Summary

• Unlocking available cost-effective energy savings potentials, for example in buildings, is a prerequisite for the EU to reach its competitiveness, security of supply and climate change goals. The EU Climate and Energy Framework must therefore be built in a way that drives efficient policies towards realising such potential.

• In order to prioritise actions towards this goal, energy efficiency has to be the starting point in the design of the 2030 Energy and Climate Framework, and a binding energy saving target based on the saving potentials of the different sectors (bottom up approach) is needed. This target should not lead to an absolute cap on energy consumption but stimulate competitiveness and sustainable growth.

• Research shows that realising Europe’s overall cost effective energy savings potential (40%) could deliver GHG emission reductions of at least 50% by 2030 and increase the share of renewables in the energy mix to 35%.

• Buildings offer the highest cost-effective energy savings and GHG emission reduction potential while offering substantial benefits to the economic and social development of our societies. In order to realise this potential, the overarching savings targets should be complemented by a sectoral target for buildings supported by clear milestones and policy measures.

1) The 2020 target design experience has left a considerable, yet promising savings potential untapped, particularly in buildings

The 2020 climate and energy package has not delivered enough on energy efficiency despite it being the most cost-effective approach to achieving climate and energy goals. The economic slowdown has helped in making progress towards achieving the target but uncertainty has prevailed for both policymakers and businesses. No conducive framework was developed to enable our economies to waste less energy. There are three reasons for this underachievement:

• First, the energy efficiency target was left as a non-binding, aspirational target, “competing” with two other binding targets (for GHG and RES). This led to a lack of prioritisation, reporting and enforcement, and to inconsistencies in the design of national measures

• Second, the top down approach used to define the target for energy efficiency prevented sectors with a high cost-effective potential, primarily buildings, to unleash their potential

• Third, the articulation of the targets lacked consistency. Not only were the GHG, RES and EE targets set with no vision of their respective impact over each other, thus neglecting the mutual benefits of articulating them in a meaningful manner, but also the 2020 framework was not articulated with a longer term vision, i.e. the 2050 outlook

The energy efficiency potential in the EU will not be realised in the period to 2020 and this is particularly true for the buildings sector. As recently underlined by the International Energy Agency (IEA) in its World Energy Outlook 2012, existing policies will not enable the full economic potential of energy efficiency to be seized. In the buildings sector, continuing current policies at the same level of ambition would leave four-fifths of the potential untapped. This is worrying because buildings represent 40% of the EU final energy consumption, 28% of its natural gas consumption, and 59% of its electricity consumption.
A recent study prepared by the Fraunhofer ISI\(^1\) has calculated the potentials for each major contributing sector by 2030 and, crucially, has shown that the cost-effective potential in the residential buildings sector\(^2\) is a 61% reduction in energy demand as compared to the PRIMES 2009 projections.

Such a significant lack of progress on achieving cost-effective energy efficiency potentials is bad for the EU economy. Wasting huge quantities of energy erodes our competitiveness, increases our vulnerability to security of supply and unnecessarily burdens public finances. The EU paid €573 billion on imported fossil fuels in 2011 leading to a significant energy trade deficit of €423 billion. Moreover, the less efficient our economies are, the less likely they are to benefit from measures toward recovery, simply because of the disproportionate burden of energy costs.

| EuroACE sees this untapped potential as an opportunity and as a priority matter for the next decades. A continuation of the setting of aspirational, unarticulated and medium-term goals will not work. The next framework needs to create commitment enabling the potential to be tapped. |

2) Unlocking the existing potential through creating an adequate level of commitment is a prerequisite for the EU to reach its competitiveness and climate change goals. This requires an overarching binding energy savings target, and a specific focus on buildings

The EU needs to have an overall binding energy efficiency target for 2030 that is built on the cost-effective potentials of each contributing sector, with the buildings sector taking the lead. The energy saving target must be defined as an interim step on the path to 2050 and the creation of a sustainable low-carbon economy in the EU.

A binding target is the only way to create the necessary level of commitment to ensure that the right prioritisation for energy efficiency is maintained over time and beyond political turbulences, and that it leads to adequate policy and investment decisions.

In addition, a binding framework for 2030 that is formulated in the context of achieving the EU 2050 goal of creating a low-carbon economy would provide a gigantic boost to correctly implement existing policy tools. For example, this would give to the renovation roadmaps that are required under Article 4 of the energy Efficiency Directive, a meaningful basis on which national and interim targets can be set. In other words, it is coherent in policy-making terms to set an overall binding energy efficiency target for 2030 as a support to the policy instruments that are in the process of implementation.

**Energy efficiency has to be the starting point in the design of the 2030 Energy and Climate Framework.** This will guarantee that an ambitious GHG target will be reached, whilst a GHG target alone does not provide any certainty on how much more efficient (and thus less wasteful) our economies will become. Nor would it secure the jobs and competitiveness benefits that action on energy efficiency brings.

This call has been backed up by the findings of the recent Fraunhofer Study that shows that starting with energy efficiency is the right way to go. In particular, the Study suggests that the setting of an overall 40% energy saving target for 2030 for the EU would deliver at least a 50% reduction in CO2 emissions and help increase the share of renewables in the energy mix to 35% - even with a low growth scenario. Conversely, the Study confirms that the setting of a CO\(_2\) target as the only binding target would not stimulate energy efficiency.

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\(^2\) The research from Fraunhofer (see ref 1) is based on a bottom-up assessment of the energy savings potential in individual sectors: industry (21%), residential (61%), tertiary (38%) and transport (41%). Realising this potential would result in €239bn net savings per year on energy bills for householders and industry
The energy saving target, in order to be meaningful, has to be built from the bottom-up on the known potentials in each contributing sector, which is, according to latest research, for residential buildings, 61% and for the tertiary sector 38%. This is the most rational way to facilitate the design of policy measures addressing such potential, in a tailor-made and flexible manner. Breaking down the overall energy saving target into sectoral targets reflecting their respective potential will make it possible to express specific targets in the most suitable manner. This could be e.g. in terms of absolute energy savings for a sector like buildings (compared to base-lines or reference years) or in terms of energy intensity in industry sectors (disaggregated energy consumption for production processes). Relevant metrics should be used, to reflect the way each potential can be monitored and evaluated.

Setting the overall target according to this methodology will help to achieve the savings in a more pragmatic and targeted manner, contribute to decoupling economic growth from energy consumption, and prepare the ground for a cheaper integration of renewables. A target elaborated on this basis should not lead to an absolute cap in energy use, but stimulate sustainable growth.

3) **Ensuring that buildings lead the way through a complementary sectoral binding target is essential. It will greatly facilitate meeting the overarching energy saving target**

Within this framework, a binding sectoral target for buildings is essential to drive the needed transformation of the building stock, releasing multiple benefits for the EU economy and for its citizens, and ultimately ensure that the huge energy resource that it represents is tapped.

Such a sectoral target for buildings should be linked to the ambition of an 80% reduction in energy demand of buildings by 2050, an objective confirmed as technologically feasible and economically viable by many studies, and specified in the European Parliament’s report on the Energy Roadmap 2050. **Equipping the journey towards this 2050 ambition with a strategic milestone for 2030 is essential as it will be:**

- **Good for the economy:** Implementation of ambitious energy efficiency measures, particularly in buildings would significantly contribute to reducing our dependence on energy and helping the EU to get more out of its own resources. Indeed, the most important and largest indigenous source of energy is energy efficiency and it is also the most cost effective on a “per kWh” basis. Not least, more energy efficiency means less infrastructure needs and equals more cost-effectiveness, thus making the transition towards a low carbon future less risky and less costly.

- **Good for public finances:** A focus on energy efficiency would provide extensive macro-economic savings, improving the economic situation of many national economies. In addition, public finances would benefit from new actions in energy efficiency: research has demonstrated that investing in activities such as ambitious energy efficient renovation of buildings would bring vast immediate benefits for public budgets.

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“Building renovation in Europe toward 2050: What are the choices?” Ecofys, 2012

4^According to the study “Multiple Benefits of Investing in Energy Efficient Renovations - Impact on Public Finances” (Copenhagen Economics, October 2012) gross annual investments of 41-78 billion € in building renovation bring annual returns of €104-175 billion to society of which €29-39 billion go to public finances
Good for business: Binding energy efficiency targets would keep energy prices and costs, which are key elements for maintaining the global competitiveness of European businesses, at reasonable levels. Such targets will also provide a boost to competitiveness, not only because of more efficient production, but also because of the induced innovation that higher energy efficiency requires. Indeed, the strong development of EU energy efficiency technologies will put the European energy efficiency industry in the forefront of developments and innovation in this area, thus allowing for expansion of future export markets.

Good for employment: Energy efficiency-related activities have the potential to put millions of EU citizens back to work, especially in those sectors that have suffered most during the crisis. Investing in energy efficiency is about creating jobs, as €1m invested in energy efficiency creates, on average in the EU, 19 jobs5. A well-documented example of this benefit is the German KfW scheme for building renovation, which, in 2010, created or safeguarded around 340,000 jobs6 in Germany alone. Another study7, published in 2011, shows that at EU level, ambitious renovation programmes could lead to the creation of up to an average of 1.1 million new direct jobs in the construction sector for the full period up to 2050.

Good for the environment: If the EU is serious about reaching its 2050 climate goals (85% less overall CO2 emissions, 88-91% lower emissions from the residential sector), ambitious action must start now and be maintained throughout the period to 2030 and beyond. A cost-effective savings potential in the building sector may remain untapped if current policies are not upgraded; with the risk that a great part of the potential of GHG emissions is being locked in in existing buildings. Not least, energy efficiency helps reducing the amount of polluting emissions from buildings, hence contributing to improving the quality of ambient air.

Good for EU citizens: Cutting energy spending in EU homes through ambitious energy efficient renovations brings wide savings to the end consumer. From its own estimates, the European Commission states that energy efficiency in buildings could save around €600 per year per household by 20208. This aggregates to around €12bn in annual savings for homeowners in the EU. Renovating the EU building stock will also significantly reduce fuel poverty9 and will contribute to urban renewal, thereby strengthening social cohesion in the EU. In addition, energy efficient renovations of buildings where the indoor climate is simultaneously improved have a positive effect on occupants health, workers’ productivity and learning abilities of the people living and working in the buildings. This improvement in general well-being has extensive positive effects on citizens and thus on society as a whole.

6 "Impact on public budgets of KfW promotional programmes in the field of “Energy-efficient building and rehabilitation”", KfW, 2011
7 "Europe’s Buildings Under the Microscope” by the Buildings Performance Institute of Europe
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About EuroACE:
EuroACE represents Europe’s leading companies involved with the manufacture, distribution and installation of energy saving goods and services for buildings. EuroACE members have a total turnover of around €140 billion per year in efficiency-related business and they employ approximately 172,000 people in these activities in Europe. The mission of EuroACE is to work together with the EU institutions to help Europe move towards a more efficient use of energy in buildings, thereby contributing to Europe’s commitments on climate change, energy security and economic growth.