GPP In practice

Low carbon waste collection services

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BRISTOL CITY COUNCIL, UK

Background

The City of Bristol was recently awarded the European Green Capital Award 2015 for allocating €800m towards transport improvements, energy efficiency and renewable energy, for consistently reducing carbon dioxide equivalent (CO_2e) emissions since 2005 and for doubling the number of cyclists between 2001 and 2011. The award also recognised Bristol's growing green economy and ambition to become a centre of low carbon industry.

Bristol City's sustainable procurement strategy was adopted in 2009. It includes training, the development of relevant criteria, clauses and targets, monitoring SPP and market development. Every new purchase that requires a contract undergoes a sustainability assessment and input from the environment team, including recommended GPP criteria.

The Council has had emissions reduction targets for a number of years, but in 2011 a new target for the whole city was adopted to reduce CO_2e by 40% by 2020, from the baseline year 2005.

Procurement objectives

The procurement procedure for a service contract for the collection of municipal waste and winter road maintenance around the City of Bristol began in 2009. Analysis showed that the market had changed considerably over the previous ten year contract; therefore it was important to use the tender to drive economic and environmental improvements.

Pre-qualified service providers took part in a competitive dialogue procedure to explore the diverse approaches available within the waste industry. This was also considered the optimum way of achieving high recycling rates, a reduction in emissions and good value for money.

Bristol's waste team set separation requirements for the contract, whilst the environment team set CO_2e reduction targets. The contract began in November 2011 and includes the provision of vehicles, staff and depots for waste collection, road gritting, snow ploughing and relevant communication with the public.

Criteria used

On the first page of the specification, the aims of Bristol by 2015 (as relevant to the contract) were set out, which included being a beacon authority delivering locally accountable 'Streetscene' services including street cleansing, litter picking, graffiti removal, litter bin emptying, and recovery of fly tipping. Aims also included working with partners to achieve excellence, being a recognised leader in waste collection and recycling, and being Britain's cleanest City.

Selection Criteria: A pre-qualifications phase allowed the selection of candidates according to the appropriateness of their Environmental Management System (EMS). This was necessary due to the subsequent requirements of the Environment Agency.

Desired Outcomes: Due to the fact that a competitive dialogue process was carried out, 'desired outcomes' were used as opposed to conformance-based technical specifications. These included:

- Reduce the 'carbon footprint' associated with the service in line with the agreed 2020 target for Bristol,
- Increase waste reduction, reuse, recycling and composting, towards an aim of zero waste,
- Deliver significant reductions of untreated waste sent to landfill,
- Maximise the efficient recovery of resources i.e. recyclates and energy from residual waste,
- Tackle and reduce the incidents of environmental crime (e.g. by storing and collecting evidence from 'fly tipping'),
- Enhance community understanding of sustainable waste management.

Award criteria: Bidders were judged on the bids they put together following the competitive dialogue procedure and were evaluated according to factors including a carbon management plan indicating how they would achieve reduction targets. 4% of marks were allocated to environment and sustainability aspects including the carbon footprint of the service, quality of EMSs and the environmental impacts of the winter maintenance service. Effective operational management of the following aspects were also evaluated; waste collection (13%); street cleansing (12%); winter maintenance (4%) and waste transfer and processing (2%). A demonstration of how the bidder would meet performance targets for waste collection (8%) and street cleansing (5%) was also scored.

Contract performance clauses: The share of CO_2e emissions savings from this service contract, which would contribute to the overarching municipal target, was defined. In order to do this, the City target of a 40% reduction in CO_2e emissions by 2020 (baseline 2005) was adjusted on a pro rata basis to fit the length of the service contract (2011 – 2017). Baseline emissions data from the previous contractor (2009/2010) were used to help calculate tonnes of CO_2e saved. Calculations were also carried out on the difference in efficiency of available vehicles

compared to the existing fleet and the likely savings from optimising the collection regime. The resulting CO_2e reduction target set by the Council was 25%. Given the time needed to implement changes, there was no penalty clause during year one. Thereafter, the penalty rises for each 1% above the target, to a maximum of 0.375% of the annual contract value. Any money raised was earmarked for environmental improvements in lieu of those the contractor failed to make.

Results

Six companies expressed an interest in taking part in the competitive dialogue and three were pre-qualified to take part. The emissions reduction plans from all bidders offered similar strategies, with new fleets and altered collection regimes.

In their carbon management plan, the successful bidder made a commitment to replace the fleet with new multi-compartment vehicles that allowed a new collection regime, which reduced the number of journeys necessary. They also committed to using telematics equipment within the new fleet to aid monitoring of carbon impacts such as; driver behavior and associated efficiency; the vehicle's movements in real time to identify delays, reasons for missed collections and better routing possibilities; and load weights, ensuring that vehicles are not overfilled. The winning bidder offered a CO_2e reduction of 32%, which exceeded the Council's target of 25%. Best estimates for carbon savings are currently 12% for the first year of the contract.

Environmental impacts

Road transportation accounts for around 24% of all CO_2 emissions in the EU. Urban areas in particular suffer from air and noise pollution during a vehicle's use phase. Public authorities must therefore work with contractors to minimise the harmful impacts of the transport-related services they provide. The aim of this contract was to reduce annual emissions by around 720 tonnes by the end of the contract. Since most improvements would come from replacing the fleet of vehicles at the beginning of the contract, it was possible to 'frontload' the CO_2e reduction target in order to achieve emissions reductions as early in the contract period as possible.

Three billion tonnes of waste are generated each year within the EU. Most of what is thrown away is either burnt in incinerators, or dumped into landfill sites (67%), causing environmental damage. Landfilling not only takes up valuable land space, it also causes air, water and soil pollution, discharging CO_2 and methane into the atmosphere and chemicals and pesticides into the earth and groundwater. An important objective for Bristol is to increase recycling rates within the City and this has partly been achieved through enhanced treatment of black bag waste at the mechanical biological treatment plant. This, together with the successful contractor's improved collection system, means that the Council's 50% recycling rate target has been achieved a year ahead of schedule (rates were at 38% by the end of the previous contract). In addition to the numerous waste streams already taken for recycling, the new contractor collects mixed plastic packaging and waxed beverage cartons.

Lessons learned

- Transportation-based service contracts should only be set up/extended for period's equivalent to the length of the reasonable economic lifespan of the vehicle fleet.
- The size of the contract and the competitive dialogue procedure used twice the amount of time usually spent on a contract awarded under the open procedure. However, the final evaluation was found to be no more complex than an average tender.
- Originally, both incentive and penalty clauses were planned but this was not possible in the end, due to restrictive budgets. A difficulty with the penalty clause system was that the CO_2e reduction target could not be made too challenging, because a higher risk of supplier failure would imply price increases.
- It was useful to have monitored CO_2e emissions in the past and to have set overarching Council targets in order to both justify collecting emissions data from suppliers and to help calculate reduction requirements as part of service contracts. Being clear about data requirements and asking providers about the amount of fuel used, rather than about miles covered in a generic vehicle type, resulted in more accurate data when calculating fleet emissions.

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