest almost EUR 6.4 billion⁶ via financial instruments for low-carbon objectives, mainly for energy efficiency; this is a more than eight-fold increase compared to the 2007-2013 period.⁷

Building upon the Investment Plan for Europe and the European Structural and Investment Funds, the Commission will launch an initiative to further boost investments by public sector entities, energy services companies, SMEs/midcaps and households in energy efficiency and smart buildings. This new initiative, in close cooperation with the European Investment Bank (EIB) and the Member States, can **unlock an additional EUR 10 billion** of public and private funds⁸ until 2020 for energy efficiency and renewables. This should be done through financial intermediaries and national energy efficiency investment platforms to aggregate projects, de-risk energy efficiency investments and optimise the use of public funds, including in particular European Structural and Investment Funds in combination with funding through the European Fund for Strategic Investments. Such combinations, which are already possible today, will be further facilitated through the proposed amendments to the Financial Regulation and the Common Provisions Regulation⁹. Member States, especially those with higher energy intensity and external energy dependency, are encouraged to participate in and contribute to this initiative. The sharing of risk between EU and national public and private funds will make available more attractive financing options to final beneficiaries. In addition, several regulatory and administrative advantages will be connected to the use of an EU solution, for example regarding state aid, public procurement, co-financing obligations, as well as reporting and ex-ante assessments. Importantly, in the context of the assessment of public finances under the Stability and Growth Pact, the Commission will also take a favourable position towards Member States' contributions to one-off contributions into thematic or multi-country investment platforms in the context of the EFSI¹⁰.

A significant part of these funds will be implemented in cities and regions: local and regional actors play a crucial role in supporting clean energy buildings, through decisions in areas like building codes and urban planning. Through initiatives like the Covenant of Mayors for Climate and Energy¹¹, cities and regions are encouraged to implement actions towards reducing emissions of greenhouse gases, increasing resilience, and ensuring access to clean and affordable energy for all.

Pillar I: More effective use of public funding

⁵ Estimate based on financial tables of the operational programmes 2014-2020 for the thematic objective "supporting the shift towards a low-carbon economy" overall.

⁶ Including national co-financing.

⁷ The first annual summary of progress of ESIF FIs under 2014-2020 will be produced by end November 2016.

⁸ The EIB provided EUR 10.5bn to the energy efficiency sector over the last 5 years.

⁹ COM(2016) 605 of 14 September 2016.

¹⁰ See the Statement of the Commission on its assessment of one-off contributions within the context of the EFSI initiative for the purpose of implementing the Stability and Growth Pact, OJ L 169, p. 38 as well as See the Communication 'Making the best use of the flexibility within the existing rules of the Stability and Growth Pact', COM (2015) 12.

¹¹ http://www.covenantofmayors.eu/index_en.html

The aim is to maximise the use of available public funding via financial instruments addressing identified market failures and by better targeting grants towards vulnerable consumers. To this end, the Commission will:

- a. **Develop sustainable energy financing models** based on national investment platforms (with a possible regional dimension) to attract additional private financing for building renovation, designed as foreseen in the EFSI Regulation and in line with EU state aid rules.

In the EU, more so than in other developed economies, banks play a central role in financing investments of consumers and enterprises. While they are increasingly active in the new energy markets, especially large scale renewables, banks seldom consider energy efficiency as a distinct market segment. This results in a lack of adequate and affordable commercial financing products for energy efficiency or renewables energies investments in buildings¹². In order to address this shortcoming, the Commission has developed a pioneering financing scheme, the Private Finance for Energy Efficiency (PF4EE) facility, funded by the LIFE Programme and managed by the EIB. The success of this pilot scheme, as exemplified by a significantly higher leverage than originally planned, shows the potential of driving efficiency investments through risk-sharing, technical assistance and credit lines from the EIB to participating financial institutions. Lessons learnt from the Private Finance for Energy Efficiency (PF4EE) will help further boost the combination of European Fund for Strategic Investments and other sources of public funding, including European Structural and Investment Funds, where appropriate, through investment platforms.¹³

Building on this experience, the Commission will support the development of **flexible energy efficiency and renewable financing platforms** at national or regional level. These platforms can offer a full service solution enabling local banks, financial intermediaries, energy service companies or other entities pooling investments to deploy attractive sustainable energy financing products to a large number of final recipients in the area covered by the platform¹⁴. In particular, three mutually reinforcing elements can be delivered to the entities willing to finance portfolios of sustainable energy investments:

- Up-scaled EIB debt financing via the European Fund for Strategic Investments to increase their financing capacity (contributing thus to a reinforced focus on sustainable energy buildings under European Fund for Strategic Investments 2.0);
- A risk-sharing mechanism to mitigate the risk of sustainable energy building investments portfolios and to enable more attractive lending conditions to final recipients. This feature could be deployed together with locally available funds, including the European Structural and Investment Funds;

¹² In particular heating and Cooling solutions, solar panels in rooftops, and heat pumps.

¹³ In its recently adopted "Omnibus Regulation" proposal (COM (2016) 605), the Commission proposes simplified rules applicable to combining ESIF with EFSI which could enable the development of further easy-to-use models and templates.

¹⁴ These platforms will also provide better visibility to the projects financed there in for the purposes of applying the relevant regulatory and administrative advantages provided by EFSI.

- Technical expertise and assistance for rolling out lending programmes developed in cooperation with the European Investment Advisory Hub – including through the facilities such as ELENA, JASPERS, fi-compass¹⁵ - and other sources of national or regional funding.

To support the deployment of this model and other associated sustainable energy instruments, the Commission will investigate opportunities to redeploy existing EU funds, e.g. for technical assistance.

- b. Energy Performance Contracting:** The role of energy performance contracting in driving the efficiency of public buildings must increase as they offer a holistic approach to renovations, including financing, carrying out the works and energy management. They also can, under certain conditions, allow investing in efficiency without increasing public debt, which is of key importance for governments as well as local and regional authorities facing budgetary constraints, especially when it comes to social housing, hospitals or schools. Rules for public sector investments and for statistical treatment of assets renovation should be transparent and clear in order to facilitate energy efficiency investment in public assets. Eurostat will explore how to address the impact of energy efficiency-related investments on the debt and deficit of governments. The Commission is analysing, in close cooperation with the Member States, the impact of public accounting rules on the market for energy performance contracting and, as appropriate, will update its guidance on the statistical treatment of such partnerships before late spring 2017.
- c. Deliver assistance to public fund managers with the structuring and deployment of financial instruments:** in addition to the support provided under the European Investment Advisory Hub, fi-compass or the Energy and Managing Authorities network, the Commission will organise a series of regional capacity building events involving key decision-makers and stakeholders. The first workshop took place in November this year in Riga covering the Baltic region.
- d.** In addition, the Commission has developed a readily-available **template for increasing the share of financial instruments under the European Structural and Investment Funds:** the off-the-shelf instrument for energy efficiency. Member States have been active in setting up financial instruments for energy efficiency, notably in order to reach the target of channelling 20% of ESIF for the low-carbon economy investments through financial instruments. However, some Member States are facing delays in that respect and more use of off-the shelf instruments can help to address this gap.

In parallel, the legislative proposal on the Energy Performance of Buildings Directive includes measures to **link the financial incentives** provided by public funds with the energy savings achieved.

Pillar II: Aggregation and assistance for project development

¹⁵ fi-compass is a platform for advisory services on financial instruments under the European Structural and Investment funds (ESIF), designed to support ESIF managing authorities and other interested parties, by providing practical know-how and learning tools on financial instruments. <https://www.fi-compass.eu/>

The availability of a large-scale pipeline of bankable projects to feed investment platforms and financial instruments is essential for the success of this initiative. However, many project promoters – public authorities, individuals or businesses – lack the skills and capacity to set up, implement and finance ambitious clean energy building projects. The Commission will therefore:

- a. **Reinforce existing Project Development Assistance facilities¹⁶ at the EU level** such as ELENA in cooperation with the European Investment Advisory Hub. The aim is to increase the investment pipeline, support the deployment of financial instruments, get closer to project promoters, especially from Eastern and Central Europe, further engage cities and local actors and stimulate aggregation and the market uptake of promising solutions, including innovative technologies, financing and organisational strategies. The Commission will increase the budget of the EU Project Development Assistance from €23 million in 2015 to €38 million per year as of 2017. The budget of the EU Project Development Assistance for 2016-2017 is expected to trigger up to €3bn¹⁷ of sustainable energy building investments.
- b. **Encourage Member States to develop dedicated local or regional one-stop-shops** for project developers, covering the whole customer journey from information, technical assistance, structuring and provision of financial support, to the monitoring of savings. These facilities should lead to more locally-developed project pipelines and strong and trustworthy partnerships with local actors (e.g. SMEs, financial institutions, and energy agencies), the key being to connect the supply of finance with demand for it. The development and replication of these one-stop-shops will be supported at the EU level by an exchange of good practices through Manag'Energy¹⁸, funding through Horizon 2020¹⁹, the EU Project Development Assistance facilities, or funding from the European Structural and Investment Funds when relevant.

In parallel, the proposed continuation of energy saving obligations for Member States in Article 7 of the Energy Efficiency Directive will provide a further boost to bundling small-scale projects.

Pillar III: De-risking

As called for by financial institutions²⁰, investors and financiers need to better understand the real risks and benefits of sustainable energy building investments based on market evidence and performance track record. Fundamentals such as the lower probability of default in the case of energy saving loans or an increased value of assets due to higher energy performance need to be progressively recognised by banks and reflected in the pricing of their financing products. The development of dedicated sustainable energy building financing products is

¹⁶ ELENA Facility and the PDA call under the Horizon 2020 Programme.

¹⁷ Based on past leverage ratio achieved in the ELENA and PDA EASME facilities.

¹⁸ Manag'Energy will be the focal point for capacity building for the 400+ local and regional energy agencies in Europe to increase their capacity on finance of energy efficiency and empower agencies to develop structures in view of holistic, integrated local/regional approaches.

¹⁹ H2020, EE-23-2017, on innovative financing schemes, namely on schemes based on project aggregators or clearing houses at regional or national level.

²⁰ www.eefig.com

also important to support the creation of a secondary (re-financing) market and increase private capital participation. To underpin this market transformation, the Commission:

- a. **Launches the De-risking Energy Efficiency Platform** disclosing the technical and financial performance of over 5,000 European industrial and buildings energy efficiency projects. Project developers, financiers, and investors are invited to further populate this open-source database and benefit from its benchmarking features and peer-to-peer learning.
- b. Will closely work with public and private financial institutions, industry representatives and sector experts on a **consensual framework for the underwriting of sustainable energy building investments**. Co-produced by the Energy Efficiency Financial Institutions Group¹¹ and scheduled for 2017, this initiative will help financial institutions incorporate the key energy benefits into their business practice while reducing transaction costs and increasing investors' confidence. This action will also help unlock the green mortgage market.

In parallel, the legislative proposal on the Energy Performance of Buildings Directive includes measures to provide private sector investors with access to more and better information, including more reliable building Energy Performance Certificates, the collection of actual energy consumption data of public buildings and the further development of long-term renovation roadmaps to guide investment decisions.

The Commission also launches the **EU building Stock Observatory** to centrally collect all relevant information regarding EU buildings and energy renovation. This will enable the support for designing, implementing, monitoring and evaluation of policies and related financial instruments.

2. Construction sector

The Commission will invite stakeholders of the construction sector to discuss the challenges and opportunities that sustainable energy building investments represent for the sector, and how this can be further promoted. This complements the work of the High-Level Tripartite Forum for Sustainable Construction of the Construction 2020 Strategy.

Under its Skills Agenda for Europe²¹ the Commission launched effort to help tackle skills challenges. Based on the experience with the pilot schemes launched this year, in 2017 the Commission will roll out new sets of so called "Blueprints for Sectoral Cooperation on Skills" and one of them will also concern the construction sector with focus on energy efficiency and digital skills. In that context, synergies will be developed with the Commission "BUILD UP Skills" initiative, which looks into the upskilling of construction sector workers on energy efficiency and renewable energy technologies, their installation and management.²²

Construction of new buildings or retrofitting buildings to render them more energy-efficient provides an opportunity to rethink construction and demolition practices to take into account broader resource efficiency aspects. Under the circular economy package, the European Commission will present next year an EU framework to assess the overall environmental

²¹ Communication "A New Skills Agenda for Europe: Working together to strengthen human capital, employability and competitiveness", COM (2016) 381.

²² Initiative funded under the programmes: Intelligent Energy Europe and Horizon 2020 Societal Challenge 3.

performance of buildings. Such framework should be used to promote circular economy in the built environment, including by being used as a reference in large scale application projects, in European Structural and Investment Funds and in national policy and legislation. Moreover, the European Commission is exploring options to support initiatives to foster investments in new and/or innovative construction and demolition waste recycling infrastructure in regions lagging behind with respect to the 70% target for the re-use, recovery and recycling to be achieved by 2020 under the Waste Framework Directive. Such investments could be supported by the European Fund for Strategic Investments. A specific platform for circular economy projects is in the process of being established. In addition, the Commission has prepared a Construction and Demolition Waste Management Protocol to help stakeholders treat waste in an environmentally sound way and increasing its potential for recycling. Looking ahead, the European Commission is also working on principles and rules for the sustainable design of buildings in order to generate less construction and demolition waste and facilitate materials recycling. All these initiatives will in turn help reduce energy consumption and costs related to construction materials.

The construction sector's growth and jobs potential needs to be unlocked by improving the functioning of markets. The results of the fitness check on construction will be used to ensure better coherence of related internal market and energy efficiency legislation. For instance, requirements stemming from Ecodesign regulations should be incorporated, where relevant, into the harmonised standards under the Construction Products Regulation applicable to the same products to provide manufacturers with one single framework for the testing of products. As the internal market for construction products is still fragmented, a consultation process with stakeholders is ongoing²³, possibly leading to a revision of the Construction Products Regulation within the mandate of this Commission.

The European Commission will continue to support innovation through stimulating the development of advanced technological products and processes in the frame of the contractual public private partnership (cPPP) *energy-efficient Buildings (EeB)*. This PPP is expected to deliver the technologies needed to increase sustainability and competitiveness of the European construction industry.²⁴

The initiative could be supported by a smart approach to public procurement promoting innovative low-carbon solutions via industry-led standardisation initiatives, such as SustSteel²⁵. Once these standards are finalised, they can be used by the construction sector for fulfilling their sustainability objectives. This approach could potentially be replicated for other construction products and would empower the sector to valorise their efforts and to market more efficiently their products.

The new public procurement directives (in force since spring 2016) consolidate and optimize all existing innovation instruments: functional criteria, variants, quality considerations in technical specifications and award criteria. The EU also contributes to innovation procurement through the European Structural and Investment Funds and the Horizon 2020 programme. This has led to a series of ground-breaking projects. An interesting example is the cross-border PAPIRUS project (covering Germany, Spain, Italy and Norway) which aims to promote, implement and validate innovative solutions for sustainable construction through

²³ As foreseen in the Report on the Implementation of the Construction Products Regulation (add reference)

²⁴ http://ec.europa.eu/research/industrial_technologies/energy-efficient-buildings_en.html.

²⁵ The steel industry is working on European standards on sustainable steel (SustSteel), which would enable companies to certify that their steel products for the construction sector comply with the defined requirements for the economic, environmental and social aspects of sustainability.

public procurement, focusing on Nearly Zero Energy Buildings. In addition, the Commission has published voluntary Green Public Procurement criteria for Office Building Design, Construction and Management which include a series of recommendations on how to procure a green, energy-efficient office building²⁶.

Digital technologies have the potential to raise efficiency of construction processes and the operation of buildings, thus contributing to our energy saving objectives. The Commission therefore supports the definition of common principles and rules in public procurement to digitalise the characteristics of buildings, including their energy performance (Building Information Modelling). Together with the development of a common framework for a digital building logbook and specific actions targeting SMEs, this makes it much easier to exchange information and support decision-making before, during and after construction projects, avoid a fragmentation of competing national strategies and cut the costs for SMEs. Moreover, under the Government Procurement Agreement of the WTO and in the context of bilateral agreements, the EU ensures that public procurement is carried out in a transparent and competitive manner that does not discriminate against EU goods, services or suppliers.

²⁶ SWD(2016) 180 final EU GPP Criteria for Office Building Design, Construction and Management