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FACT SHEET AND Q&A 28 JANUARY 2015

# EUROPE'S CHOICE: LOW-CARBON GROWTH OR HIGH-CARBON RISKS?

## ANALYSIS OF MEMBER STATE PROPOSALS FOR THE EUROPEAN INVESTMENT PLAN

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## Key Findings

> Member states have proposed more than a trillion Euros' worth of low-carbon and socially useful investments that can effectively drive economic growth in Europe in the short-term while increasing Europe's long-term resilience and quality of life.

> There is no growth rational for the new European fund for Strategic Investment to invest in high-carbon energy and transport projects that expose EU to high risk of stranded assets

> But those EU member states with the highest dependence on Russian energy imports are missing their opportunity and undermining Europe's energy security due to their failure to propose put forward the least investment in energy efficiency and electricity grids

## Introduction

In December 2014, the European Commission announced a €315 billion fiscal stimulus via the launch of a new European Fund for Strategic Investment (EFSI). Subsequently, member states have proposed a total of 2028 priority projects with a total value of €1,409 billion.

E3G's analysis of this potential investment pipeline shows that the demand for low-carbon and socially useful projects is four times higher that for high-carbon projects. As the legislation to establish the EFSI is considered by the European Parliament and Council, our initial audit of the proposed projects highlights where investment should be directed to drive growth and build strategic infrastructure for Europe's future:

1. There is no growth rationale for funding risky, high-carbon projects
2. The proposed high-carbon projects expose Europe to a high risk of stranded assets
3. Energy efficiency and grid infrastructure represent only 8% of proposed investments
4. Member states with the highest dependence on Russian energy imports are proposing the least investment in energy efficiency and grids

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## 1. There is no growth rationale for funding risky, high-carbon projects

Let's start with the good news: there is a major demand for investment in low-carbon projects in Europe, backed by a very strong project pipeline. Low-carbon investment projects put forward by member states represent the opportunity for €624 billion of investment (excluding nuclear) – nearly twice the €315 billion of investment that can be supported via the European Fund for Strategic Investment. To aid Europe's economic recovery the speed of delivery also matters. Positively, €222 billion of the proposed low-carbon projects can be delivered by 2017, which is double the amount of 'shovel-ready' high-carbon projects that have been proposed.

**Fig 1: High vs Low carbon investment (bn€) - Total**

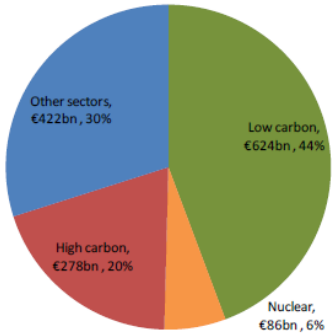
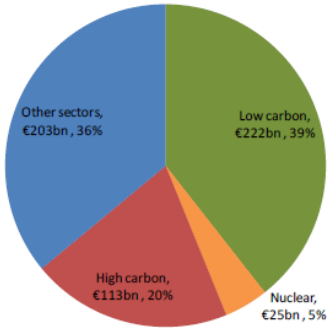



**Fig 2: High vs Low carbon investment (bn€) – 2015-17**




When combined with socially-beneficial projects such as digital infrastructure, there is an identified investment pipeline of over €1 trillion in Europe - without the need to invest in high-carbon projects. In this context, there is no rationale for the Investment Plan for Europe to be used to invest in high-risk, high-carbon projects over either the short or the long term.

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## 2. The proposed high-carbon projects expose Europe to a high risk of stranded assets in future

The high-carbon investment projects put forward by member states are also high risk, as they face uncertain future demand and are inconsistent with the EU's strategic objectives.

**Fig 3: High carbon investment (bn€) - Total**

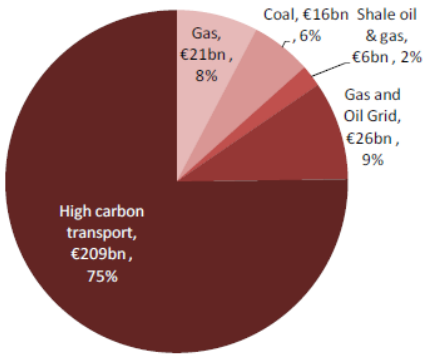
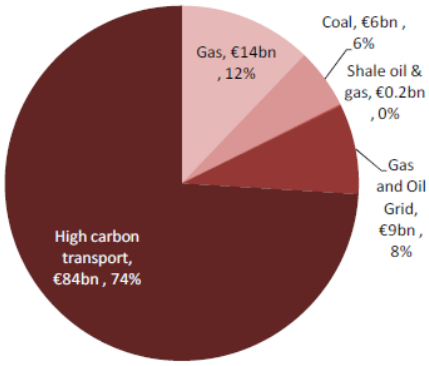



**Fig 4: High carbon investment (bn€) – 2015-17**




High carbon transport, mainly roads and airports, makes up 75% of the proposed high-carbon projects put forward by member states. But passenger transport demand has flatlined over the last decade: these projects therefore risk adding unnecessary capacity to the system in Europe.[1] Roads and airports also have lowest leverage potential, yet these proposed projects would require the most public money (over €200bn) but have often delivered the least public value from past European investments.[2]

Similarly, despite European gas demand falling by 9% over the last decade and being projected to fall even further as energy efficiency measures are delivered, member states have put forward €26 billion of gas and oil infrastructure investments. There is a significant risk that these projects will be underutilized as demand continues to fall.[3] Furthermore, this focus on investment in high carbon infrastructure risks crowding out security-critical infrastructure investment such as electricity interconnections and transmission networks as well as energy efficiency projects.

To meet the EU's strategic objectives for its mid- and long-term climate and energy policy, member states need to make better investment choices. The focus should be on building low-risk, high-value infrastructure consistent with a low-carbon future. This would maximise the public value of investment and increase security of supply by lowering dependence on imported fuels.

[1] Passenger transport demand in the EU-28 decreased by nearly 1.5 % between 2011 and 2012, following a slight downward trend since its peak in 2009, broken only by a 1 % increase in 2011 **http://www.eea.europa.eu/data-and-maps/indicators/passenger-transport-demand-version-2/assessment-4**

[2] The European Court of Auditors found that only half of 20 airports in Estonia, Greece, Italy, Poland and Spain that received EU money needed EU funding, and much of the infrastructure, once built and paid for, was underused. See "EU millions wasted on white elephant airports, say auditors", *Euractiv,* December 2014 **http://www.euractiv.com/sections/transport/eu-millions-wasted-white-elephant-airports-say-auditors-310854** ; Special Report: EU funds help Poland build 'ghost' airports, *Reuters,* December 2014 **http://www.reuters.com/article/2014/12/14/us-poland-airports-specialreport-idUSKBN0JS06K20141214**

[3] E3G, (2014) Energy Security and the Connecting Europe Facility, **http://e3g.org/x8zAb**

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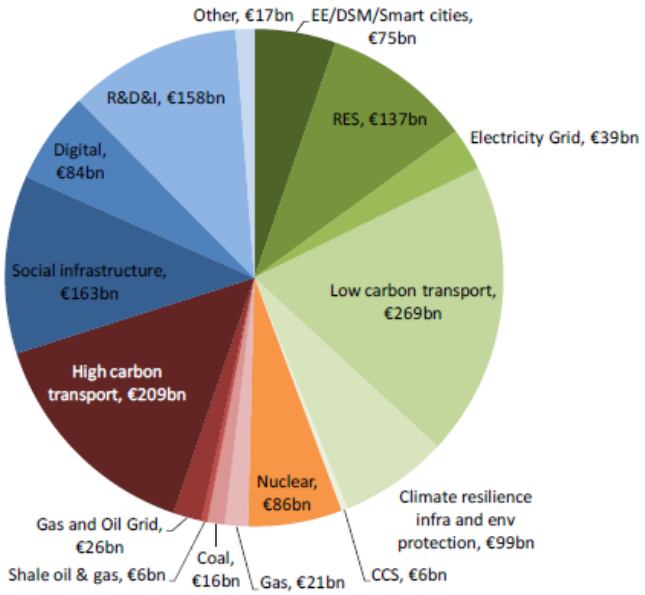
## 3. Energy efficiency and grid infrastructure represent only 8% of proposed investments

Accelerated investment in energy efficiency and addressing the missing links in Europe's electricity networks should be seen as the top strategic infrastructure priorities to deliver socio-economic returns, achieve climate objectives, and lower energy bills for all European citizens.

However, only 5% (€75 billion) of the projects listed by member states include energy efficiency measures, smart cities or demand side management. Only 3% (€39 billion) of the projects put forward include electricity networks.

**Fig 5: Total investment, per sub sector**




Energy efficiency has however been identified by the European Commission as a key priority area for the investment package.[4] But the number of high risk gas projects put forward by Member States signals a clear need for more coherent approach to European energy security and to mobilizing investments in line with the EU's climate and energy objectives.

[4] http://ec.europa.eu/priorities/jobs-growth-investment/plan/docs/investment-plan-qa_en.pdf

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## 4. Member states with the highest dependence on Russian energy imports are proposing the least investment in energy efficiency and grids

Eastern European countries with the greatest exposure to Russian gas imports are missing their opportunity to deliver smart investment, and are prejudicing Europe's energy security. The Visegràd Group countries have put forward just 7% (equal to €5.2 billion) of total European investment in energy saving measures.[5] These countries also have some of the lowest levels of energy efficiency in Europe, but have not identified projects that would lower their energy demand. This risks locking in Europe's exposure to price volatility and supply shocks for further decades.[6]

Across the EU, few countries recognised high socio-economic returns of investing in energy efficiency. In absolute terms, greatest investment is planned by Italy and Spain, proposing €16.5 and €10.7 billion investments respectively.

At the same time, proposed priority projects in gas and oil infrastructure (i.e. new electricity generation capacity and pipeline investments) from the most energy inefficient Member States more than double their efficiency projects both in terms of numbers and value.[7]

**Fig 6: Investment in V4+2 countries in energy efficiency and DSM (bn €)**

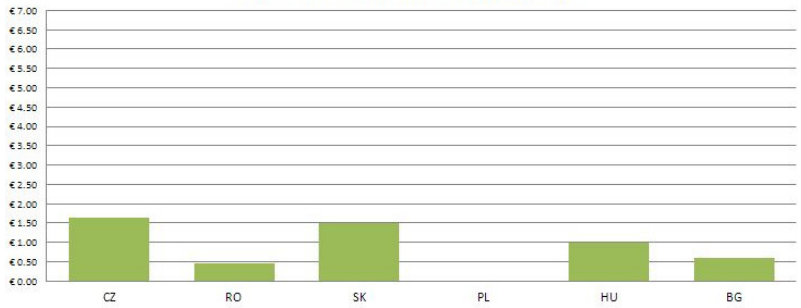
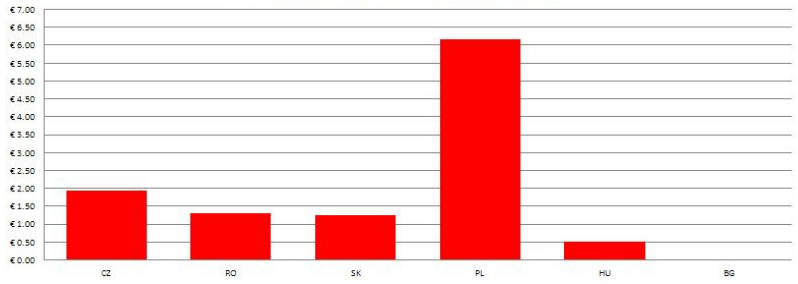



**Fig 7: Investment in V4+2 countries in gas and oil pipelines (bn €)**




[5] Poland, Czech Republic, Slovakia, Hungary, Romania and Bulgaria have listed 21 projects for energy efficiency improvements, demand side measures and smart appliances with a total value of €5.2 billion and of €2 billion by 2017. The total value accounts for only 7% of the total €75 billion investment across all 28 member states.

[6] EU risks wasting billions on gas infrastructure 'white elephants', *Euractiv*, September 2014
**http://www.euractiv.com/sections/energy/eu-risks-wasting-billions-gas-infrastructure-white-elephants-308625**

[7] Poland, Czech Republic, Slovakia, Hungary, Romania and Bulgaria have listed 54 projects (including gas generation and gas and oil pipelines) with a total value of €11 billion and of €5 billion by 2017.

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# Q&A: THE INVESTMENT PLAN FOR EUROPE

## What does *high-carbon* investment include?

High-carbon investment includes the following investment categories: high carbon energy production and generation (coal, gas, shale oil and gas), gas and oil pipelines, and high carbon transport (roads and airports). 75% of the total high-carbon projects put forward by Member States are for investments in roads and new airports.

The high carbon energy projects include investment values of at least €16 billion towards coal, €6 billion for refining shale oil and gas, and €21 billion for gas generation projects, with an accompanying €26 billion in gas and oil pipeline infrastructure.

## What does *low-carbon* investment include?

Low-carbon investment include the following categories: renewable generation, energy efficiency (including demand side measures and smart cities), nuclear generation, electricity networks, climate resilient infrastructure and environmental protection, low carbon transport (electrification of transport, public transport, waterways), and Carbon Capture and Storage (CCS).

**Fig 8: Low carbon investment (bn€) - Total**

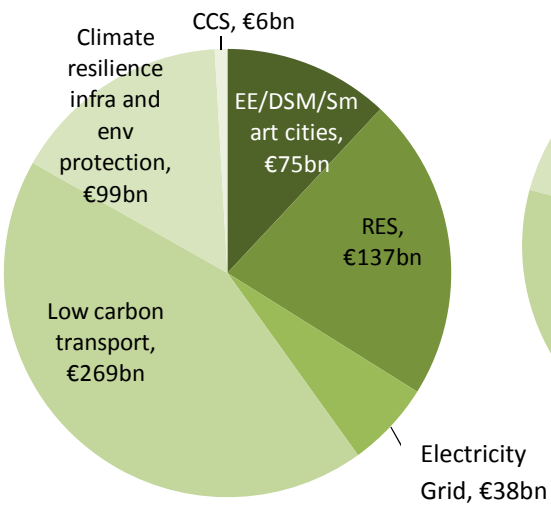
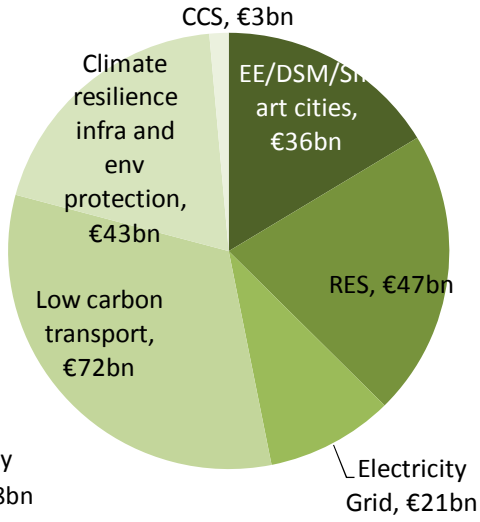



**Fig 9: Low carbon investment (bn€) – 2015-17**




Low-carbon transport makes up the largest share of low carbon investment, with a projected value of at least €269 billion investment. Renewable energy projects make up a fifth of the total low-carbon share, with offshore wind dominating the proposed €137 billion investment, while an additional €39 billion would go towards electricity grids and interconnectors between Member States.

At least €75 billion is included in the member state project lists for improving energy efficiency in both households and businesses, and going towards demand side measures and smart technology. Other areas of low carbon investment include at least €6 billion towards CCS, while climate resilience and environmental protection projects make up at least €99 billion of investment, covering flood risk management and circular economy initiatives particularly around waste removal and water supply management.

## What does *other* investment include?

The projects categorised as 'other' investments include broadband roll-out and new digital infrastructure; social projects dominated by investments in housing, schools and hospitals; funding for research, development and innovation projects; and all other projects not fitting in one of the categories mention above.

**Fig 10: Other investment (bn€) - Total**

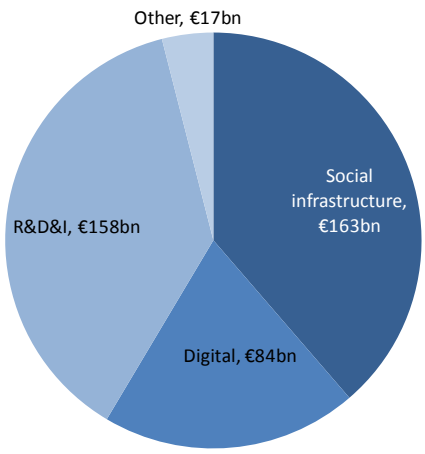
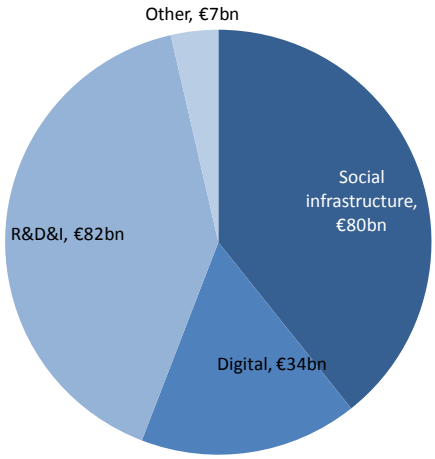



**Fig 11: Other investment (bn€) – 2015-17**




## About E3G

E3G is an independent, non-profit European organisation operating in the public interest to accelerate the global transition to sustainable development. E3G builds cross-sectoral coalitions to achieve carefully defined outcomes, chosen for their capacity to leverage change. E3G works closely with like-minded partners in government, politics, business, civil society, science, the media, public interest foundations and elsewhere. More information is available at www.e3g.org

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