Environmental criteria for sustainable public procurement of

Pumping Stations

Version 7 May 2015

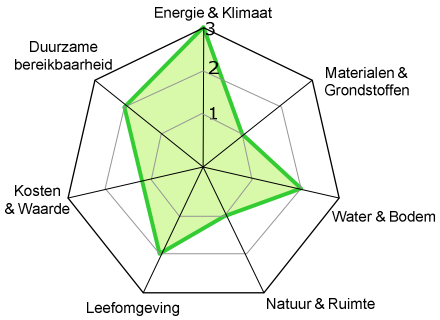
1. Scope/definition

The Pumping Stations product group comprises the surface water and sewage pumping stations managed by the government (water boards, Directorate-General for Public Works and Water Management and municipalities). The following products (with their corresponding CPV codes) are part of this product group. This list of products is not intended to be exhaustive.

Products	CPV code
Design and consultation on new works and reconstruction	71322000
Design of facilities	71323200
Engineering works and construction works	45220000
Mechanical facilities	45350000
Activities for facilities in construction sector	45300000
Pump station construction	45232152
Electrical pumps	31681200
Demolition	45111100-9

2. Criteria documents and approach to sustainable groundwork, road and hydraulic engineering

The core of the Sustainable Groundwork, Road and Hydraulic Engineering Approach is to allow sustainability aspects to be a consideration from an early planning stage on, with a focus on the whole life cycle of the infrastructure or object(s) to be built. This is the approach that facilitates the biggest gains in sustainability, and it allows a good and broad-based consideration of People, Planet and Profit to be made in every project.



The AmbitionWeb has a key role in the Sustainable Groundwork, Road and Hydraulic Engineering Approach. It helps clarify ambitions at an early stage of a project, so they can then be maintained throughout the entire project process. For more information about the Sustainable Groundwork, Road and Hydraulic Engineering Approach and AmbitionWeb, see http://duurzaamgww.nl/.

The AmbitionWeb revolves around a number of sustainability themes, each with three ambition levels:

1. insight into the biggest impactors and flows for the theme in question, with the achievement of a minimum level
2. drafting specific reduction targets and achieving a significant improvement on the theme in question
3. adding value, instead of just making “less bad”. Not only is the impact on people/planet/profit zero, but a positive contribution is made

Part of level 1 is meeting the suitability requirements, minimum requirements and
contract provisions of the Sustainable Procurement criteria documents. The award criteria may be used to make a contribution to level 2.

Below is a list of the requirements and criteria broken down by the individual themes. The criteria documents identify a total of five themes:

- energy and climate
- supplies and raw materials
- water and soil
- living environment
- nature and space

The following table presents the themes on which the buyer can actually have an impact by using the requirements and criteria in this criteria document.

Themes	Level 1 AmbitionWeb Selection criteria (SC) Technical specifications (ME) Contract provisions (CB)	Level 2 AmbitionWeb Award criteria (AC)
Energy and climate	ME1. Energy efficiency of system ME2. Energy efficiency of system components CB2. Energy efficiency	
Supplies and raw materials	ME3. Lubricants ME4. Processing/removal of stony substances CB1. Management and maintenance plan	GC1. Energy efficiency of system

3. Assignment of criteria to project phases

The criteria in this document pertain to both the design and completion of new construction and reconstruction of works, and the management, maintenance and demolition of existing works. In the following table, the criteria are assigned to the individual phases to which they apply.

Area of application Criterion	Design	Completion	Management and Maintenance	Demolition
Technical specifications				
1. Energy efficiency of system	-	x	x	-
2. Energy efficiency of system components	-	x	x	-
3. Lubricants	-	-	x	-
4. Processing/removal of stony substances	-	-	-	x
Award criteria				
1. Energy efficiency of system	o	o	o	-
Contract provisions				
1. Management and maintenance plan	-	x	x	-
2. Energy efficiency	-	x	x	-

x = include in this phase
- = do not include in this phase
o = optional

4. Selection criteria

Not defined for this product group.

5. Technical specifications

No.	Technical specifications (ME)
ME1	*(For new construction or modification of a surface water or sewer pumping station)* **Energy efficiency of the system** The system must have an energy efficiency of at least [X]% rating point(s) [X] and a pumping head of [X] m of water column (mwc) over a period of [X] years. "System" is defined as: …. [The contracting authority must fill in here which components are included in this call for tender, for example pump, electric motor, transmission and electrical system] [The contracting authority must enter the operating point(s) that have been determined based on the usage profile and add other relevant system characteristics] [The contracting authority should fill in the period within which the efficiency is to be guaranteed to avoid the efficiency indicated failing to be achieved in practice due for example to contamination. Guarantee measurements may be included in the contract]. *Explanation* For determining the minimum efficiency X of the system, the contracting authority must assume best available technology. "Best available technology" is defined as: the best available energy-saving technology and best energy-saving design solutions that can be used within current risk and reliability parameters. The contracting authority must require the energy efficiency of the entire system at operating point(s) defined in advance. The operating points are determined based on the usage profile. For sewage pumping stations, these are often "Dry Weather Rate" (DWR) [X] in m^3/h for [X] hours/year, "Wet Weather Rate" (WWR) during [X] hours/year and if necessary an increased DWR of [X] m^3/h for [X] hours/year. And measured over a given period (X years). Other system characteristics are the head (minimum/maximum) [mwc (metres water column)] and if present in a sewage pumping station the "pressure pipework resistance" [mwc]. *Verification* The statement of the efficiency may be verified with a pump test or guarantee measurement.
ME2	**Energy efficiency system components** 1. *(if a pump is procured separately)* The hydraulic efficiency of the pump must be at least [X]% at operating point [X] m^3/min and a static head of [X] mwc. 2. *(if an electric motor is procured separately)* The efficiency of the electric motor set up dry in a pump system, measured according to IEC 60034-2-1:2007-09, must be over 95%. For electric motors up to 90kW a class EFF1 motor will comply. 3. *(if a ventilation system is procured separately)* The ventilation system must at least comply with class SFP 2 according to EN 13779. *Explanation* Re 1) For the minimum efficiency, best available technology should be assumed (see minimum requirement 1). Moreover, the minimum efficiency must be greater than, or at least equal to, the efficiency of any pump to be replaced. For an EMVI, extra recognition may be given if the efficiency is higher than this minimum. Re 3) The European standard for ventilation, EN 13779, stipulates categories for the energy consumption of mechanical ventilation systems. The category is expressed by SFP (Specific Fan Power). SFP 2 stands for a ventilation system energy consumption of 500-750 W/(m^3/s). This designation means the energy consumption of the ventilation system including motor, fan and pipework system. *Verification* The tenderer may be asked to submit documentation demonstrating compliance with the requirements above.
ME3	**Lubricants (oils and greases)** a. For maintenance, lubricants with a low viscosity or regenerated lubricants, with at least 25% regenerated base oils. Lubricants with a low viscosity are in the category SAE 0W30, SAE-5W30 or equivalent.

	b. Hydraulic fluids and greases must not be classified with an environmental or health hazard or a warning sentence (R-sentence) at the time of use (lowest classification limit in Regulation (EC) no. 1272/2008 or Directive 99/45/EC of the Council). c. No deviation is permitted from the prohibition in article 6, paragraph 6, of Regulation (EC) no. 66/2010 for substances considered of serious concern and included on the list referred to in article 59 of Regulation (EG) no. 1907/2006, insofar as present in concentrations in excess of 0.010 percent by weight in mixtures. d. The carbon content from renewable resources must be ≥ 45 %. e. The cumulative mass concentration of component substances that are both non-biodegradable and bioaccumulative may not exceed 0.1 percent by weight. *Verification* The tenderer may be requested to provide the technical data on the lubricants. Products with a relevant Type I environmental label answering to the listed criteria will be assumed to be in compliance. Other appropriate forms of evidence, such as a technical file or approval report from an independent institution, will also be accepted. Products with the European Ecolabel will be assumed to be in compliance with the set requirements. A list of oils and greases that are in compliance with the requirements of the European Ecolabel can be found at http://www.rvo.nl/sites/default/files/2014/12/Olielijst.pdf. *Source: EU GPP*
ME4	**Processing/removal of stony substances according to BRL 2506** If stony substances are broken up, the breaking must take place according to BRL 2506. *Verification* The tenderer may be asked to submit a KOMO product certificate "BRL 2506 Recycling granulates for use in Groundwork, Road and Hydraulic Engineering works and concrete". Certificates can be verified on www.bouwkwaliteit.nl.

6. Award criteria

No.	Award criteria (GC)
GC1	**Energy yield system** The more the system efficiency of the pumping station exceeds the efficiency required in minimum requirement no. 1, the higher the tender will be rated The tender will be evaluated as follows: <to be completed further by the contracting authority>. *Verification* The tenderer may be asked to submit documentation demonstrating compliance with the requirements above. A guarantee measurement upon handover may be included as part of the contract.

7. Contract provisions

No.	Contract provisions (CB)
CB1	**Management and maintenance plan** Upon the handover of the pumping station, a management and maintenance plan must be supplied, describing the maintenance measures required to keep the pumping station in good order. The plan should describe the means of management and maintenance necessary to maintain the sustainable aspects of the pumping station. [to be completed further by the purchaser] The plan should consist in any case of the following sections: • description of the management measures to be taken into account with inspection intervals for a period of XX years, with associated instructions (at least describing inspection points, methods, estimated number of person-hours) • description of the maintenance intervals to be taken into account for a period of XX years, with associated instructions (at least describing maintenance activities and necessary materials and energy, and an estimate of the number of person-hours and any relationship with other activities for which for example excavation is necessary)
CB2	**Energy efficiency** On handover, the efficiency of the pump + electric motors + (if present) frequency regulator will be measured according to method ISO 9906. If the efficiency measured comes out lower than indicated in the tender, the supplying party will pay a penalty [X] for each percentage point the efficiency is lower.