Procuring climate-friendly waste collection and treatment services
Municipality of Sarpsborg (Norway)

Background
The city of Sarpsborg is located in the county of Østfold, situated south-east Norway, and has a population of 54,678 people.

In August 2016, the Municipality of Sarpsborg re-tendered its waste collection service, encouraging bidders to consider how their proposed service could contribute to the Sarpsborg Energy and Climate Plan. The Energy and Climate Plan was first setup in 2002 and aims to significantly reduce greenhouse gas emissions (GHG) in the city. In 2008, emissions were estimated to total 374,000 tonnes of CO₂ equivalents (7.4 tonnes per inhabitant) mostly caused by road traffic and industries.

The current Energy and Climate Plan (2011-2020) has an overall target to reduce direct GHG by 50%, by 2020, and focuses on five areas of action: Transport, energy consumption of buildings, waste management, climate change adaptation, and capacity building and knowledge exchange.

Procurement objectives
In August 2016, the Municipality launched an ‘open’ public procurement procedure to tender Sarpsborg’s waste collection service for the next five years.

Service requirements included the collection of sorted waste, the provision of collection facilities and the transportation of waste to specified recycling/end-points.

The procurement was run according to a ‘most economically advantageous tender’ (MEAT) model, with selection criteria used to exclude bidders who were unable to meet certain minimum environmental (and social) criteria. The award criteria were used to rank bids according to price and quality aspects. By encouraging a reduction of CO₂ emissions as part of the award criteria, the winning service - which will introduce two fully electrified waste collection trucks - is not only cheaper due to the low cost of hydro-energy in Norway - but will also result in savings of approximately 300 tonnes of CO₂ emissions annually.
Criteria used

Subject matter of the contract:
Sanitation service for Sarpsborg municipality covering:

- Collection of source sorted consumable waste from households (and holiday home areas), municipal buildings and companies in the municipality;
- Collection units for waste and the collection of waste from events;
- Hire of containers for clearance waste and building waste from the municipality’s entities.

Loading, transportation and recycling of waste from the collections described.

The contract shall also include the two further options:

- Collection of food waste in separate containers,
- Collection of glass and metal packaging in separate containers.

Regarding the two options: The municipality of Sarpsborg plans to revise the Municipal Plan for Waste during the period. This may imply that a political decision is made to introduce collection arrangements for more waste types such as food waste, hazardous waste and glass and metal packaging.

Technical specifications:
Minimum performance requirements for the vehicles used to execute the service:

a) Minimum of European Emission Standard (EURO) 6 for vehicles to be used for the collection of waste.
b) Minimum of EURO 5 to be used for further transportation to the treatment plant.

In addition, due to an existing agreement between the Municipality of Sarpsborg and recycling provider Grønt Punkt Norge AS, bidders also had to meet requirements for plastic packaging after collection (that is, transportation, sorting, balling, storage and uploading), in order to ensure the ongoing recovery of plastic waste.

Award criteria:
The most economically advantageous tender was awarded the contract based on the following:

- Quality and Environment (60% of total points)
- Price (40% of total points)

The criteria for ‘Quality and Environment’ were presented in the format of a ‘Description of Needs’ which bidders were asked to respond to. This required details about the following aspects of the service:

- Implementation plan, that is, collection schedule, routes, staffing, treatment of special cases, etc.
- Road and vehicle adaptation, such as ensuring that roads where collection is needed can be appropriately serviced.
- Environmental aspect of waste transportation, in particular, how the proposed solution will affect GHG. As such, bidders were asked to:
  - Account for company environmental management and vision through possible certifications, or as a minimum describe the company’s environmental policy;
  - Set out an environmental solution for the transport and treatment of waste and utilisation of energy;
  - Specifically outline how their solution could contribute to the Sarpsborg Energy and Climate Plan.

- Recycling of waste: Ensuring continued collection, monitoring, and ability to collect further waste streams, as may be required over the course of the contract.
Contract performance clauses:
The contracting authority (Sarpsborg) reserved the ‘right to check’ aspects such as workmanship, composition of waste, suppliers’ vehicle equipment as well as trans-shipment and treatment facilities.

The supplier should work with the contracting authority, providing information when requested, and reporting any deviations from planned service levels. The supplier is also required to report on waste volumes, material grade and trans-shipment levels, etc. in order to inform the Municipality’s environmental reporting and waste planning.

Results

The Call for Tenders was published in August 2016, with the contract signed in early December of the same year. Four bids were received. The service will run between 1 October 2017 to 30 September 2022. The contract is valued at over €21 million (204,822,859 Norwegian Krone) in total.

The inclusion of ‘quality and environment’ criteria, particularly those addressing the minimisation of emissions related to the transportation of waste, resulted in bidders proposing several low carbon alternatives to traditional waste collection trucks, with substantial CO\textsubscript{2} emission improvements also offered. Bids were thus assessed according to:

- Type of ‘low GHG’ powered vehicles and the number of them assured, and
- Transportation distance to further waste processing.

Offers were assigned scores for both price and quality on a scale of 0 to 10 (with 10 being the best possible score). A linear point model was used to compare offers. For example, the lowest price was awarded a score of 10; bids priced at double or more received a score of 1; others received scores calculated in relation to these maximum and minimum values.

The winning bid was not only the one with the lowest price, it also scored highest on quality due to its compatibility with the Sarpsborg Energy and Climate Plan.

Environmental Impacts

The winning tender covered a range of environmental considerations in its service design.

One of the best qualities of the winning bid was the resulting introduction of two fully electric waste collection trucks in Sarpsborg’s city centre, with the remaining six cars in the fleet being converted from diesel to biogas. In Norway, the electricity sector relies predominantly on hydroelectricity, which is considered a renewable source of energy. By switching to electric waste collection vehicles, and reducing transportation routes, approximately 300 tonnes of CO\textsubscript{2} emissions can be saved per year. With Norwegian hydropower and low electricity costs, the total cost of ownership for these cars will prove far lower than the conventional ones. Electric powered trucks are significantly quieter, reducing noise pollution in urban areas. Furthermore, six other trucks, which currently run on diesel, will be converted to biogas. Thus, the entire fleet will operate completely free of fossil fuels in the short-term future. In addition, the new contract will see paper waste treated locally instead of transporting it to Gothenburg for treatment – over 200 kilometres away. Paper waste amounted to 2,400 tonnes in 2016.

Finally, by also assessing bids according to transportation distance to further waste processing, the winning bid also included agreements with local actors for the treatment of both residual and food waste, which will further reduce emissions related to transport to waste treatment plants.
Lessons learned

- This procurement was achieved within the framework of a traditional ‘open’ tender competition. Weighting the award criteria to favour environment and quality raised the standard without impacting price, with the winning bid in fact making the best offer across all three criteria.
- By combining waste collection and further waste processing in one procurement, it was possible to procure a more holistic and efficient solution which also reduces the need to transport waste.
- Including social requirements in the contract – for example professional injury insurance, collective agreement, use of own employees, documentation, and compliance with the Conventions of the International Labour Organisation – indicates that price is not lowered at the expense of those who perform the job, thus safeguarding against ‘social dumping’.

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For related information, please see European GPP criteria for Transport and the Technical Background Report.