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## Binding targets for energy savings:

### The first cornerstone for a 2030 policy for competitiveness and sustainable growth

The EU today faces compelling economic, social and environmental challenges. European decision-makers must provide an adequate response to these challenges and agree on a coordinated and balanced framework for EU 2030 climate & energy policies which is **based on ambitious binding energy savings targets**.

Our first priority must be to cut our huge energy waste, which is estimated to be as high as 40% of our energy consumption<sup>1</sup>. Reaping these savings will generate the greatest possible economic, social and environmental benefits, provide the cheapest GHG emissions reductions and improve our energy security most effectively.

**Focussing on a single EU GHG reduction target for 2030 would not accomplish this: in fact, by doing that this would be doing things the wrong way around!**<sup>2</sup>.

### Getting things right: Energy efficiency first!

- **The current 2020 framework has not delivered** in terms of directing policies and investments that unlock our large cost-effective savings. The indicative national savings targets from the EED will likely fall well short of the goal.
- **Starting with energy savings provides predictability for investments and improves energy security**, in addition to enabling us to reduce GHG with certainty.
- **Starting with a GHG target, on the other hand, does not work**. A single GHG target requires fewer savings, would deprive the EU of improved competitiveness, and lead to the loss of many related benefits and co-benefits in the form of increased employment, strengthened national budgets, improved health and comfort, and reduced fuel poverty, to name a few.
- In addition, **energy savings are known to cost between one-half and one-third of new energy production** per kWh. This is why energy efficiency and energy savings need to come first in the design of the 2030 climate & energy framework. Only then will we move toward a feasible, affordable and sustainable energy / low carbon transition.
- **A binding EU energy savings target for 2030 of around 40% (compared with 2005 or the Commission's 2009 baseline) will anchor the commitment** and place the energy and low carbon transition on a solid footing. It can reduce GHG emissions by 50%-60% by 2030 and it will decisively boost the EU economy through higher energy security, durable job creation and increased competitiveness.

<sup>1</sup> Fraunhofer ISI 2013; Analysis of a European Reference Target System for 2030

<sup>2</sup> Ibid.

### **The right targets: binding, coherent, mutually reinforcing**

A coherent, mutually reinforcing set of binding Climate & Energy policies, targets and measures with energy savings as its core element is the single most cost-effective approach to generate immediate and tangible results while streamlining and ensuring maximum ambition in Member States to transpose, implement and monitor the current EU and national policies and instruments.

Therefore, EU Climate & Energy policy for 2030 needs to be based on **a set of three binding targets built-up and structured in the most coherent and effective manner**: starting with an ambitious overall EU Energy Savings objective defined through a pragmatic bottom-up approach based on cost-effective potentials, then combining them with realistic RES goals and only then derive the corresponding GHG reductions that can be achieved. As stated above, recent research shows that this will not lower the climate-related ambitions, but will, on the contrary: provide greater GHG savings at a lower economic, environmental, social and political cost.

### **The right architecture: Bottom-up, potential-based**

**2030 objectives need to be set through a bottom-up analysis of the cost-effective potential** of the different sectors of the economy to deliver economic, social and environmental benefits.

This means that the savings potential from the various sectors (buildings, transport, etc.) has been carefully assessed before setting overall targets. This rational has already been taken on-board by the current research undertaken in this area (among others by the Coalition for Energy Savings and the German Ministry of Environment<sup>3</sup>).

The recent research cited above has demonstrated that the residential sector alone has a cost-effective potential for achieving up to 61% energy savings by 2030<sup>4</sup>. Strong targets and measures aimed at the **deep renovation of the EU building stock** are a perfect example of how the EU can “tick all the boxes” for improved competitiveness, and sustainable, inclusive growth. Yet alone, without the resulting high level of accountability and commitment resulting from an ambitious binding overall target, and clear sectoral targets and measures, they will not deliver and the potential will remain untapped.

### **Focus on the right deliverables: Ticking all the boxes!**

**A binding target is an “empowering” vehicle**, without which existing measures will never deliver as much as what they were intended to (for instance, measures for the building sector only become meaningful when they are supported by an overarching target).

**Targets can serve numerous functions, as they increase the level of activity in the buildings renovation sector:**

- They will **alleviate the endemic economic waste in our economies**, reducing energy costs for households;
- They will **make the EU more competitive**, by lowering the energy costs in industry, even if energy prices rise;
- They will lead to **increased employment opportunities in local economies**, boosting the recovery in one of our key sectors, construction,
- They will both directly and indirectly put millions of Europeans back to work, **reducing costs for public budgets** resulting from high unemployment benefit payments, while generating additional taxes,
- They will **reduce our energy dependency**, cutting energy waste at the very end of the supply chain and reducing the need for investments in generation, transmission and distribution infrastructure;
- They will contribute to **significantly reduce GHG emissions**, turning buildings from energy wasters and polluters into climate savers and comfort zones.

<sup>3</sup> “Contribution of Energy Efficiency Measures to Climate Protection within the European Union until 2050”, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), June 2012

<sup>4</sup> Fraunhofer ISI 2013; Analysis of a European Reference Target System for 2030. The potential for other sectors is: Transport: 41%, tertiary:-38%, Industry: 26%

## Explanatory memorandum

### What should a binding energy savings target look like? Achieving the potentials of each sector

The point of departure for the 2030 framework should be the maximisation of the cost-effective contribution of targets and measures to overall sustainability, economic competitiveness, security of supply and social progress.

The 2030 binding overall energy savings target must be based on the combined cost-effective savings potential of the main contributing sectors of the EU economy (Buildings, Transport, Energy Transformation, Industry) taking into account national conditions and mutually re-enforcing policy interactions. This approach would allow the overall savings target to be accompanied by binding sectorial targets and measures (including those aimed at building renovation) while avoiding initial perceived overlaps with EU-ETS obligations.

Building renovations have by far the biggest cost-effective energy savings and emissions reduction potential of any sector in the EU. Reducing the energy demand of the EU building stock by 80% by 2050 is possible with currently available technologies. Long-term strategies for deep renovation of the building stock must therefore be at the heart of any future climate and energy strategy.

	Main issues	Keys for improvement	What ambitious action on buildings would bring
Energy prices	High energy prices affect negatively the competitiveness of EU industry and the affordability for vulnerable households	All scenarios (notably IEA) indicate that energy prices will continue to rise. The key would therefore be to address <b>energy costs</b> by focusing on <b>demand side-management and energy efficiency</b>	It has been demonstrated that ambitious building refurbishment can cost-effectively reduce the energy demand of the building stock by 80% by 2050 <sup>5</sup>
Job creation & Competitiveness	Record high unemployment in some MS, especially in the construction sector. Industry's competitiveness declining in the international scenario due to high energy prices in the EU	Need for <b>long-lasting strategies to ensure local, durable quality jobs</b> , especially for youth, and to foster a competitive, highly energy-efficient clean-tech EU industry.	Every million € invested in building renovation creates 17 local, stable jobs <sup>6</sup> (mostly in SMEs). Energy efficiency is the largest clean-tech market worth €720 billion globally in 2010 and growing by 10% annually <sup>7</sup> .
Internal Energy Market	Need for massive investments on infrastructure and inter-connections	Cutting energy waste would <b>reduce the investment needs</b> in infrastructure and <b>cut energy imports</b>	The residential sector has the biggest potential for energy savings (estimated at 61% by 2030 <sup>8</sup> )
Energy security	The EU has the world's biggest energy deficit <sup>9</sup> . This creates huge economic unbalances and will become a long-term source of political instability		
Long-term environmental targets	Need to respect long-term climate goals and to allow the EU to play a role in COP international negotiations	Energy efficiency as key contributor to <b>make GHG target attainable in a more cost-efficient manner. Due to low price elasticity for energy (0.2), GHG targets alone will not lead to tapping the full savings potential, or even to a small share of it</b>	36% of EU's CO2 emissions come from buildings, and this can be at least cut in half with existing technologies

### Timeframe: 2030 target as a milestone towards 2050

A 2030 binding energy savings target must have a broader reach than just mobilising stakeholders to deliver savings by 2030: it should enable the 28 Member States to be on the right track to achieve their 2050 objectives.

Rather than a prolongation of the 2020 framework, 2030 energy savings should be an important intermediate step in delivering the EU strategy for 2050, providing a clear vision and investment security for companies and other stakeholders, and ensuring coherence with existing Climate & Energy objectives and with long-term Roadmaps. A pure "10-years-after-2020" approach would be too short-sighted; risking the perpetuation of the current policy inconsistencies and incompatibilities between targets and measures and would not mobilise investors sufficiently.

<sup>5</sup> Ecofys 2012 "Building renovation in Europe toward 2050: What are the choices?"

<sup>6</sup> Based on a breakdown of cost components for energy efficiency upgrade of 15 international case studies "Roadmap for a New Housing Sector", 2012

<sup>7</sup> German Federal Ministry for the Environment 2012: GreenTech made in Germany 3.0.

<sup>8</sup> Fraunhofer ISI 2013: Analysis of a European Reference Target System for 2030

<sup>9</sup> 423 billion € in 2012 - Eurostat 2013; News release - January 2013, Euro area international trade.

## How do targets fit in the framework? The “sustainable growth” checklist

Climate and Energy policies play an essential role for EU long-term sustainable growth. The 2030 framework needs to respond to multiple challenges. The elements below confirm that putting energy savings at the core of the 2030 Climate & Energy policy is - from all those perspectives - an unbeatable option.

**Competitiveness: Energy savings lowers our energy costs, improves our energy security and enables a solid economic recovery**

- **Trade balance:** Trade deficits in most EU countries are largely due to deficits in trading goods, where energy plays the biggest role. According to the Fraunhofer Institute study published by the German Federal Ministry of the Environment, net energy cost savings of tapping energy savings potential of the building stock by 2050 would amount to 124 billion €'05 annually<sup>10</sup>;

- Address the compelling issue of **energy security**: The external dimension of energy policy has an enormous strategic importance for economic (trade deficit), political (external relations) and social (energy shortages) considerations. In 2009/2010, the EU imported 83.5% of its oil and 64.2% of the gas it consumed<sup>11</sup>.

This is largely driven by the energy consumption of buildings, which account for 38% of total natural gas consumption in the EU27 and 59% of total electricity consumption in the EU27<sup>12</sup>. Ensuring security of supply - through maximising the role of energy savings- should be put at the heart of the EU energy policy.

- **Free-up the economy from its endemic waste:** Too much money is wasted on energy by enterprises and consumers. Energy inefficiency is undermining our competitiveness, increasing our vulnerability to security of supply problems and unnecessarily burdening our public finances. **The less efficient our economies are, the less likely they are to benefit from any measures taken to stimulate growth**, because of the disproportionate share of energy costs for enterprises', households' and public budgets.

Especially in times of crisis, tax payers expect that public budgets focus on areas of spending that are more relevant in the short term than energy waste, such as education, healthcare or research. But reducing energy waste has an immediate impact on all the other budget posts because **energy savings generate cash flow**.

- **Boost public finances:** The touchstone of a cost-effective energy and climate policy should be to ensure its broader goals while generating positive sum games for public finances. In an economic context where public finances are stretched, the new framework must also deliver by focussing on those activities that have a positive impact on public finances.

For example, research has demonstrated that investing in activities such as building refurbishment can bring vast immediate benefits for public budgets<sup>13</sup>.

**The social aspect: Energy efficiency boosts local and sustainable jobs and helps prevent growing fuel poverty**

- **Employment:** The 2030 framework must respond to one of the most compelling issues in the EU and help create stable, quality, local jobs. Energy-saving-related activities have the potential to put back to work millions of EU citizens, especially in those sectors having suffered most during the crisis, such as construction. The best example is the German KfW scheme for building refurbishment, which in 2010 created or safeguarded -in Germany alone- some 340,000 jobs.

By investing in an energy efficiency upgrade of the building sector, the EU Member States can stimulate economic activity, create between 760,000 and 1,480,000 jobs and bring benefits to GDP of €153-291bn depending on the level of investments<sup>14</sup>

- **Focus on consumers:** High energy prices linked to economic crisis have led to an increasing problem of energy poverty in most EU Member States. Energy savings - especially in households - should therefore be favoured as a key element of the “social pillar” of a truly sustainable energy policy.

**Energy savings deliver greater GHG reduction at lower cost**

- **Climate commitments:** If the EU is serious about reaching its 2050 climate goals (reducing its overall CO<sub>2</sub> emissions by 85%, and by 88-91% in the residential sector), ambitious action must start now and be maintained to 2030 and beyond.

By immediately focusing on actions in those sectors that could deliver wider benefits for the short, medium and long term, the new Energy & Climate framework must enable the EU to keep leadership in global climate policy-making ahead of the global climate agreement by 2015 and beyond.

<sup>10</sup> “Contribution of Energy Efficiency Measures to Climate Protection within the European Union until 2050”, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), June 2012

<sup>11</sup> E3G, The macroeconomic benefits of energy efficiency, 2012

<sup>12</sup> IEA, Presentation to ECEEE, Nov. 2012 - <http://www.eceee.org/calendar/2012/WEO-2012-Brussels-launch>

<sup>13</sup> Impact on public budgets of KfW promotional programmes in the field of energy-efficient building and rehabilitation”, Jülich Institute/KfW, 2011. The Jülich study concluded that every Euro invested in building refurbishment programmes yielded a four- to five-fold return the same year through the creation of some 340,000 local jobs, reducing the cost of unemployment benefits and increasing income taxes generated.

<sup>14</sup> “Multiple Benefits of Investing in Energy Efficient Renovations - Impact on Public Finances”, a Study by Copenhagen Economics, October 2012, available at <http://www.renovate-europe.eu/Multiple-Benefits-Study>