

Key Policy Issues from a study on demand-side eco-innovation policy

Is there a way to improve the targeting and commercial success of eco-innovation policy?

A new study by COWI for DG Environment recommends the development of expanded demand-side policy – particularly catalytic procurement - in the EU as a cost-effective way of stimulating eco-innovation.

Based on existing experience with similar policies in the EU and US, it describes the requirements for a successful policy programme. The policy programme needs to remedy an information failure about future markets that frequently holds back commercialisation of prototypes. The key aspects are:

- formation of groups of potential customers for an innovation to indicate future market demand; and
- use of pre-announced market support instruments to support future commercialisation.

By leveraging the market's purchasing power and tapping into information on market demand, this form of policy can be more cost-effective at bringing about successful innovation than supply-side subsidy.

What are the current problems that catalytic procurement could tackle?

The most significant problem hindering greater investment in eco-innovation is the a 'chicken or egg' trap: manufacturers wait until there is a demonstrated demand before they develop and commercialise technologies, but buyers wait to see the product on the market before they demonstrate they will buy it (*ten Cate et al, 1998*). Beneficial eco-innovations developed to prototypes are not commercialised due to this uncertainty about future markets.

Current EU demand-side innovation policy appears limited in the way it tackles the 'chicken and egg' problem. Existing policy instruments which could be used to support commercialisation of innovation, e.g. product policy, do not appear to be used to tackle this problem.

Eco-innovation often brings higher external benefits than other innovation because eco-innovations themselves deliver a positive externality in addition to the innovation externality, e.g. a reduction in external costs from environmental damage, or greater energy security.

What does the study recommend is done?

Innovation procurement policy creates a way to solve this problem - by exchanging information between potential buyers and innovators and giving advance notification of future support for marketing innovations.

The European Commission should use upcoming evaluations of the ETAP and Lead Markets Initiative to identify the current scope of EU demand-side innovation policy and how aspects of existing instruments (eg. LMI, technology platforms, product policy) might be expanded to form a stronger, demand-side, innovation procurement policy. The study makes specific recommendations on the practicalities of how to shape a wider innovation procurement policy, including the links to existing EU policy.

How does the policy work?

- To most efficiently boost commercialisation of eco-innovation, procurement policy should play the role of facilitator, rather than buyer. The facilitator gathers together private and public purchasers with an interest in an innovation with environmental characteristics, e.g., an improved energy system for buildings. These buyers set out what they would need from an innovation, in terms of its function, characteristics and price. Innovators then assess whether they can meet those requirements.
- If the buyer group constitutes a considerable market share, its views are influential on manufacturers assessing whether there is a sufficiently large commercial market for their innovation. This 'bundling of future demand' is a key aspect of the policy. Whilst an indication from a buyer group that they would be likely to buy a certain number of products is a very effective policy instrument, most potential manufacturers do not need a guaranteed purchase.
- Based on the analysis coming out of the buyer groups, various policy and market instruments may be announced to support future market uptake, to give greater confidence to innovators that they will be able to break into existing markets. This requires up-front commitments by the European Commission and Member States to make existing and future policy measures available, matching the instrument to the specific problem in a market. For example, pre-announced public testing and evaluation of an innovation is seen as effective to reassure innovators that they will be able to differentiate the innovation from existing products.

What demand-side instruments should be considered as part of this policy?

- Sales support through subsidies for a certain number of products sold, paid either to the manufacturer or to purchasers (including those purchasers in the buyer group)
- The revision of product labelling classes (e.g. energy labels) to allow the innovative products to differentiate their performance from products already on the market.
- Matching future green public procurement criteria to the technical requirements set up for the product.
- Guaranteed markets – a pre-commitment to purchasing of a certain number of products. This can also take the form of a pre-commercial procurement process.
- Publicity campaigns for the best product(s), which could focus around the award of a prize, including promotion at trade fairs and product demonstration facilities.
- A financial 'prize' when the best product is put on the market.

For which products can this be used to achieving existing policy goals?

Innovation procurement policy has already been applied in some countries to achieve environmental and energy goals (first 5 bullets below). Analysis suggests applying it in 5 further areas (the later bullets):

- White appliances (energy-efficient refrigerators, ovens, washing machines and tumble driers).
- Components (high-efficient motors).
- Housing (energy-efficient water mixer).
- Office blocks (control and monitoring systems, sun shading technology and lighting system).
- Public transportation (hydrogen buses).

- The transport sector (hydrogen powered fuel cell, electric car, electric motors, city buses).
- Wastewater treatment (environmental biotechnology).
- Chemical components (DEHP-free component).
- Healthcare products (e.g. continence care products).
- Energy-efficient components (pumps).

What are the costs?

Based on Swedish experience the costs of a project to support commercialisation of an innovation are estimated to EUR 100,000 - 500,000 for each specific area of innovation. There do not appear to be legal constraints on use of this policy.

For more information?

The study "**Bridging the Valley of Death: public support for commercialisation of eco-innovation**" with an executive summary is available on the European Commission's website on this link:

http://ec.europa.eu/environment/enveco/innovation_technology/index.htm

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