

## POLICY PAPER

### INVESTMENT PLAN: PUTTING EFFICIENCY FIRST



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In light of the numerous economic and social virtues of energy efficiency, notably for buildings which represent 40% of the energy consumed in Europe, we propose **that energy efficiency is the priority number one under the European Fund for Strategic Investments (EFSI)** initiated by president Juncker. The best way to do so is probably to **allocate €50 bn to a specific sub-fund on efficiency under the EFSI**. We would call this sub-component the EFSI-EE.

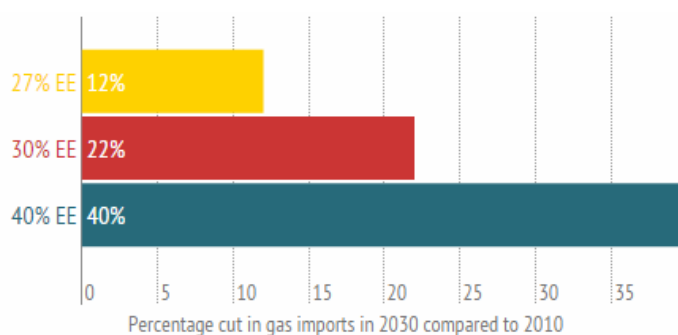
This paper presents the arguments in favour of making **efficiency first**. It also explains the leverage which needs to be achieved by public investments. We then put forward concrete proposals to better link EFSI-EE with existing policies and instruments in order to make the Juncker plan a success.

#### Introduction - Energy efficiency, a tool with multiple usages

In addition to its contribution to tackle climate change and environmental decline, energy efficiency also delivers numerous positive impacts on our society.

- **An asset for job creation and to reduce macro-economic imbalances**

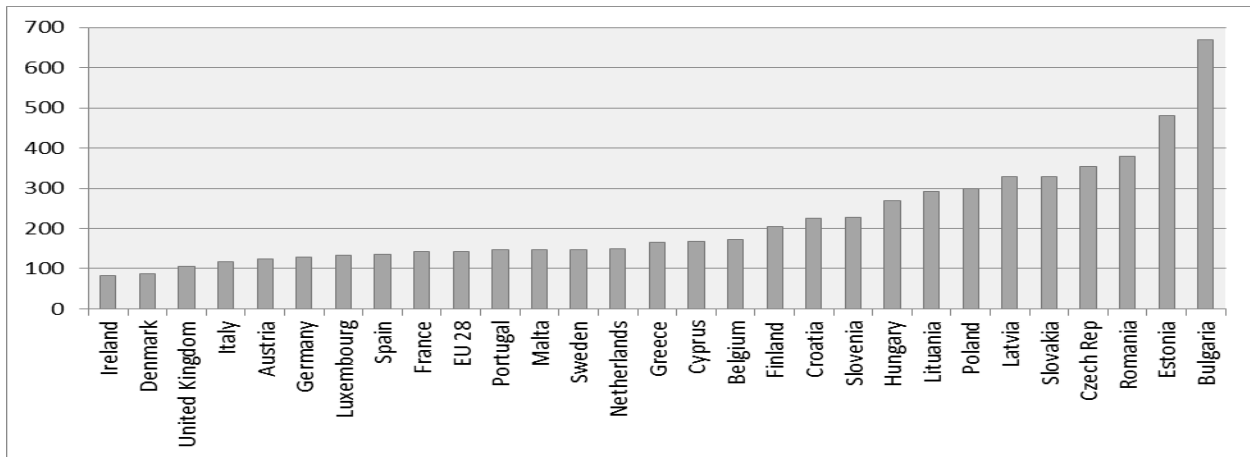
By building highly efficient economies, we can provide high-quality green jobs to fight unemployment, especially in the building sector which was critically affected by the economic crisis in Europe lately. It is acknowledged that up to 2 million jobs<sup>1</sup> could be created in the area of energy efficiency measures alone by 2020 and possibly another 2 million jobs by 2030.<sup>2</sup> Other studies conclude that on average 17 jobs are created per million euro invested.<sup>3</sup> Efficiency also helps saving money, developing resilient economic sectors and reducing macro-economic imbalances (the EU spends some €421 bn/year on energy imports).<sup>4</sup>



*Energy efficiency is the most obvious measure to mitigate the "gas threat" coming from Russia<sup>5</sup>*

- **A means to break the economic divide within Europe**

Energy efficiency is also important to ensure **convergence of all European economies**. We can observe great differences between the energy intensity of economies in Northern and Western Europe compared to the ones in Central and Eastern Europe. Except Malta, all member states from the 2004 and 2007 enlargements are the most intensive in Europe, with over 200 toe/M€GDP. The most energy intensive country, Bulgaria, shows intensity eight times higher than the best performers, Ireland and Denmark (670 compared to 83).



Energy intensity in EU 28, in toe/M€ GDP<sup>6</sup>: investments in efficiency are key to reduce the economic divide

- **An indispensable contribution to tackle fuel poverty**

In addition, better efficiency is a direct solution to **reduce energy poverty** affecting some 50-125 million EU citizens.<sup>7</sup> These households are unable to heat their homes or to afford adequate energy services; they tend to live in energy-inefficient buildings and are often behind on payments for utility bills. Studies reckon energy efficiency is "the most effective answer" to the issue.<sup>8</sup>

- **A positive return for public finance**

Energy efficiency investments are also **good for public finance**.<sup>9</sup> In Germany, the KfW programme generates a €5 return in public budget through VAT, direct tax on labour and benefits and reduced payments of unemployment allowances for every €1 of public expenditure.<sup>10</sup> In the current budgetary constraints and very rigid stability requirements, energy efficiency investments (notably grants to renovate private housing) could even be **excluded from the calculation of public debt** and considered "off-balance", or at least benefit from a qualified treatment through amortised costs accounting.

- **A driver for the competitiveness of European manufacturing industry and SMEs**

Energy efficiency will not only re-launch the European economy by boosting the building sector but it is also a key investment necessary to make EU manufacturing industries and SMEs more competitive. Energy and resources often represent 20 to 50% of overall production costs for the manufacturing industry. As Europe will, for geological and structural reasons, always have a higher price per unit of electricity and gas than major competitors like US or China, **the only way for the EU manufacturing industry to be cost-competitive is to lead the world in energy and resource efficiency**.

Subsequently, we call for a **"big-bang" in the treatment of energy efficiency in Europe, under the umbrella of the EFSI** proposed by president Juncker: the EFSI-EE would be a valuable instrument to

increase the renovation rate of buildings in Europe and break two of the most important barriers to higher efficiency in the industry: lack of knowledge and expertise (through technical assistance) and lack of access to cheap capital (through loans at better conditions).

## 1. Efficiency first: the leverage potential

Financing energy efficiency measures cannot exclusively come from public funds, but the funds engaged by governments should be smartly used in order to stimulate investment from the private sector: this is what we call **the leverage effect**. The EFSI proposed by the Commission expects a leverage effect of factor 15: some €20 bn of public guarantees lead to at least €300 bn investments. Efficiency however represents one of the few economic sectors where a leverage factor higher than 15 has been achieved in the past.

Such leverage effect has been successfully observed in several ongoing initiatives. These programmes can be Europe-wide, such as the ones managed by the European Investment Bank. They can also be national, such as the German KfW "renovation fund" which offers loans from the public bank (KfW) topped-up by grants from the federal budget. This scheme reported investment leverage around 1 to 10 over the period 2006-2011, constantly increasing and reaching even a 1 to 16 ratio in 2010 and a 1 to 20 ratio in 2011.<sup>11</sup>

Other examples can be observed in Lithuania where the KredEx bank proposes a mix of grants and loans, or in the Latvian energy efficiency fund (see good practices at the end of the paper).

## 2. The EU should do better on efficiency, the poor parent of our energy policy

Energy Efficiency is the poor parent of the EU energy policy. This is shown by a recent study realised by the consultancy Ecofys for the European Commission: despite its numerous virtues, **energy efficiency got over the last decade much less support than all other energy supply options** (renewables, fossil fuels, nuclear). In 2012, support to energy savings is reported at a very low level around €9 bn, less than 8% of the €113 bn total energy support in the EU28.<sup>12</sup> The financial envelope which targets energy efficiency investments has to be multiplied by a factor three to five over the next decade.

Despite nice words, member states themselves should do better in the implementation of existing legislation. To date, four of them (Austria, Belgium, Finland, and Poland) were referred to Court for failing to fully transpose the buildings directive more than two years after the deadline! Similarly, most member states failed to notify the transposition of the energy efficiency directive in due time and two of them (Bulgaria and Hungary) were issued a reasoned opinion and some more cases are likely to follow soon. Thus we need a "carrot and stick" approach. About the stick, we propose to introduce the following conditionality: **member states not fully complying with the *acquis communautaire* on efficiency cannot benefit from the EFSI-EE**. About the carrot, we propose as an incentive that technical assistance is critically increased under the EFSI-EE and a better access to European programmes such as structural funds.

Member states should also do better to deploy funds in a cost-effective way. Despite a great potential for savings in some public buildings such as schools, hospitals and universities, **not all public buildings necessarily need grants**. The approach of some member states was recently criticised by the European Court of Auditors in its 2013 report: structural funds have too often been ineffectively used for energy efficiency projects. Many projects benefitted from grants while they are profitable and could have been realised by an energy service company. Following efforts from the European Commission to ensure proper tracking of investments, member states should re-think the way they chose between grants and

financial instruments when supporting efficiency projects. In Poland, the draft operational programme for 2014-2020 suggests that the public sector would receive almost twice as much support as private housing. This would need to be properly justified by an assessment of the savings potential of each project in a context where public sector buildings account for just 10% of final energy use and where residential building in Poland has an annual energy performance of 215-230 kWh/sqm,<sup>13</sup> five times higher than in Germany.<sup>14</sup> A better use of public money is needed, where new business models like energy service companies are encouraged and benefit from public support. We would also like to see **energy service companies** recognised as a way to ensure leverage for the renovation of public and private buildings.

At EU level, **current initiatives are not always properly tailored** to the specificities of energy efficiency. For example, the general approach of the EFSI is based on investments through guarantee funds, not entirely adapted to energy efficiency projects also requiring grants. **Loans are not enough** to trigger massive refurbishment of private housing. Hence the Commission should organise a structured dialogue with member states set-up consistent and well-funded renovation vehicles delivering a mix of loans (revolving funds) and grants. Member states should use "fresh" money to finance these grants, such as ETS and tax revenues, profits derived from the low oil price, but also structural funds. Another major stumbling block is the limited absorption capacity deriving from the **lack of expertise and the lack of a legal framework** to identify, implement and make energy efficiency projects bankable – e.g. to find a way to bundle smaller projects and put them in a format which bankers can understand and subscribe to. This would represent an incentive for local public authorities. We think that cities taking commitments for sustainable plans at local level, such as parties to the **Covenant of Mayors**, should be rewarded with an easier access to the EFSI-EE. As important players, SMEs should also be encouraged by the Commission and by member states to invest in efficiency measures through voucher systems of **deferred tax credits**. Finally, **innovation** is a key driver and the Commission should encourage the integration of key enabling technologies within energy research and demonstration.

**All these elements are interlinked and should be considered together in a holistic approach under the EFSI-EE.** The International Energy Agency acknowledged that flaws in the design of energy efficiency schemes, such as the lack of proper technical assistance, can threaten the whole effectiveness of a programme.<sup>15</sup>

### 3. At least €50 bn for efficiency in the EFSI: making the Juncker plan a success story

#### 1. *A special sub-component for energy efficiency with ring-fenced money allocation*

In a context where 40% of our energy is wasted in non-efficient buildings, the renovation rate is still extremely low in Europe (some 1.2% per year). Several analysts revealed that a deep and fast renovation of the EU building stock will require between €600 and €900 bn investment. Others estimate the investment needs between €84 and €100 bn/year. This can be achieved by 2030 with a €50 bn allocation and a factor 15 leverage, placed under the EFSI-EE, a **special sub-component within the EFSI, entirely dedicated to energy efficiency** fully taking into account the specificities of the sector described earlier in the paper and topped-up by other sources such as structural funds, ETS revenues and other national contributions. As a result of this investment, the energy consumption of EU buildings will be between 50% and 70% less than today and the carbon emissions from the building sector may be reduced by 80-90%.

#### 2. *Strict conditionality*

As described earlier in the paper, we are in favour of a strict conditionality to access funds under the

EFSI-EE, inspired from what is done for the structural funds: only member states fully applying the *acquis communautaire* can benefit from the programme.

### **3. *New business models to ensure higher leverage: the ESCOs***

#### **What is an ESCO?**

ESCO stands for "Energy Services Company". An ESCO is a company proposing services to businesses and households on how to reduce their consumption, retrofit their buildings, diminish their energy costs, etc. It remunerates itself on the savings achieved.

In general, a renovation project in the public sector doesn't require more than 10% of grants if managed through efficient ESCO structures. These structures can be 100% public (such as the Berlin Energy Agency), mixed public/private or 100% private. The EFSI-EE would offer these 10% of grants to enhanced ESCOs. In addition, these enhanced ESCOs should broaden their portfolio of activities and enter into deep renovation. ESCOs are also useful to run profitable projects in the private buildings stock, and we need to structure a real market of energy efficiency services.

### **4. *The toolbox: finding the right mix of grants and loans***

It is an illusion to believe that loans, even if guaranteed at the most favourable conditions, can leverage huge energy efficiency investments to retrofit private housing. This is due to the following situation. In Europe, fossil and nuclear energy sources are deemed "cheap" because their price does not internalise all of their production costs: health, environment, safety, decommissioning, waste management, liability. These energy sources also often benefit from massive subsidies from the states and from local public authorities, because they are very capital intensive. This market distortion is the reason why pure loans (even those granted at very advantageous conditions by the EIB or other public bank mechanisms thanks to their good AAA ratings) are not able to kick-off large scale energy efficiency investments. The EFSI-EE should operate with a ratio of at least 20% of grants and 80% loans to show success. The precise share of grants and loans should be flexible as each situation may require a differentiated treatment in light of the local context.

### **5. *More technical assistance: an "up-scaled ELENA"***

Since its creation in 2009, ELENA is an instrument which has been providing technical assistance grants to public authorities in their attempts to launch sustainable investments at local level. The expected leverage of the programme is 1 to 20. With limited staff, it supported already 60 projects with €72 million, channeling €3.815 bn investments over the same period thanks to its multiplication effect. This remains a small example of what should be multiplied and up-scaled for the sustainable deployment of energy efficiency measures. We suggest at minimum €100 million/year funded "up-scaled ELENA" which could be steered by the Advisory Hub under the EFSI. As a concrete example, most countries are completely unprepared for the application of the the Near Zero Energy Buildings standards (nZEB) which will enter into application in 2018 (for public buildings) and 2020 (for residential). The EFSI-EE could also assist them in this preparation process.

### **6. *Efficient buildings need well trained and skilled workforce***

Energy efficiency is directly linked to the presence on the market of a skilled workforce, engineers and architects. This is particularly true for workers in the buildings sector who should receive adequate training on how to install energy efficient components, but also in service companies when recommending products or services to customers. Good practices can be found in successful

EU training programmes like "build up skills".<sup>16</sup> We call on member states to make the best use of the European Social Fund to properly address the construction workforce. An innovative training scheme exists in Luxembourg, financed by a 0.19% contribution from workers' salaries and managed by an independent private company. The workers receive grades and their salary increases in parallel to their level of qualification. In addition to projects supported by the EFSI-EE, we trust the European Social Fund should also support such initiatives and impulse to a structured EU level social dialogue between the entrepreneurs of the building sector and the workforce.

The development of the financial instruments and technical assistance mentioned above will promote good practice standards. This will be a major incentive to improve the training of the workforce. For example eligibility criteria to access to the EFSI-EE could be that technical assistance and training schemes are included.

### ***7. Empowered citizens and consumers***

Efficiency is also about consumers choosing the right products, technologies, and tools when going for efficiency measures. Hence information should be more transparent and made accessible in an easier way to them: the EFSI-EE could support one-stop shops to give citizens independent advice. Awareness-raising campaigns could also be financed by the EFSI-EE and channeled through local public authorities who benefit from a great deal of trust from citizens.

### ***8. Research & Development and innovation***

Most technologies related to energy efficiency are already present on the market, and the objective is about combining them and fine-tuning near-to-market solutions. R&D in other sectors such as the key enabling technologies (materials, ICT) is often separated from the energy research, although they would be more efficient if considered together. For this reason, the EFSI-EE should prioritise the integration of smart technologies and advanced materials in the built environment. This is the objective of the Smart Cities and Communities initiative as acknowledged in the operational implementation plan.<sup>17</sup> A stronger focus on using the EFSI to trigger innovation and to speed-up knowledge transfer from research and demonstration into mainstream is also politically highly justified. In their proposal on EFSI, the Commission intends to take most money from ongoing innovation funds. There are not many areas outside energy where money is taken from existing programmes such as Horizon 2020 but could still at least indirectly serve the research and innovation agenda in the EU.

### ***9. Innovative systems for efficiency for SMEs***

Amongst the incentives for SMEs to renovate their building and implement energy savings measure, the EFSI-EE should support a green innovation voucher scheme to allow SMEs accessing business expertise in eco-innovation. Innovation vouchers are based on the assumption that SMEs often do not have in-house expertise to identify and evaluate energy efficiency potentials properly. Vouchers are grants that allow those SMEs to access external expertise to assess the potential and the costs of energy savings measures at building or manufacturing process level. For groups of industrial SMEs from the same value chain, a number of "value-chain eco-innovation vouchers" could be given out, identifying savings potentials both in efficiency and competitiveness gains for the entire sector. In addition to the EFSI-EE, a powerful tool facilitating the financing of energy efficiency could be the introduction by member states of tradable Green Certificates providing deferred tax credits to eligible parties to be redeemed after a period of five years. Such certificates would be allocated to both SMEs and providers of services of general economic interest such as public utilities as financial grants in exchange of binding commitments to increase investments in energy efficiency related

projects.<sup>18</sup> Such certificates are to be allocated under strict conditions to be framed at the EU level in specific guidelines for the EFSI and implemented nationally under the subsidiarity principle.

### **10. Decentralised management**

The EFSI-EE should build upon the success of the facilities run by the European Investment Bank to support energy efficiency investments such as JESSICA. However, this is another illusion to believe that such an important energy efficiency programme could be solely managed from the headquarters of the Bank. The concept of the EFSI-EE implies a strong cooperation between the EIB, the European Bank for Reconstruction and Development (EBRD), national public banks and stakeholders. Dedicated national sub-energy efficiency components should be established under the EFSI-EE, based on the experience of other member states and adapted to local realities. Such entities would develop projects at scale by regrouping smaller projects and when possible standard approaches for projects under their supervision. The national sub-components could ultimately set-up dedicated channels by type of sector (public buildings, private buildings, SMEs).

Finally, the EFSI-EE should build on the success of some past and existing programmes which turned successful in various member states. We would like to outline some of these good practices, in addition to the KfW and ELENA initiatives detailed earlier in the paper.

#### **The EU energy efficiency fund**

Launched on 1 July 2011 with a €265 million budget, using debt and equity to finance bankable projects for local public authorities.

#### **The Latvian Efficiency Fund**

In Latvia, a new Energy Efficiency Fund is created with a €150 million dotation, awarding loans to citizens to retrofit their house at attractive conditions, with the possibility to get additional rebates in case the energy consumption is not higher than 90 kWh/sqm after completion.

#### **JESSICA Holding Fund (Lithuania)**

With a €100 million amount from public budget topped up with €127 million from the structural funds, the Holding Fund awards renovation loans to consumers through the commercial banks Siauliu Bankas, Swedbank and Seb. It combines loans with 15% conditional grant if the final performance of the building achieves at least the "D" class (on a A to G scale) and 100% grants to prepare documentation. The scheme achieved 60% energy savings.

#### **The KredEx Fund (Estonia)**

Revolving fund established by KredEx (Credit and Export Guarantee Fund from the State) to finance energy efficiency in Estonia: 600 buildings (22 000 apartments) retrofitted, energy savings of 39%. €66 million loans including €17 million from the structural funds. Commercial banks top up with 50% (€29 million) using the KredEx State guarantee, resulting in a low-cost loan for the final beneficiary through commercial banks.

#### **Union Sociale pour l'Habitat (France)**

With an envelope of €192 million from the structural funds, the social housing union leveraged €1.2 billion investment to renovate nearly 60,000 social households in France (factor 1 to 6). Amongst the targeted building stock, the share of "EFG" class buildings reduced from 71% to 0% and the share of "A-B" class buildings increased from 0% to 46%. The programme also created 16,000 local jobs.

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<sup>1</sup> COM (2011) 109 final, [Energy Efficiency Plan 2011](#).

<sup>2</sup> The scenario based on 40% GHG reduction, ambitious explicit EE policies and a 30% RES target would generate 1.25 million additional jobs by 2030, compared to the reference scenario:

[http://ec.europa.eu/energy/doc/2030/20140122\\_impact\\_assessment.pdf](http://ec.europa.eu/energy/doc/2030/20140122_impact_assessment.pdf) (please note that this does not model the 40% energy efficiency target agreed by the European Parliament (in February 2014), but only a maximum of 34% savings. Adopting a binding target of 40% energy savings would boost job creation still further).

<sup>3</sup> Institute for European Environmental Policy, [Review of Costs and Benefits of Energy Savings](#), May 2013.

<sup>4</sup> The European Alliance of Companies for Energy Efficiency in Buildings, [EuroACE](#).

<sup>5</sup> Source [Greenpeace EU](#).

<sup>6</sup> European Commission, [EU Energy in figures: Statistical Pocketbook 2014](#).

<sup>7</sup> EPEE Intelligent Energy Europe, [European Fuel Poverty and Energy Efficiency](#).

<sup>8</sup> BPIE, [Alleviating Fuel Poverty in the EU](#), May 2014.

<sup>9</sup> Copenhagen Economics, [Multiple Benefits of Investing in Energy Efficient Renovation of Buildings: Impact on Public Finance](#), 5 October 2012.

<sup>10</sup> KfW Press Release, *KfW programmes Energy-efficient Construction and Refurbishment: public budgets benefit up to fivefold from "promotional euros"*, 27 October 2011.

<sup>11</sup> Idem.

<sup>12</sup> European Commission, [Subsidies and Costs of EU Energy](#), 10 October 2014.

<sup>13</sup> Bankwatch and Friends of the Earth, *New money, old ideas*, December 2014.

<sup>14</sup> BPIE, [Europe's Buildings under the Microscope](#), October 2011.

<sup>15</sup> IEA, [Joint Public-Private Approaches for Energy Efficiency Finance](#), December 2011.

<sup>16</sup> <http://www.buildupskills.eu/en/about>

<sup>17</sup> European Innovation Partnership on Smart Cities and Communities - [Draft Operational Implementation Plan](#).

<sup>18</sup> See ['the Green Investment Plan'](#) adopted by the Green group in the European Parliament.