The Coalition Portfolio:

Financial Issues for Energy Efficiency

Position Paper

7 April 2011

Executive summary

1. Energy efficiency is the lowest-cost climate solution which will also deliver large economic benefits, but investment is needed to realise its potential.

2. An adequate and effective mix of private financing and public investment is required if we are to meet the 2020 targets.

3. Financial and market barriers are currently blocking the needed increase in energy efficiency.

4. Public funding is necessary to unlock private capital to the market; it needs to be sufficient, more accessible, and to be leveraged in order to attract the necessary private sector investments.

5. Taxation can be a useful tool to incentivise the uptake of energy efficient solutions, through tax credits, VAT reductions for building renovation, and linking energy taxation to carbon emissions.

6. Private financing can be encouraged through partnerships between investors and public authorities, the development of new finance mechanisms, shared savings schemes, and by government action to secure competitive interest rates for investment.

7. Market-based instruments can also play a role by creating energy savings incentives and obligations upon energy suppliers. Energy prices must reflect the full cost to society in order to incentivise energy savings rather than rewarding consumption.

8. A coordinated approach is needed to encourage energy efficiency, bringing together a stable framework for investment, well-coordinated finance instruments, and cross-sectoral funding, together with delivery, monitoring and evaluation mechanisms to ensure quality, effectiveness, and consistency.

9. Financing solutions should go hand-in-hand with the adoption of a binding target for energy savings in order to achieve the 2020 goals.

10. No single solution exists for financing energy efficiency investments.

I. Background: Why are financing policies necessary?

Energy efficiency is recognised as the lowest-cost and fastest means of realising energy savings, while also delivering large economic benefits to society. Yet it takes upfront capital to finance most energy saving initiatives. To reach the levels of improvements in energy efficiency necessary to meet 2020 targets, financial solutions require both *private financing* – i.e. ensuring that the market has the right incentives to invest – and *public investment* – the mechanisms by which public funds can be used to encourage energy efficiency, directly and by leveraging private capital. However, there are many reasons why adequate financing is not being made available.

Without going into great detail, these so-called barriers fall into a few key groups:

- Inadequate incentives to invest

The lack of adequate incentives for the market to invest in energy efficiency is a significant problem. Two problems are particularly prevalent. First, *payback periods* for recuperating up-front investment costs are often perceived as too long. This is equally true for consumers and business.

Most consumers – whether individuals or businesses - find that their financial resources are stretched when faced with the practicalities of paying for major energy efficiency investment. Energy efficiency has to compete with other life priorities. This is particularly true in a time of recession or uncertainty.

The lack of trusted, relevant information, and the uncertainty of directly benefitting from longer-term energy savings make the choice even more difficult. Even for energy efficient solutions that do not require huge investments, full lifecycle costs and benefit considerations do not pull the demand towards the most energy efficient solutions. The market for energy efficient appliances, for example, needs more incentives to help consumers overcome the higher upfront cost for the most efficient products and accelerate market transformation beyond natural trends. Secondly, split incentives between landlord / tenant or owner / occupier for housing and commercial building renovations are a barrier to high-efficiency construction and renovation, because the person who will bear the costs of an investment (the landlord) will not be the one to reap the benefits (as it is the tenant whose energy bills will be lower). As a final example, investing in high efficiency cogeneration is rated high risk by the banks due to energy market uncertainty and a lack of performance knowledge.

- Lack of access to investment capital

While there is a lot of private capital available in European economies, it is difficult to assemble and apply private capital to energy efficiency projects. One major problem is the dispersed nature of efficiency measures, which creates high transaction costs, asset ownership problems and loan enforcement challenges. Experience also teaches that adequate public funds are required to successfully leverage private capital for efficiency

programmes (usually 25% to 30% of the total cost of efficiency measures). However, public funding is often insufficient or inconsistent. There is often poor understanding of how to leverage private investment, where the lack of fully functioning private financing for energy efficiency investment and the difficulties in aggregating individual projects to overcome the high transaction costs constitute barriers to scaling up major energy efficiency programmes.

- Additional market barriers

Markets do not currently reflect the full societal cost of wasteful energy use, nor do they incentivise energy savings, particularly within the energy market itself. Energy prices often do not reflect the true costs to society because they are directly or indirectly subsidised. Instead society rewards consumption rather than efficiency. For example, lenders do not value efficiency in underwriting practices and the real estate market does not adequately reflect the added value associated with efficiency.

Energy suppliers, generators, and regulated distribution companies earn their profits from increased sales or throughput (increasing capacity), rather than from intervening successfully to lower their customers' consumption. Meanwhile, power market rules are structured to meet the operational and financial needs of power suppliers rather than creating concentrated market "pull" for energy demand reduction and primary fuel savings. Energy infrastructure costs are equally spread over the energy that is sold to the final users ignoring the service content of the energy market.

These market and financial barriers are not the only limitations to an uptake in energy efficiency. The Coalition remains firmly convinced that a binding EU target for energy saving is needed in order to drive demand, as is a clear and consistent regulatory framework which creates incentives for efficiency. A strong combination of political will, regulatory framework, and public and private investment is needed in order to take advantage of the economic, social and environmental potential for energy savings, and to achieve the 2020 targets.

It is from this starting point that the Coalition for Energy Savings wants to see a whole new mind set. This paper addresses the financial imperatives for energy efficiency. There needs to be a new way of thinking that will convince the financial community and the public sector to take a new direction. Approaches from the past simply have to change.

II. The Coalition Portfolio for Financing Energy Efficiency

The Coalition portfolio proposes a range of measures to align both public and private financial instruments with the goal of realising a step change in financing energy efficiency in Europe. They focus on improving the availability of public as well as private capital needed to capture the deep reservoir of cost-effective efficiency improvements in homes and businesses, thereby achieving carbon reduction targets at the lowest total cost to the economy – while also serving Europe's high-level ambitions for efficient and sustainable economic growth, greater energy security, and new employment opportunities in job sectors that cannot be exported to foreign shores.

1. Public funding

As noted above, over time, as much as 75% of needed efficiency investments will be supported by private capital, secured by and paid for by the owners of homes, businesses, and commercial buildings. Public funding is, however, essential to unlock and deliver that private capital to the market. Public funding is needed to support delivery of energy efficiency in several ways:

(a) to create the foundation of public education, trusted information and quality control that consumers need in order to undertake major efficiency investments;

(b) to provide direct grants and cost-sharing incentives to accelerate uptake by efficiency providers and end-use customers, overcoming some of the market and behavioural barriers that have blocked appropriate investments in the past;

(c) to pay for efficiency improvements in public buildings, social housing, and homes of those in fuel poverty; and

(d) to provide risk-mitigation mechanisms that will make investments more attractive to private finance.

- ✓ Re-Directing Energy Subsidies towards Energy Efficiency

Public subsidies for energy use should be re-directed to ensure that they promote energy efficiency, rather than encouraging greater consumption of fossil fuels. Reorienting subsidies would provide great opportunities to reduce harm to the environment whilst also providing the economic opportunities which greater investment in energy efficiency will bring.

- ✓ Accessibility of public funding

Currently available public funding at all levels for energy efficiency is underutilised, often as a result of administrative reasons. In order to encourage greater take-up, grants and subsidies must be adequately publicised, bureaucratic procedures simplified, and there should be greater coordination between different forms of public funding. These changes should address two different challenges in parallel: making funding more accessible for some small projects, whilst also encouraging the 'bundling' together of other projects so that they are more attractive for private financing. Member States should each be required to create Energy Efficiency National Funds, aimed at pooling together all available financing and leveraging additional resources on the market. These National

funds would act as single entry points for different streams of money, and streamline funds for energy efficiency measures to all potential beneficiaries. There is also a need for a long-term commitment for public funding to reinforce the policy objectives, something which has proven very difficult in the past.

- ✓ EU funds targeted at energy efficiency

The current framework for disbursing EU funds does not sufficiently encourage investment in energy efficiency. The Multi-Annual Financial Framework should ensure that EU funds are directed towards achieving the 2020 climate and energy targets. There are numerous possibilities to support this, for example, the European Commission should propose increasing the percentage of national European Regional Development Fund allocations currently available for investment in energy efficiency of buildings to support social cohesion (currently 4%). Unspent funds under the European Economic Recovery Programme should be made available via a specialised financial instrument, such as a publically backed guarantee, that encourages private investment in energy efficiency projects. Moreover climate and energy saving 'proofing' should be introduced for all EU funds, to ensure that energy saving is automatically integrated within the conditionality for the granting of funds.

- ✓ Effectively using leverage instruments to attract private finance

While direct public investment in efficiency is sometimes the best course of action (e.g., in public buildings and social housing), much greater attention must be paid to the ways that government, regulated utility and other sources of "public" funds can be targeted to leverage much larger amounts of private capital for deep efficiency gains. Using public funds to buy down investment risks, lowering interest rates, guaranteeing returns and reducing upfront capital cost, will help to attract more private sector investments. For example, the European Investment Bank's Risk Sharing Finance Facility can provide guarantees for loans offered by private banks for energy saving investments, which can help to build confidence in a relatively new market, until such time as the private sector is able to do this without support. Furthermore, measures need to be taken to promote innovative loan underwriting approaches, access to credit and risk guarantees for Energy Service Companies (ESCOs), so that they can carry out more comprehensive measures and greater savings. Finally, government and government-directed funds can be used to develop program plans, information campaigns, and quality control instruments, which are essential to consumer and investor acceptance and market uptake of efficient equipment, building renovations and other pro-efficiency measures.

2. Taxation

- ✓ Income tax credits

Income tax credits have proven to be a powerful tool to activate consumer demand for energy efficient appliances and services. These schemes allow for investments in energy efficiency to be tax deductible, thus creating an investment incentive. Tax credits can apply to deep building renovation or to super efficient products.

- ✓ VAT

VAT reductions for energy efficient goods and services in the building renovation sector should be put in place by all Member States.

- ✓ Energy taxation

Energy taxation levels should be linked to the energy content of each fuel, in order to encourage a switch to more energy efficient solutions. The forthcoming revision of the Energy Taxation Directive should, through minimum tax levels, internalise external costs and promote changes in consumer, producers and manufacturers behaviour. However, since energy prices alone have not been sufficient to drive investments in efficiency (due to the fact that demand is rather inelastic), governments should not expect that energy taxes will by themselves drive needed efficiency improvements. Energy taxes provide a powerful opportunity to create stable revenue sources for sustained, well-funded efficiency programmes, which will be essential to success in improving the resource efficiency and energy productivity of European economies.

A reduced energy tax for certain services and products could also be used to establish a link to efficiency applications and services, thus driving the energy efficiency demand.

3. Private financing

- ✓ Partnerships between investors and public authorities

Developing new financing models that would allow direct co-investing from public and private sources in joint ventures would help to bring down the cost of capital for energy efficiency investments. By providing a small part of the initial financing, taking a first loss position, or otherwise having a share of the investment, public funding can bring down the overall risk of the investment and increase the financial attractiveness for different investors. Bundling various sources of funding is key to ensure, for example, deep renovations (e.g. factor four retrofits[1]) that require significant up-front funding.

- ✓ Developing new finance mechanisms

Energy efficiency requires longer-term investment in order to realise major projects. This fits well with the long-term investment horizon of institutional investors (pension funds, insurance companies). However, these investors will only become active in the sector if there are attractive product offerings in place, which have stable returns and low risks and can be traded in a liquid market. There is a potential to develop an "energy efficiency bond" market, but this will need depth, scale and liquidity to be optimally functional.

- ✓ Shared savings schemes for renovation of rented accommodation

Measures have already been introduced in some European countries to define the amount which investors can recover from tenants as part of shared savings schemes to promote renovation of rented housing. These schemes should be encouraged across the European Union.

[1] Retrofits which are aimed at reducing greenhouse gas emissions by a factor of four before 2050.

- ✓ Competitive interest rates

Energy efficiency investments have to compete with other investment opportunities. If the investment is less attractive because the interest rate is comparative to current commercial rates for house owners, energy efficient investments are not very attractive. Governments, or government institutions, can bring down the interest rates as they have access to cheaper capital on the capital markets.

4. Market-based instruments

- ✓ Creating energy savings incentives in electricity and natural gas markets

European markets for electricity and natural gas have been developed to promote reliable, secure service and competitive low-cost supply. Customer demand reduction has largely been overlooked as a resource to help meet system needs at lower costs to consumers and the economy. Energy suppliers make money by selling more energy; network owners make money by delivering greater throughput. A new business model for electric and natural gas utilities is needed in order to create the right incentives for suppliers and users to save energy, rewarding efficiency in production and reduced. Fundamentally, what is required is adoption of an "efficiency first" approach to power and gas system operations: for each operational challenge or system investment need confronting utilities, competitive investors, and governments, the question must be raised: "What part of this need could be met more reliably and less expensively through greater energy efficiency?" And then, "What market rules, mandates, or incentives will best unlock that efficiency resource?"

A large number of creative solutions are on offer in this arena, and they should be examined and instituted by European governments, power system operators, regulators and utilities. Important examples include: reforming the rate structures of network facility operators to de-link profits from the rate of system throughput; giving efficiency and demand-management providers the opportunity to compete against conventional supply-side resources in all-resource capacity markets; paying for efficiency resources that avoid the necessity of costly distribution system upgrades; creating broad-based system benefit funds to support broad-based efficiency programs; designing "smart grid" investments to help customers understand and capture large-scale, long-lasting efficiency gains; and commissioning dedicated efficiency programs or "efficiency utilities" to promote success in efficiency without the mixed incentives faced by most energy service companies in these markets today.

- ✓ Energy supplier obligations and white certificates

Government imposed supplier obligations can promote energy savings, and reward efficiency. Such obligations must be well-designed, such that the obligated parties, the level of savings and rate of increase over time, the cost recovery mechanisms, if any, the compliance period and the approach to apportioning the obligation among fuels and actors are clearly defined. They can also unlock long-term funding from obligated suppliers.

With regard to building renovations, utility obligations must be targeted to achieve deep energy savings, rather than piece-meal upgrades. This will avoid a lock-in effect. This will also ensure that utility services do not undermine the services provided by ESCOs,

which will offer much more substantial savings but with potentially longer pay-back periods and will require greater commitment by the building owner in terms of disruption to the building.

Supplier obligations, including white certificate schemes, are in effect at the regional or national level in several European jurisdictions, and their experience can and should be built on as we seek to greatly enhance delivery of efficiency services throughout Europe. While supplier obligations can be a powerful source of funding for the "public" side of the efficiency equation, it is not necessary to place the funding obligation and programme delivery in the same enterprise or agency. On the contrary, a thriving sector of small and large independent energy service providers is necessary to develop tailor-made solutions at all levels. Member States may choose to impose the supplier obligation on upstream, wholesale energy suppliers, while establishing downstream efficiency delivery agents to work with customers, or they may choose to create pooled funding schemes to concentrate delivery in the most effective manner. European institutions, including network operators, ENTSO-E and ACER, should facilitate the broad-based cost recovery rules that would facilitate funding for systematic efficiency programmes across power markets and systems.

- ✓ Reflecting un-priced external costs and benefits

One of the fundamental barriers to market-based investments in energy efficiency is the under-pricing of energy due to the externalization of the environmental costs of production and consumption. Thus, policies that internalize environmental costs, such as pollution standards and the Emissions Trading Scheme (ETS), provide indirect support for efficiency gains. However, cost internalization by itself is not enough. Due to the pervasive barriers to energy efficiency in housing markets, commercial construction, and in consumer behaviour, the price-elasticity of consumer demand is low, and the market barriers to efficiency are stubbornly high. While energy markets should fully reflect the total costs to society of energy consumption, to capture a large fraction of the cost-effective efficiency potential, much more direct regulation is required. For this reason, we continue to support a full suite of complementary measures to environmental standards and the ETS. The list includes building codes and more direct progress on the Energy Performance of Buildings Directive (EPBD), constant improvements in appliance and equipment standards, and supplier obligations and other mechanisms for widespread building retrofits. In addition, one of the most powerful tools available to the Member States will be the new opportunity to provide substantial funding for efficiency programs through use of the revenues made available by the auction of carbon allowances. It is altogether fitting that a policy to impose pollution charges on energy "bads" should be directly linked to financial support for investments in energy "goods" that not only lower emissions directly, but do so at the lowest cost to society. We encourage the Commission to support, and the Member States to enact, policies that provide meaningful public support for efficiency investments, and in particular, take advantage of the ETS auction revenues to support deep investments in energy efficiency for the benefit of the environment and the economy.

5. Coordination

In addition to these specific measures, there needs to be a greater attention paid to the coordination of finance mechanisms, and to their delivery and evaluation. No single solution exists for financing energy efficiency investments; hence the portfolio of measures must be capable of working together in a flexible, efficient manner. The elements required include:

- ✓ A stable framework for investment

Investment must be encouraged through a stable framework which provides assurances of stability and long-term returns on investment.

- ✓ Coordination of instruments

Instruments must be better coordinated, so that, for example, loans and subsidies can be easily combined to finance projects, and potential customers do not have to shop around a patchwork of different funding sources.

- ✓ Cross-sectoral funding

Funding for energy efficiency must be available across different sectors of the economy.

- ✓ Adequate delivery monitoring and evaluation mechanisms to ensure quality

Instruments are needed to ensure that the success of energy savings measures can be tracked, to ensure that the European Union gets back on track to achieve the 2020 energy savings target.

The Coalition for Energy Savings brings together business, professional and civil society associations. The Coalition's purpose is to make the case for a European energy policy that places a much greater, more meaningful emphasis on energy efficiency and savings. In particular it is arguing for the current 20% energy efficiency target to be binding.

Members of The Coalition:

The Architects' Council of Europe (ACE)
Buildings Performance Institute Europe (BPIE)
ClientEarth
Climate Action Network – Europe (CAN-Europe)
The Climate Group
COGEN Europe
The European Alliance of Companies for Energy Efficiency in Buildings (EuroACE)
The European Alliance to Save Energy (EU-ASE)
European Association of Polyurethane Insulation Manufacturers (PU Europe)
The European Climate Foundation
The European Committee of Domestic Equipment Manufacturers (CECED)
European Copper Institute
The European Council for an Energy Efficient Economy (eceee)
European Environmental Bureau (EEB)
The European Insulation Manufacturers Association (Eurima)
European Lamp Companies Federation (ELCF)
The European Liaison Committee For Social Housing (CECODHAS)
Friends of the Earth Europe
Glass for Europe
The Prince of Wales's EU Corporate Leaders Group on Climate Change (EU CLG)
The Regulatory Assistance Project (RAP)
The Royal Institution of Chartered Surveyors (RICS)
WWF

The Coalition for ENERGY SAVINGS