

Public procurement for green innovation

Public procurement has played a key role in the development of high-technology sectors and industries. In the United States, demand from the military – in conjunction with military R&D programmes – contributed to the development and diffusion of technologies such as the Internet and the Global Positioning System (GPS). As public procurement accounts for 15% of GDP in OECD countries, many governments today aim to include innovation in general public procurement, for example through awareness-raising measures and training of procurement agency personnel, and to stimulate innovation through more direct measures such as specific functional or performance standards in public tenders.

Many OECD countries have introduced programmes to encourage green innovation by providing and enlarging core public demand. Public procurement can create a market for green technologies that face cost disadvantages and can facilitate feedback between experimental users and technology providers. It can also promote diffusion of such technologies and services by overcoming information asymmetries and a potential consumer bias against green products and technologies.

The general procurement framework can have an indirect demand-pull impact if (environmental) regulations and industry standards help make public procurement more innovation-friendly and if green innovation becomes a by-product of general procurement. It can also encourage technological innovation more directly by specifying green innovative goods and services. In 2003, the European Commission called on member states to adopt national action plans for green public procurement. Although they are not legally binding, 21 member states have adopted such plans. The measures and criteria vary.

Studies on semiconductors and other electronic innovations suggest that public procurement contracts can serve the same function as a prize and induce innovative efforts by business (Mowery et al., 2010). Some OECD governments, for example, have guaranteed public procurement for award-winning technologies in energy-efficiency competitions.

Reverse auction is yet another procurement tool that can be used to support the commercialisation of green technology. This would require procurement of green technology outputs (e.g. second generation biofuels) up to a given cost, at prices determined through competitive bidding. The US Department of Energy issued in mid-2010 a notice for a first reverse auction, with a budget of USD 4.6 million. It aims to stimulate the production of cellulosic bio-fuels, with a target of 1 billion gallons for 2013.

References

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[1] <http://dx.doi.org/10.1787/9789264119925-en>

[2] http://dx.doi.org/10.1787/sti_outlook-2012-5-en