Country case: Green public procurement in the Netherlands

Description

Public Procurement Principle: **Balance, E-procurement**

Procurement Stage: **Pre-Tendering, Tendering**

Audience: **Policy Maker, Procuring Entity, Private Sector**

Rijkswaterstaat (the Department of Public Works of the Ministry of Infrastructure and the Environment, RWS) developed a methodology for infrastructure projects whereby the functional specification of the tender, together with the quality input from the client, ensure an innovative and high-quality solution. The tenderer is also asked to respond to specific quality criteria. The RWS uses the most economically advantageous tender (MEAT) methodology, including specific sustainability criteria.

The RWS has decided to focus on two criteria when assessing the sustainability attributes of offers, work processes and associated products: CO2 emissions and environmental impact. Two instruments have therefore been developed: the CO2 performance ladder and "DuboCalc", respectively.

The CO2 performance ladder is a certification system with which a tenderer can show the measures to be taken to limit CO2 emissions within the company and in projects, as well as elsewhere in the supply chain. DuboCalc is a life-cycle analysis (LCA) based tool that calculates the sustainability value of a specific design based on the materials to be used. Bidders use DuboCalc to compare different design options for their submissions. The DuboCalc score of the preferred design is submitted with the tender price.

A tenderer can submit a CO2 performance ladder certificate with their tender submission. The certificate obliges the tenderer to comply with a certain CO2 reduction target according to its method of execution and working processes. Holders of the certificate have their submission price reduced by a value proportional to the effort made to reduce CO2 emissions. The CO2 performance ladder certificate can be provided as evidence at the tender submission stage, but this is not compulsory as long as the certificate is provided within one year of signing the contract.

CO2 performance ladder

Contractors can apply for a CO2 performance ladder certificate. In order to comply, contractors need to take steps towards reducing their carbon footprint. The first step (or "rung" on the ladder) is to measure the company's CO2 emissions. In further steps, supply chain CO2 emissions are also measured, and more importantly goals are set towards reducing emissions. The higher levels on the CO2 ladder include steps towards CO2 reduction in the supply chain.

The CO2 performance ladder is used in the tendering procedure as follows: the bidder indicates at which of the five rungs (ambition levels) of the CO2 performance ladder he/she intends to carry out the work; the higher the effort to reduce CO2 emissions, the higher the rung. A commitment to a higher rung results in a greater deduction from the submission price, which increases the chance of winning the contract. Each CO2 ambition level corresponds to a different percentage reduction of the submission price. The final amount assessed by the RWS using the CO2 performance ladder is a deduction of 1% per rung of the submission price. The highest level is Rung 5, so the maximum deduction is 5%.

DuboCalc

To quantify the sustainability of material use, the RWS has developed a software tool that calculates the environmental impact of construction materials. This calculation is based on an LCA of the material. The software is called the Sustainable Building Calculator, or "DuboCalc". This tool can be used in tenders for works if the design phase is included in the tender. Dubocalc was developed as part of an overall trend towards performance-based tendering assessing the overall environmental impact of constructions rather than prescribing details.

With DuboCalc, all embedded environmental impacts of material use can be calculated, from raw material extraction and production up to and including demolition and recycling (the entire life cycle). DuboCalc also calculates the energy consumed by infrastructure works during the use phase.

For a DuboCalc calculation of infrastructure works, the programme requires input of the amounts of materials used for a particular design. Using LCA data from a built-in database, it calculates 11 environmental impact parameters. The software is based on an independent (national) dataset containing certified LCA information for each material.

DuboCalc calculates the value of these effects via the so-called "shadow price method" to arrive at a single figure, the Environmental Cost Indicator value (ECI value). The shadow price method is based on the costs of preventing emissions from arising. The ECI value indicates the environmental impact of a particular design for civil engineering works. A lower value indicates lower environmental impact. Designs that differ significantly from each other in terms of material use also differ in terms of environmental quality. DuboCalc enables designers to calculate ECI values of alternative designs to arrive at an optimally sustainable design.

The ECI value is used in the tendering procedure as follows: the contracting authority provides the tenderer with all the functional requirements and the latest version of the DuboCalc programme. The tenderer designs the infrastructure and calculates the price and the ECI value. The ECI value is transformed into a monetary value according to a formula that is prescribed by the tenderer (the ECI value and monetary value are inversely related and there is a minimum and a maximum). These two prices are offered to the contracting authority. The contracting authority selects the tenderer with the lowest price and ECI value combined to undertake the work.

Source: OECD (2015), *Effective Delivery of Large Infrastructure Projects: The Case of the New International Airport of Mexico City*, OECD Publishing, Paris.