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## Environmental quality management systems in public procurement regarding wastewater infrastructure

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**Abstract.** The application of environmental criteria in public procurement should be considered in terms of implementing the principle of sustainable development. Hence, dissemination of environmental criteria in public procurement is one of the strategic objectives of the European Union, enabling the improvement of environment.

There are specific solutions that allow the contracting authority to take environmental aspects into account while evaluating offers and contractors educationse.g. Eco-Management and Audit Scheme (EMAS). The contracting authority has the option of requiring the contractor to demonstrate the implementation of environmental management measures or systems. During the procurement procedure, the contracting authority may require from the contractor to demonstrate the implementation of environmental management measures or systems and verify that the contractor's existing quality system guarantees the proper performance of the contract or minimizes negative environmental impacts or whether the proposed products meet the requirements of certain standards or technical specifications.

To confirm that the offered supplies, services or works meet the specific requirements, the contracting authority may demand specific documents. The legal system, indicating the executive regulations of the Public Procurement Law, provide such opportunity.

The purpose of the paper is to indicate how the contracting authority can apply environmental requirements at the stage of preparing tender documentation for the construction and extension of waste water treatment plants and wastewater infrastructure.

The article presents the original research carried out in dozens of municipalities, which in 2009–2015 carried out public sewage infrastructure contracts.

The results of the studies indicated that the contracting authorities generally did not require the contractor to implement environmental management systems and did not indicate such criteria when selecting contractors.

### 1. Introduction

The application of environmental criteria in public procurement should be considered in terms of the implementation of the principle of sustainable development. Hence the promotion of pro-



environmental criteria in public procurement is one of the strategic objectives of the whole European Union, ensuring improvement of the environment.

There are specific solutions that allow the contracting entity to take environmental aspects into account, for instance, under the terms of participation in the proceedings or in the description of the subject of the order, such as contractors' qualifications (e.g. Eco-Management and Audit Scheme EMAS). The contracting authority has the option of requiring the contractor to demonstrate the implementation of environmental management measures or systems. During the procurement procedure, the contracting authority may require the contractor to demonstrate the implementation of environmental management measures or systems and verification of whether the contractor's existing quality system guarantees the proper performance of the contract or minimizes the adverse effect on the environment, or whether the proposed products meet the requirements of specific standards or technical specifications.

To confirm that the offered supplies, services or works meet the specific requirements, the contracting authority may demand specific documents. This is possible due to the legal system, indicating the executive regulations of the Public Procurement Law (PPL). These regulations, however, have changed fourfold over the past decade [1-4], but they are still helpful.

The aim of the study is to show how the contracting authority can apply environmental requirements at the stage of developing tender documentation for the construction and extension of wastewater treatment plants and wastewater facilities.

The paper presents the original results of research carried out in several dozen municipalities, which in the years 2009–2015 performed public sewage infrastructure procurement with financial support from the European Union.

The results of the studies indicated that the contracting authorities generally did not require the contractor to implement environmental management systems and did not include such a criterion in the selection of contractors.

Contemporary Europe is the leader in environmental management. Observing the requirements of an environmental management system obliges companies to constantly minimize the destructive impact on the surrounding natural environment, to reduce pollutant emissions, to limit the degradation of the environment and to increase the efficiency of the enterprise by reducing costs [5]. Environmental systems have also become a competitive tool. Increasingly, modern companies are aware of this and take actions aimed at minimizing the negative impact on the environment.

Until recently, alongside the prices, the basic attribute of most of the goods, allowing to acquire new customers, was their quality. At present, concern for the environment in terms of management becomes a new criterion. In companies wishing to demonstrate that they are taking environmental considerations seriously and that they are prepared to reduce their environmental impact by preventing or mitigating adverse effects on the broader environment, a clear action is the implementation of the Environmental Management System.

## **2. Systems and standards of environmental management**

The most widely known Environmental Systems include:

- EMAS –Eco-Management and Audit Scheme,
- ISO 14001–Environmental Management System,
- FSC – Certification System for Control of Product Origin and Forest Economy,
- ISO 50001 – Energy Management System.

The most popular standards that define environmental management requirements are now the European EMAS and the global ISO 14000.

The Council Regulation of 29 June 1993 No 1836/93 introduces the Eco-Management and Audit Scheme (EMAS). EMAS is valid in all 28 Member States of the European Union and in countries belonging to the European Economic Area (EEA), participation in which is totally voluntary.

On the other hand, in 1996, the International Standardisation Organization (ISO) published the ISO 14001 standard. ISO 14000 series standards indicate the basic requirements for an environmental

management system. ISO 14001 standard is a tool to help organizations to systematically manage their activities, products and services in such a way that their environmental impact is minimal. It includes EMAS, which is the first of its eight attachments. The ISO 14001 standard goes towards improving the environmental performance, achieving environmental targets, and meeting compliance obligations and *is intended for use by organizations wishing to manage their environmental responsibilities in a systematic manner that promotes the “environmental pillar” of sustainable development*. As compared to ISO, EMAS has several additional requirements, such as environmental review, environmental performance, legality, employee engagement, or communication.

### **3. Systems and standards of environmental management in the Polish public procurement law**

In the Polish legal system, there is also room for the issues related to certificates (considerations cover the period 2009–2015 – the same as the research). According to Art. 25 section 1 of the Act of 29.01.2004 Public Procurement Law (PPL –Journal of Laws of 2007, No. 223, item 1655, as amended) [6] in the procedure for awarding a public contract, the contracting authority may demand from the contractors the statements or documents necessary to carry out the proceedings. They are to confirm the fulfilment of conditions for participation in proceedings by offering the supplies, services or construction works required by the contracting authority.

This is because of the provisions of the regulations [1-4] issued on the basis of the aforementioned statutory delegation.

The contracting authority has the right to request environmental considerations under tenders. The principle of sustainable development and the Public Procurement Law oblige to apply evaluation criteria of tenders other than the price, relating to the object of the contract. The contracting authority has a great deal of freedom in their choice, including such options as environmental aspects, quality or innovation. Until the implementation of Directive 2014/24 / EU [7] into the Polish legal order, the criteria indicated by the contracting authority had to rely on the characteristics (the ban was introduced in Article 91 (3) of the PPL). This meant that, in order to apply the green criteria for the evaluation of tenders, the contracting authority could not consider the contractor's EMAS or ISO certificates as a criterion for the evaluation of tenders submitted, because this would be the reference to the criterion in question, that is, the contractor's characteristics. According to the assessment of the National Appeal Chamber (NAC) as well as the European Court of Justice (17.09.2002, C-513/99), such a requirement could lead to discriminatory practices. Hence, the contracting authorities could not point to the fact that the above certificates were held as a non-price criterion for tender evaluation. On the other hand, the fact that the contractor has implemented management procedures certified by EMAS or ISO could become a condition of participation in the public procurement procedure.

It worth noting that Article 67 par. 2b of Directive 2014/24/EU and Art. 30b of the PPL in force caused that at present it is possible to request submitting a certificate from contractors and the non-price criterion for evaluating tenders may include *“the organization, qualifications and experience of the staff assigned to the performance of the contract in question where the qualifications of the designated staff may have a significant impact on the performance of the contract”*.

The contracting authority is obliged to clearly indicate the environmental management measures which the contractor is to use when performing the contract. The contracting authority must indicate that the subject of the contract is to be implemented in accordance with the environmental management systems. The statements or documents required in the specification of essential terms of the contract must be necessary to conduct the proceedings. The contracting authority may not demand documents to prove compliance if they have not specified them in advance. Therefore, in the specification of essential terms of the contract, the contracting authority should indicate the environmental management measures that the contractor will use during the performance of the contract. They must also refer to the Eco-Management and Audit Scheme (EMAS) or environmental management standards based on European or international standards certified by entities operating under EU, European or international laws. Only then the contracting authority can demand that the contractor submit appropriate environmental certificates (EMAS or ISO 14001). Otherwise, they may

be charged with violation of art. 25 section 1 of the Act of 29 January 2004 PPL in relation to, respectively, § 3 section 1 point 4 [1]; § 5 section 1 point 5 [2]; § 6 section 1 point 4 [3]; § 13 section 1 point 5 [4]. This is the attitude of The National Appeal Chamber (NAC – in Polish: Krajowa Izba Odwoławcza - KIO) and in judgment of 24.11.2014 ref. Act KIO 2358/14 KIO stated that the documents required by the contracting authorities in the proceedings serve, as provided for in Art. 25.1.1 point 2 PPL, to confirm the requirements concerning the object of the order. Where the contracting authority does not specify the requirements in the specification of essential terms of the contract, then the document required in this respect should be regarded as superfluous and any claim ineffective. In the procurement award procedure, the contracting authority may demand documents in question, that is ones confirming that the offered supplies, services or works meet the requirements indicated by the contracting authority. This type of document does not apply to the disposition of art. 26 sec. 1 PPL. Hence, the contracting authority is entitled, but not obliged, to request these documents, irrespective of the estimated value of the proceedings. Thus, only the discretionary decision of the contracting authority decides on whether and to what extent to use the right to request such documents.

An example, and therefore open, catalogue of these documents is listed in § 3 section 1 item 4 [1]; § 5 section 1 point 5 [2]; § 6 section 1 point 4 [3]; § 13 section 1 item 5 [4] of the Regulations. Due to their close connection with the object of the order, there is practically no possibility of creating a closed list of documents which the contracting authority may or should require in the course of the proceedings. It is the contracting authorities decision about the direction of actions. A number of documents in question will be personalized, depending on the method of implementation, the parameters of the subject, detailed requirements and expectations of the contracting authority. This document is intended to respond to the legitimate, actual and objective needs of the contracting authority in the context of a specific contract. Requesting a specific document cannot go beyond the scope of the subject matter of the order and its terms of delivery. The contracting authority should specify which parameters of the object of the order or circumstances related to its implementation are to be confirmed by each of the requested document.

It is important that, according to the regulation [1-4], instead of the mentioned certificates, the contractor can submit other documents which confirm that the contractor uses equivalent environmental management measures in accordance with the required standards or environmental management systems. They may be issued by entities established in another European Economic Area (EEA) Member State. The documents may refer to another equivalent system or standard, but must explicitly indicate the fulfilment of the requirements by the contractor.

In Poland, the conformity assessment body is the Polish Centre for Testing and Certification (PCBC), which possesses accreditations issued by the Polish Centre for Accreditation. The Polish Centre for Testing and Certification issues certificates and conducts research on many product groups, including management systems (e.g. EMAS).

The documents refer to the fulfilment of requirements specified by the contracting authorities by the offered supplies, services or construction works. On the other hand, the lack of such documents or the analysis of their content may lead to the rejection of the offer under Article 89 section 1 point 2 PPL as incompatible with the specification of essential terms of the contract.

#### **4. Systems and standards of environmental management in statistics**

Environmental policy in organizations is implemented through EMAS or ISO 14001. Both EMAS and the ISO 1400 series are nonetheless voluntary instruments, the use and acquisition of which is not mandatory. Yet a change of entrepreneurs' approach to environment protection is being observed in their adjusting production processes to the requirements of ISO 14001. This is confirmed by the growing number of environmental management certifications [8].

There is a global increase in ISO 14001, which rose slightly from 6% at the end of 2013 to 7% at the end of 2014 [9]. For comparison, in 2005 just over 1,200 companies possessed ISO 14001 certification and only 7 had EMAS. In 2009 in Poland, the ISO 14001 environmental management

system certificate was granted to 1,500 companies, in 2010–1793, in 2011–1900, in 2012–2014 companies. In 2013 in Poland, this certificate was received by 2,220 companies, which gave us the 10<sup>th</sup> place among European countries [10], while in 2014 the number amounted to 2,213 [11]. Data from the ISO Survey report show that the number of certificates issued worldwide since 2008 has been steadily increasing and the highest number of certificates since 2012 has been issued in the construction industry. According to the certification body data, 148 certificates were issued in Poland from 2012 to 2014, including 30 new ones. Also in Poland construction companies have most often been certified to comply with the requirements of ISO 14001 (in 2013 30% and in 2014 19%) [8]. There is a growing interest in environmental certification from year to year, which translates into a growing number of ecologically sustainable businesses [5]. As of today (2017) in the EMAS register, the list of Polish organizations registered includes about 70 companies [12].

## 5. Results of own research and analysis of results

More than 70 public entities, local government units were required to return questionnaires, which were obliged to return the questionnaires after they had been filled in and signed by the responsible person. More than 70 municipalities in Poland were randomly selected (around 400 in which similar types of investments were made in the same period), in which tenders for the construction or extension of wastewater infrastructure were implemented in the form of sewage treatment plants. The study period extended from 2009 to 2015, while the additional criterion was the co-financing of a construction project by the European Union funds. The questions they were asked included the following:

1. To verify the conditions of participation in the environmental management, was it necessary to present an attestation of an independent body responsible for certifying the compliance of the contractor with European environmental management standards, which the contractor will use during the performance of the contract for works or services, referring to the EMAS or environmental management standards based on European or international standards certified by entities operating under European Union law, European or international certification standards.

2. Have contractors been obliged to submit an environmental management plan (EMP) for the construction of waste water infrastructure and the operation of the facilities, with the emphasis on reducing the environmental impact.

Given the importance of sustainability issues and environment protection, it was to be expected that studies on the formulation of the requirement for the contractor to demonstrate the implementation of environmental management measures or systems in the specification of essential terms of the contract will confirm the awareness of these issues and the willingness of public entities to award contracts for pro-environmental actions, in particular environmental quality management systems.

Another circumstance that could indicate the potential interest of contracting parties in this issue was the co-financing of investments by the European Union, which has made one of its strategic goals for sustainable development. Another reason is the kind of investment which, naturally, owing to its nature, should have a pro-environmental character already at the stage of formulating the requirements of the tender.

Thus the results of the survey may be surprising, as only three tenders out of 70 investments elicited an affirmative answer to question 1 and two tenders out of 70 investments – to question 2.

It is to be expected that there exists many reasons for which in the tender documentation the contracting entities do not choose to indicate the environmental management measures that contractors are required to perform when ordering the construction or extension of a sewage treatment plant, but the dominating ones are the following:

It is possible that the contracting authorities were unable to properly identify and diagnose environmental aspects that could have been potentially important for them from the perspective of the procedure in question. There is no knowledge of the methodology for identifying and evaluating environmental aspects. On the other hand, it is also very likely that the contracting authorities, due to the provision of the regulation, permitting interchange of other documents confirming that the

contractors apply equivalent environmental management measures, were afraid that they would not be able to verify whether the documents submitted by the contractor had provided a way to ensure that environmental aspects were met. Hence, it is imperative that the contracting entity, in the same way as the Eco-Management and Audit System Verifier, can determine whether the contractor is pursuing appropriate environmental policies.

In addition, the examined municipalities were asked a number of thematically grouped questions on the application of green procurement in tenders, including water management, effluent treatment efficiency, water consumption requirements, electricity consumption and energy efficiency. The results of this study were close enough to say that the investigated entities generally benefited from the opportunity to green their public contracts. One may also conclude that the culprit is the lack of adequate knowledge and awareness, needs and care for the environment, lack of specialists and advisers, lack of sufficient mechanisms or data to prove the long term benefits and prestige of the so-called green orders and lack of accounting for contracting entities in terms of economy when spending public funds without proper recognition of life cycle investments.

In the case of the researched investments, realization of the principle of sustainable development leaves much to be desired and does not look optimistic.

## 6. Technical dialogue

In the case of complex orders and investments, including the construction of sewage treatment plants requiring specialized knowledge and comprehension of environmental, qualitative or innovative aspects, it is probably worth considering the use of technical dialogue institutions (art. 31a – art. 31d PPL), which was defined in the directives as: preliminary market consultations. The contracting authority then appeals to experts, contractors and specialists for advice or information needed to prepare the description of the subject of the order, the specification of essential terms of the contract. The technical dialogue is intended to enable the contracting authority to acquire the knowledge needed to conduct the proceedings and to obtain information about the solutions available on the market. In the case of good will and awareness of the need to care for the environment, such skilful tool can be very helpful.

Previously, the amendment made in February 2013 introduced a technical dialogue institution under art. 31a, art. 31b and art. 31c PPL, and by the amendment of art. 24 sec. 2 PPL and adding paragraph 2a to art. 96 PPL. Yet, before 2013 it was also possible to use professional advice at the stage preceding the initiation of the public procurement procedure. The technical dialogue could then be applied on the basis of the rules deriving directly from EU law. According to recital 8 in the preamble to Directive 2004/18/EC, the classic directive [13], and recital 15 in the preamble to Directive 2004/17/EC, sectoral directive [14], *“the contracting authorities may, prior to the commencement of the contract award procedure, through the technical dialogue, seek or use advice which may be used in the preparation of the specifications, provided that such advice does not result in restriction of fair competition”*.

## 7. Conclusions

On the basis of the above findings, it should be concluded that the researched public contracting authorities, in general, do not require the contractor to implement environmental management systems and do not indicate such criteria when selecting contractors, or do so in a casual manner. As demonstrated (purely hypothetically), the causes of this state can be many and they are probably complex. The construction sector is a branch of the economy, which contributes significantly to the degradation of the environment, hence the environmental management system could serve to minimize the environmental impact of the organization processes.

It is worth remembering that construction which meets the requirements of sustainable development is one of the basic elements of economic development strategy in EU countries, aiming at smart, sustainable growth, improvement of the use of natural resources, increase of energy efficiency and improvement of life quality of the society.

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