

E3G response to DG Energy Consultation on Financial Support for Energy Efficiency in Buildings

About E3G

E3G is an independent, non-profit European organisation operating in the public interest to accelerate the global transition to sustainable development. It has two areas of work focused on scaling up investment into energy efficiency: through power sector reform and low carbon finance innovation.

Question 1. Addressing market failures

(a) Are the barriers identified in this document the most important ones? If not, which barriers are missing and why are they important?

The document sets out the main market failures – these have been extremely well documented on many occasions in many documents. An exemplar is the IEA's report 'Mind the Gap'.

(b) Which market failures would be most urgent to address? At what level would these failures be best addressed?

Achieving the full potential of energy efficiency across the EU economy will require incentivising millions of actors to invest. This will be a complex task and a framework approach will be needed to overcome massive inertia. The framework should include instruments aimed at targeting, as far as possible, every market failure in order to create a functioning market for energy efficiency. However, the single biggest change that could be introduced to ramp up appetite for these investments would be to remove fossil fuel subsidies.

(c) How could these failures be best addressed?

- **Un-priced/partially priced energy-related externalities** – remove fossil fuel subsidies and subsidised energy bills. Increase the carbon price through introducing set-aside.
- **Lack of information** – smart meter roll out; clarification and enforcement of energy labelling; education programmes for consumers, businesses and municipalities; requirements for energy audits by large businesses; subsidised/free audits for smaller businesses and householders.
- **Non-rational actors** – incentives for energy efficiency investment (grants, cashbacks, feedbates and low cost loans) in the early stages of market development. Regulation

to drive Laggards in the markets (for example, in the form of a requirement to retrofit if significant refurbishments are undertaken or when a property is sold or rented out, or a requirement for businesses to audit their buildings once a year coupled with a requirements to implement measures identified with a payback of less than 5 years).

2. Improving access to financing

(a) Are the current EU level financial tools for energy efficiency in buildings effective?

One of the primary issues with drawing down EU Cohesion and Structural Funds is the complexity of the processes for achieving this and requirement for substantive human resources to be applied by Member State Governments. Many Governments appear either not to have the resources or the will power to achieve this. Efforts on the Commission's side to simplify and accelerate the processes would be very helpful.

Under the next Budget period, and complementing streamlining efforts by the Commission, a requirement could be introduced on Member States to successfully allocate funds earmarked for low carbon activities before wider funding can be accessed could help focus minds. This would also help reinforce the case to Member State Governments that they should to establish dedicated energy efficiency financing and delivery agencies that would help catalyse scaled investment in this sector.

(b) How could more private financing for energy efficiency projects be mobilised?

In general terms, over the long-term, given the scale of investment needed in energy efficiency, the bulk of the capital must be sourced from the private sector. However in the short-term, access to private sector finance for energy efficiency investment is limited by three key factors:

- (i) the sheer volume of funds needed compared to the balance sheets of the traditional capital providers – i.e. banks;
- (ii) uncertainty over levels of demand for loans and ability of banks to securitise those loans once they reach sufficient volumes to free up balance sheets for further activity; and
- (iii) among investors in general there has been a flight of capital to well understood and lower risk investments due to low levels of confidence in the EU economy.

All three of these issues directly affect the availability of capital to finance the significant amount of energy efficiency investment needed – which is generally perceived as having no track record and is competing with other better understood infrastructure investment opportunities.

In more specific terms the barriers to actually financing energy efficiency are very different in different building subsectors and are both financial (including lack of products) and contractual in nature (including how risk of default on repayment is managed). When designing

interventions it will be important for policy makers to have a granular understanding of the different issues specific to financing public, commercial and privately owned residential buildings.

These issues aside, publicly sourced capital will, in the short term, have a key role to play in catalysing private sector interest and confidence in energy efficiency as an investable sector and providing early funds to kick start the market. For example, to help create demand public funds can be used to provide grants, cashbacks and technical assistance to those wanting to develop projects. Public funds can also be used to provide partial guarantees to private sector lenders who might be willing to lend once a 'deal pipeline' has been established – and build confidence in energy savings as a robust cashflow source. Public bank lending (national but backed by the MDBs to achieve scale) can be used to complement these instruments and provide volume lending to help kick start the market. Later on they could also play a role in warehousing and securitising loans – perhaps taking junior tranches of loans if needed.

(c) Are guarantees needed?

If the aim is to source private finance then yes, in the absence of a track record for loan performance, there is a need for guarantees to build confidence. There are examples of both the EIB and EBRD designing such schemes.

(d) Building capacity

This is a critical issue with respect to building Member State Government confidence that energy efficiency investment can be achieved at scale. The Commission could play a role in showcasing best practice through hosting public events and through hosting a knowledge sharing platform – could this be developed in partnership with entities such as the IEA and OECD potentially?

(e) Best practice

- EBRD's technical assistance and loan and underwriting facilities provided through the Sustainable Energy Finance Initiative. This is an exemplar in how to drive the market in the absence of strong Government programmes.
- Finance in Motion (funded by the Green Growth Fund, Southeast Europe) also deploys this approach and works closely with local commercial banks to source SME investments.
- ELENA is also a useful facility, although some municipalities have complained it is too small and that too many conditions are applied.
- Kredex's programme (developed with KfW) – effectively drew down Structural fund money and works with the private sector to promote energy efficiency investments in Estonia.

- KfW's programme – subsidised from the German Budget and works with commercial banks to disburse loans.

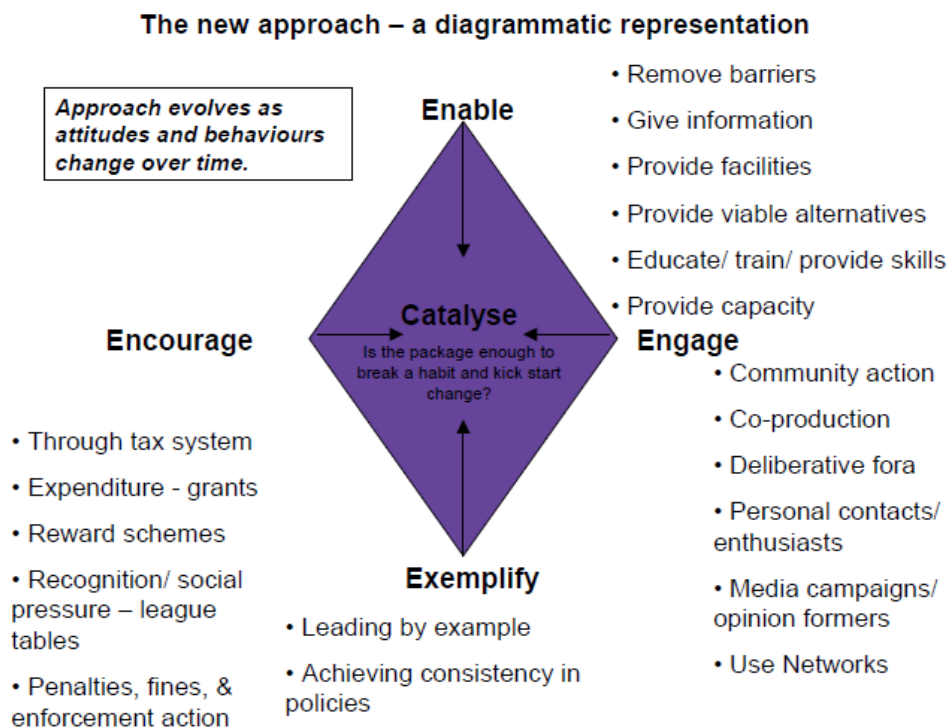
In the absence of efforts on the ground by Governments to drive scaled demand through the introduction of regulation, however, these programmes will fail to have significant impact on the market.

3. Strengthening the regulatory framework

A useful way of thinking about how to strengthen the regulatory framework is the 4Es framework, developed by the Department for Environment Food and Rural Affairs in the UK as a way of driving more sustainable behaviour among consumers. See <http://archive.defra.gov.uk/environment/economy/documents/sustainable-life-framework.pdf> (Figure 1 summarises this framework approach to designing interventions).

It helps give a sense of the range of measures that will need to be put in place, in the main part by Member State Governments, in order to drive significant change.

Figure 1. The 4Es framework



(a) Is there any need for further EU-level regulation to stimulate energy efficiency investments in buildings beyond those proposed in the new Energy Efficiency Directive?

- A top-down long-term binding target for energy efficiency improvements across the EU economy (2020 and also ideally 2030 and 2050 – reflecting the timelines over which investors work).

- Requiring the phase out of fossil fuel subsidies that weaken the economic case for energy efficiency and encourage wasteful energy use.
- Progressive tightening of EUETS caps to support the carbon price ('set aside').
- Continuing to drive up minimum standards in new assets through existing initiatives including the Ecodesign Directive; Energy Performance in Buildings Directive and supporting measures such as the Labelling Directive.
- Earmarking an increased proportion of EU Budget funds to kick-start long-term Member State-based energy efficiency programmes.

(b) What could be specific measures to be taken at national level to implement and complement most effectively the EU-regulatory framework?

Energy efficiency investments are traditionally described – according to Marginal Abatement Cost Curve analyses in particular – as being attractive because they can be achieved at net negative cost. However, the currently immature state of the market in many EU countries – including issues with high transaction costs and uncertainty over savings – means that investments are not always as attractive as expected.

This issues are set out in the E3G paper 'The Macroeconomic Benefits of Energy Efficiency: The case for public action', a summary follows here.

Transaction costs – These are the costs that arise from undertaking an investment in energy efficiency. In textbook economic terms they include the costs of searching, bargaining, negotiating, monitoring and enforcing. For an industrial company seeking to make energy efficiency improvements these costs (manifest as direct monetary or indirect time costs) will include the costs of identifying and selecting an energy auditor; undertaking the audit itself; researching and selecting a technology provider; sourcing finance; operational interruption and so on.

Transaction costs, if they can be predicted, will be reflected as higher capital requirements overall or, if they cannot be accurately be predicted, reflected in the application of a higher discount rate. The higher the transaction costs, the slower the uptake of such emission reduction technologies.

Governments have a key role to play in scaling up supply chains to make investments easier to transact, so reducing costs for consumers. This can in part be achieved by defining the long-term policy trajectory, introducing appropriate regulation and creating, where needed, institutional capacity to facilitate delivery.

Behavioural attitudes – The MAC Curve analysis is premised on the idea that individuals are 'rational'. In economics rationality implies that investors would respond to a particular investment opportunity purely on the basis of price signals. In reality the uptake of such investment opportunities depends on many other factors and is significantly affected by behavioural attitudes, which in turn are driven by social, cognitive and emotional factors. For example investors can often make investment decisions based on approximate 'rules

of thumb' or based what their peers are doing rather than using strict logic. Similarly there may be mental and emotional filters applied to the screening of investment opportunities that skew consumer preferences and affect general market sentiment.

Such behavioural attitudes can have a significant impact on the uptake of a range of emission reduction technologies, including energy efficiency. As an example the decision by a householder about whether to retrofit their home to improve energy performance may be driven by behavioural factors such as:

- Low levels of confidence in the market to deliver high quality retrofits;
- Uncertainty over the energy savings that might be achieved;
- Aversion to taking on debt to finance the investment;
- Unwillingness to live through the disruption caused by retrofit work;
- The unappealing aesthetics of some retrofit technologies.

These behavioural factors can also be described as non-monetary transaction costs. In the real world they again have the effect of pushing up the discount rate, further reducing the net present value of investments in emission reduction technologies that improve energy efficiency.

Incentives and regulation alongside information campaigns are needed to change attitudes, drive demand and provide the signals needed for the supply chain to scale up. Innovative policies such as a demand side (energy efficiency) FiT could help create certainty around revenue streams based on electricity savings. In addition, where they are not already doing so, public banks based in Member States have a role to play in making early stage investments in energy efficiency to visible build a track record.

(c) What are specific need for policy guidance and awareness raising among different stakeholder groups?

See the 4Es framework above.

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