

Using outcomes-based contracting to tackle the climate crisis

EXECUTIVE SUMMARY | September 2022

Outcomes-based contracting (OBC) has the potential to contribute towards meeting environmental objectives, and has been implemented in a range of environmental policy areas, including agriculture, waste management, and energy. Existing empirical evidence is fragmented, however, and has never been systematically collated and examined. This report offers an overview of the existing empirical literature on environmental OBC, and a summary of key findings from across the evidence, including the challenges and successes of project implementation and some indications of the environmental outcomes achieved.

RECOMMENDATIONS

1) To ensure that they are both ambitious *and* realistic, incentivised *targets* should be attuned to local context and based on an understanding of key environmental factors

Difficulties arise when targets are based on unrealistic predictions of what is possible. It is therefore important to consult with communities and experts, and to draw on existing data, to inform incentive design. If available, historical records of the environmental factors that will influence service performance should be examined. Proportional payments according to progress made may help avoid ‘incentive-motivation mismatch’ - but the balance between flexibility and discipline needs to be considered carefully.

2) Environmental *metrics* should be chosen with due consideration for broader ecological effects

Interventions into ecosystems should be informed by an understanding of their complexity, as unintended effects may occur when only one outcome is financially incentivised. People with knowledge of the ecosystem and associated communities should therefore be involved in the design of environmental OBCs, so the interests of the ecosystem as a whole can be represented in the contracting process.

3) Energy service company (ESCO) contracts should be explored for their application into other environmental policy areas

The evidence indicates ESCO contracts - wherein the energy service company is financially rewarded for reducing a client organisation’s energy usage - are well established, operating at scale, and generally achieve the desired energy savings. Both researchers and practitioners should therefore explore the extent to which the ‘ESCO model’ can translate into other policy areas and economic contexts.

WHAT IS ENVIRONMENTAL OUTCOMES-BASED CONTRACTING?

Outcomes-based contracting is a funding structure for the provision of services. A provider is responsible for delivering contracted services on behalf of a commissioner. The commissioner pays the provider, with payment contingent upon the achievement of pre-specified, measurable outcomes. Environmental OBC is therefore a version of this funding arrangement where payment is made for *environmental* outcomes - better water quality, reduced energy usage, and so on.¹

NATURE AND COVERAGE OF THE EVIDENCE ON ENVIRONMENTAL OUTCOMES-BASED CONTRACTING

The evidence for environmental OBC collated in this report consists of 18 published studies. Across those studies, the research team identified 71 individual outcomes contracts.²

The OBCs represented in the evidence cover a range of environmental policy areas: energy (51); pollution and waste management (8); water (8); agriculture (2); and sustainable infrastructure (2). The large majority of OBCs represented within the evidence are therefore energy programmes.

A wide variety of metrics were used to determine outcome payments across environmental policy areas, as the following sample demonstrates: reduced energy usage; increased crop yields; ‘cleanliness’ of stoves; improved water quality; reduced stormwater run-off; as well as various service delivery standards (such as health and safety). Social goals are included alongside environmental goals in some OBCs, either directly as payable outcomes, or indirectly as conceived within the broader aims of a project.

Geographically, the majority of the OBCs were implemented in the USA (52), followed by Taiwan (8), India (6), Peru (2), China (1), Indonesia (1), and the UK (1).

The use of OBC for environmental policy therefore appears to be quite well established, at least for achieving demand-side energy savings. The evidence suggests more diversity in both policy area and geographical location since the 2010s. While not conclusive (given the small sample size), this could suggest a growing appetite globally for environmental OBC. Nevertheless, the evidence remains clearly skewed towards energy programmes, and towards the USA, raising

¹ For the purposes of this report, we have limited the definition of OBC to those that commission private or non-governmental organisations only. Alternative forms of OBC that pay public sector organisations, or individual people/households, are therefore *not* addressed in this report.

² It is apparent that many more individual OBCs have been implemented - these 71 are simply those that were discussed with sufficient detail in the available studies to allow for their data to be collated by the research team.

the question of how far the lessons learned can be applied to other policy areas, economies, and geographies.

SYNTHESIS OF FINDINGS FROM THE REVIEWED STUDIES

Use case

The most frequently reported reasons for using an OBC were to incentivise achievement of the desired environmental end, and to allow the service provider flexibility and innovation towards that end. For the specific goal of reduced energy consumption, OBC is claimed to remove financial barriers to implementing energy saving measures, as well as to address the financial concerns of utilities companies for whom reduced energy usage would otherwise be against their interests.

Implementation challenges and successes

The challenges and successes reported in the included studies emphasise the importance of a well-designed incentive structure; namely, clearly-defined outcomes metrics and realistic targets. Projects that did not include such well-chosen metrics and targets reported a variety of challenges, including inability to verify a specified outcome, and ‘incentive-motivation mismatches’ whereby the potential benefit to the service provider is outweighed by the cost/difficulty of meeting contracted targets. Further factors reportedly contributing to successful implementation were stakeholder buy-in, and a legal/regulatory context that facilitates, rather than restricts, the kinds of innovative service partnership that OBCs are intended to produce.

Environmental outcomes achieved

From those studies that reported on outcomes achieved, two main findings arise: 1) Energy service company (ESCO) contracts designed to achieve energy savings largely achieved that aim; 2) Public-private partnerships for water quality and provision in India made minimal or no progress towards incentivised target.

A development impact bond (DIB) for cocoa production in Peru and a World Bank Clean Stoves Initiative were the only other projects with outcomes data reported in this review’s included studies. Service users in the Clean Stove Initiative in China saved fuel and reported improved air quality. The Cocoa DIB met and exceeded two of its four targets, and made progress towards, but ultimately missed, the other two.

Influence of OBC on service delivery

The practice of monitoring and measuring progress inherent in the OBC model was reported to have positive influence on service delivery in energy projects, a waste management project, and the clean stoves initiative. The monitoring process prompted services to learn and improve their program design and delivery. By contrast, however, in an Indian water PPP, the attempt to introduce monitoring was met with public opposition, stalling the project’s implementation.

RESEARCH METHOD: SYSTEMATIC REVIEW

The method used in this report is a systematic review. A systematic review is a form of literature review that uses rigorous searching and screening in order to collate all existing published evidence on a particular topic. This establishes a clear understanding of the current state of an evidence base, and allows insights to be synthesised from across a comprehensive body of available research.

The environmental focus of this report is part of a wider systematic review of outcomes-based contracting in *all* policy areas, currently being conducted by the Government Outcomes Lab and Ecorys. The research team identified 18 studies of environmental outcomes contracts, which constitute the evidence for this report. Details of the studies and the OBC programmes they examine were summarised, and ‘evidence maps’ produced to represent the state and coverage of the available evidence (section 3). Key findings from across the studies were then extracted and synthesised, focusing on the reported rationale for using OBC, the challenges and successes of design and implementation, and the reported impacts and outcomes of environmental OBC (section 4).

The report’s findings were discussed with a panel of experts in a roundtable discussion, which aided the research team’s analysis and brought to light further implications for policy.