

# Science for Environment Policy

## Simple steps to increase the uptake of sustainable service-based business models

**'Product-service systems' are innovative business models designed to satisfy societal needs in an environmentally sustainable manner.** This study explores how government policies could increase the uptake of these systems, outlining five key recommendations to achieve this, including schemes to raise awareness and involve local authorities.

There are concerns that the business models currently relied upon to satisfy basic human needs are environmentally unsustainable, with a growing number of voices calling for new models that recognise the value of ecological systems and natural capital for human welfare<sup>1</sup>. Of the new business models proposed to satisfy societal needs in a [sustainable](#) manner, product-service systems (PSSs) have received particular attention.

PSSs describe when a business offers a mix of products and services, in contrast to the traditional product-driven models, and are designed to meet customer needs with reduced environmental impact. Examples include Michelin's [fleet-management solution](#), in which tyres are sold per kilometre driven to reduce fuel use and emissions, or Rolls Royce's '[Power by the Hour](#)' service for aircraft engines, whereby maintenance and repair services are charged per hour of flight.

Although the benefits of PSSs have been well recognised, adoption remains limited due to corporate, cultural and regulatory barriers. This paper studied how 'demand-pull' government policies — which influence demand for innovations, through economic incentives for example — may stimulate uptake of PSSs.

Findings were based on [energy](#) service companies (ESCOs) in the UK. The researchers carried out a review of academic, governmental, industrial and voluntary sector literature on energy service provision and ESCo activity. As a result, they identified energy-service market stakeholders in the UK with a range of professional backgrounds relevant to energy provision and use.

Forty-three interviews were conducted with the stakeholders between July 2010 and May 2012, exploring the factors that have supported or inhibited ESCo activity in the UK, the policies that have supported activity in the past, and measures that might address barriers in the future.

In particular, four categories of demand-pull policies were explored: regulation (e.g. energy efficiency obligations and low-carbon building regulations), economic incentives (e.g. financial incentives for low-carbon projects), informative policies (e.g. training schemes and awareness initiatives) and direct public sector purchasing (e.g. procurement protocols that support energy-service contracting).

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1. Bocken, N., Short, S., Rana, P. & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, 65, pp.42–56

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Based on the results of the interviews, the authors make five key policy recommendations to support PSSs:

1. **Balancing economic incentives with regulatory disincentives**
2. **Promoting indirect policy support**, such as schemes to raise awareness of PSSs among suppliers and consumers
3. **Redesigning existing market structures**, such as making electricity trading arrangements more flexible
4. **Promoting locally-led PSS activity**, such as regulations that incentivise local authorities (and provide them with sufficient power) to support PSS businesses
5. **Creating stable policy frameworks** — avoiding sudden or large changes to regulation, so that firms and investors can be confident that the policy environment will be supportive of PSS activity in the future.

This policy analysis provides support for publicly funded educational initiatives to promote energy-service contracting among ESCo customers and prospective companies. The researchers say these initiatives should be managed by government, in line with the [European Energy Efficiency Directive](#), which requires Member States to disseminate 'clear and easily accessible' information on arrangements for energy-service contracting. The analysis is also relevant to the Directive's requirement for Member States to identify and remove regulatory and non-regulatory barriers to the use of energy-performance contracting.

Although government has a critical role to play in supporting PSSs, the researchers say national policy cannot address all barriers to PSS activity, citing customer preferences and international economic developments as examples. They recommend research into complementary solutions to these barriers. They also suggest that other governance actors, such as the European Union, trade associations and local authorities, implement policies to support PSSs.

