



Royal Netherlands
Meteorological Institute
*Ministry of Infrastructure
and Water Management*

Market consultation document – Request for Information

Pertaining to : **New generation wind sensors
and 3rd line support**

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Definitions

Annex / Appendix

Annex or Appendix to one of the Tender Documents. Annexes /Appendices constitute an integral part of the Tender Documents.

Award Criterion

The Award Criterion of the Contracting Authority will be the Economically Most Advantageous Tender (EMAT). This means that the Contracting Authority will assess both price and quality.

BES Islands

Bonaire, Sint Eustatius and Saba, located in the Caribbean.

Consortium

A cooperation of entrepreneurs, formed for the purpose of providing the product/services requested in this tender procedure. A Consortium submits a single, joint Tender.

Consortium Member

The legal body or natural person that forms part of a Consortium.

Contract

A written agreement entered into with the Tenderer that wins this Tender Process, covering the provision of the supplies and/or services requested by the Contracting Authority.

Contracting Authority

The Royal Netherlands Meteorological Institute, Koninklijk Nederlands Meteorologisch Instituut (KNMI), represented in this market consultation Procedure by the Ministry of Infrastructure and Water Management.

Lot

Separate part of a Tender Procedure for which the Tenderer can submit a Tender.

Requirements

Regulations and requirements pertaining to the supply/supplies and/or service/services to be provided. A Tender that does not meet a Requirement will be considered invalid.

Sub Award Criteria

Further specification of the award criterion. The criteria that stipulate which Tender is assessed as economically most advantageous.

VOS Fleet

Voluntary Observing Ships.

1 Introduction

This is the market consultation document (Request for Information) for the subject as stated on the title page for the benefit of the Ministry of Infrastructure and Water Management (hereinafter referred to as 'IenW').

IenW invites market parties to participate in this market consultation.

IenW requests the market / market parties to answer the questions asked in this document, whereby the questions are contained in Appendix 1 – Questionnaire New Wind Sensors.

IenW emphasizes that this market consultation is not part of the tender and no rights can be derived from it. Insights obtained from the market consultation will be used by IenW (where relevant) in the preparation of the tender and the tender documents. IenW reserves the right not to use these insights or to use them in full.

1.1 General information of the contracting authority

The Ministry of Infrastructure and Water Management

IenW is committed to quality of life and accessibility, with free traffic flow in a well laid out, clean and safe environment. The ministry works on excellent connections by road, rail, water and air, provides protection against flooding, and promotes the quality of air and water.

IenW is supervising this Tender Procedure on behalf of the Royal Netherlands Meteorological Institute (KNMI). More information can be found on the following website:

<http://www.rijksoverheid.nl/ministeries/ienm>.

Description of Royal Netherlands Meteorological Institute (KNMI)

KNMI is the national institute for weather, climate and seismology. It is an agency of the Ministry of Infrastructure and Water Management (Ministerie van Infrastructuur en Waterstaat).

Introduction

The Netherlands is the most densely populated country in Europe and situated in a delta area. In the event of a disaster, the chance of human loss and economic damage is high, which is why safety, as well as habitability and accessibility, have been high on the political and social agenda for many years. Among other things, this includes the consequences of extreme weather conditions.

Mission

KNMI is the national institute for weather, climate and seismology. It is an agency of IenW. In its function as national data and knowledge centre, KNMI acquires, processes and disseminates meteorological information to the general public, the government and the aviation and shipping sectors. It does so in the interest of safety, the economy, and a sustainable environment. To gain insight into long-term developments, KNMI in co-operation with research institutes, universities and businesses, conducts research on weather phenomena, climate change and atmospheric observation methods.

Making the knowledge, data, and information accessible to legal partners, customers and the general public is a core activity of the KNMI.

Website

www.knmi.nl (in Dutch) and www.knmi.nl/over-het-knmi/about (in English).

1.2 Reason for the market consultation

This market consultation serves as a preparation for the proposed tender for the new generation wind sensors. IenW attaches great value to the opinion of market parties and wants to involve them actively and at an early stage before the proposed tendering process starts.

1.3 Purpose of the market consultation

IenW has published this market consultation document on Tendered with the aim of reaching as many market parties as possible, to interest them and to encourage them to help improve the upcoming tender.

The goal of the market consultation is to test:

- involving the market in the project at an early stage in order to gear the tender documents as closely as possible to the market situation and the wishes of the market.
- whether the market can meet the requirements set,
- whether the contract is feasible and whether the preconditions set are realistic,
- whether the market parties are interested in the contract and are able to perform or realise the contract,
- whether the specified need will lead to the optimum solution for the KNMI,
- whether the market has sufficient capacity,
- whether there are innovative solutions,
- what the measure of qualified contractors/suppliers is.

1.4 Purpose of the European tender procedure

The purpose of the European tender is to purchase robust wind sensors with a long service life (20 years) and low maintenance costs that continuously generate reliable measurements of wind direction and speed.

The KNMI wants to conclude two agreements, one for each of the two types of wind sensors:

- Cup-and-vane sensors.
- 3D Sonic wind sensors.

After the selection of suppliers based on the wind sensors offered, an extensive test period of the two selected sensors follows for both testing in the wind tunnel and in the field ('field trials'). The entire lead time of the test period is approximately 2 years.

Depending on the results of the test period, it will be decided which wind sensor will be rolled out in the KNMI monitoring network. It is also possible that the KNMI opts for a different wind sensor for specific applications. The KNMI has no obligation to purchase a minimal amount under either of these agreements.

1.5 Information regarding the market consultation

With regard to wind sensors, the following information is important to understand what IenW is looking for and to assist in providing relevant answers.

Lots

IenW intends to use to lots in the following European tender. Lot 1 tenders specifically for a 3D sonic anemometer. Lot 2 is intended to tender for a combination of cup anemometer and windvane, potentially including a data logger or ADC to provide a digital output. Note that in this case the entire system must comply with the requirements.

Type of wind sensors

In general, the market offers 2 types of wind sensors: mechanical and sonic.

Mechanical sensors:

The mechanical sensors are the cup anemometer and wind vane and the propeller type. The propeller type is not suitable for our application because the start-up wind speed is too high (1.0 m/s) or the range too small (50 m/s).

Sonic sensors:

There are 3 types of sonic anemometers: the 3D, the 2D and the 2D compact. Both types of 2D's do not meet our requirements.

Scope

The scope of the tender is the purchase and 3rd line support of future-proof wind sensors for all locations in the KNMI monitoring network. In addition, wind sensors from the KNMI are given on loan to other parties, such as the Port of Rotterdam Authority and Rijkswaterstaat.

With the new wind sensors, the KNMI aims to further its continuous and reliable measurements of wind direction and wind speed within the KNMI monitoring network, including the locations on the BES islands (Bonaire, Sint Eustatius and Saba), the Cabauw Research Tower and the North Sea.

It is very important that continuity of the measurements of wind direction and speed is guaranteed. After all, wind measurements are essential for, among other things, the safety of the population during storms and for aviation. The measurements of the wind sensors of the KNMI are used for:

- Weather warnings such as storm and, severe gusts of wind.
- Wind-sensitive operations in the aviation and maritime sector.
- Commercial activities that depend on the wind, serviced by weather providers.
- Seawall dimensioning.
- Wind energy assessment.
- Balancing the electricity grid.
- Building codes.
- Climate research.
- Synoptic analysis of weather systems (e.g., locating weather fronts).
- Nowcasting of fog formation, advection and spread.
- Spread of toxic and polluting substances in the air.
- Worldwide weather reports (e.g., SYNOP, KLIM).
- Climate trends using homogenized wind measurements ("potential wind").

The KNMI cup anemometer and wind vane are not used on the VOS fleet. A successor to the cup anemometer and wind vane may be.

Purchase of the wind sensor

The aim is to use one type of wind sensor as much as possible. Uniform instrumentation is important because of the accuracy and reliability of the measurements should be uniform. A sensor must also be extensively tested before it is put into use, so that it is not easy to switch to another, new sensor. Furthermore, in practice fewer mistakes are made and both training and maintenance are less complicated and expensive.

Although the same model is used as much as possible, a small number of variants of the wind sensor might still be required:

- Cabauw wind profile measurements require a better accuracy (1%) with regard to wind speed. The mandatory requirement is better than or equal to the KNMI cup anemometer and it has an accuracy of 2% for a wide range of speeds.
- Two of the BES islands (Bonaire, Sint Eustatius and Saba) lie in the path of hurricanes and sensors should therefore be able to withstand and measure winds that do not occur in Europe.
- There is also the difference between heated and non-heated – at (about 10) locations operated by Rijkswaterstaat, the power supplies are insufficient to heat the wind sensor and in the middle of the North Sea it hardly freezes anymore, but we do need heated wind sensors for the other locations. Alternatively, the same model could be used if it includes both a heating and non-heating mode of operation.

In this European tender, 2 types of wind sensors will be selected with which an intensive test period will be completed:

- Sonic 3D (heated)
- Cup-and-vane (heated)

At the end of the test period, it will be decided which new generation wind sensor will be rolled out in the KNMI monitoring network.

To be flexible in the future, the KNMI wants to have the opportunity to purchase alternative wind sensors from the selected supplier (in the long term).

Maintenance of the wind sensor

We distinguish 1st, 2nd and 3rd line support:

- By 1st line support we roughly mean installing, aligning, keeping clean, exchanging, etc. on location in the field.
- By 2nd line support we typically mean maintenance in the workshop of the KNMI in de Bilt, for example standard replacement of broken parts, calibration, thorough cleaning and balancing.
- By 3rd line support we mean solving all problems with a sensor that cannot be done by 'Service & Beheer' of the KNMI itself. For example, repair of larger damage, calibration of sensors that can no longer be calibrated using the normal (according to manual) method, etc.

The KNMI will do the 1st and 2nd line support of the wind sensors. Regarding the 3rd line support, the KNMI strives to do as much of this as possible itself. In this way, the KNMI gains as much experience with and knowledge of the wind sensors as possible. How much of the 3rd line support the KNMI can perform itself depends partly on the sensor to be chosen. Part of the 3rd line support is therefore part of contract.

Out of scope

Installation of the wind sensors and preventive and corrective maintenance of the wind sensors (1st and 2nd line support) is out of scope. However, the specifications will take into account how the KNMI itself can carry out 1st and 2nd line support and at what cost.

Value

Based on the market knowledge and specifications of our needs, we can make an estimate of the expected value of the contract.

Purchase of the wind sensor

The KNMI currently has approximately 120 wind sensors in use. In addition, the KNMI has loaned approximately 80 wind sensors to other parties, such as the Port of Rotterdam Authority and Rijkswaterstaat.

The expected order value of the purchase of the wind sensors is 200 wind sensors x € 1,500 to € 3,000 per sensor = € 300,000 to € 600,000.

Third line support

Third line support typically requires more advanced technical assistance and specific knowledge, which can make it quite costly. Because of this the cost of 3rd line support will vary depending on several factors, including the type of sensor, the costs of spare parts, as well as the level of service we require.

The maintenance costs of a sonic wind sensor are expected to be lower than those of mechanical sensors. However, if a sonic wind sensor breaks down, maintenance is more expensive and takes longer. Usually, the sensor has to go back to the manufacturer because the user cannot repair it.

The estimated value of 3rd line support is based on 20% of the purchase value over the total technical life of the wind sensors: 20% of € 300,000 to € 600,000 = € 60,000 to € 120,000.

NB: The costs of our own maintenance (1st and 2nd line support) performed by the KNMI are not included in this estimate but will be included in the Total Cost of Ownership (TCO) which will influence the selection of the best wind sensor.

2 Market consultations

2.1 Procedure

The market consultation will be launched with the publication of this document. The market consultation will be structured as described below:

1. Questionnaire

IenW has prepared a questionnaire for all interested parties. The questionnaire is intended to provide IenW with an overview of relevant options available on the market. The market consultation starts by publishing this document containing the questions from I&W on TenderNed. Interested parties are invited to present, based on these questions, their views, ideas, and possibilities. Interested parties are not limited to these questions. If deemed necessary and relevant, additional items may be added.

2. Submission of questions

Any interested party may ask additional questions with respect to the questionnaire, using the facilities of TenderNed, enhancing the questions or introducing other items, deemed relevant for this market consultation

3. Submission of answers

IenW will combine all answers to each question from each interested party, without disclosure of the originator of the answers.

4. Submission of questionnaire

Interested parties are invited to submit the questionnaire with their views, ideas, possibilities, proposals, but not limited to these questions. Also, additional (standard available) information, specifications, drawings and reports can be provided as appendices. IenW will analyse the answers on the questionnaire and appendices in preparation of the individual consultations.

5. Consultation Report

Based on all received information (written and by the individual consultations) IenW will compose a report. The report will be published on TenderNed.

2.2 Schedule

Nr	Activity	Remarks	Date (and time)
1	Publication on TenderNed by IenW www.tenderned.nl (In the top-left corner you can change the language to English)	Formal publication of the Market Consultation with questionnaire	6-7-2023
2	Questions w.r.t. the market consultation and questionnaire by interested parties	Latest moment for submission of questions	24-07-2023
3	Answers by I&W w.r.t. the questions on the market consultation and questionnaire	Publication date of answers	04-08-2023
4	Submission of answers of the questionnaire by interested parties	Latest date	14-08-2023 12:00
5	Consultation Report	Publication of Market Consultation Report	Approx. 25-08-2023

Interested parties cannot derive any rights from the above schedule. IenW reserves the right to change the dates of the schedule. The above schedule is therefore indicative, whereby the greatest possible care is taken to adhere to the schedule. The schedule published on TenderNed is leading.

2.3 Confidentiality

IenW will not disclose any paper submitted and the minutes of the individual consultations in their entirety. IenW shall disclose this information exclusively to selected employees and advisers who are directly involved in the Market Consultation and/or involved in the procurement, installation, and maintenance of wind sensors, unless IenW is bound by statutory regulations to make a more elaborated disclosure.

I&W will use the information provided for the sole purpose of formulating a procurement policy, reserve the required budgets, and drafting tender documents in a way that provides for a level playing field. IenW will not include any specific references to participants or commercially sensitive information in the tender documents.

2.4 Other provisions

In respect of the market consultation, the following provisions apply. By participating in the market consultation, the participating market party declares to agree to all provisions set out without reservation.

- It is expressly stated that this market consultation is not part of the tender procedure.
- The consultation is without any obligation, both for IenW as well as the participating parties. Participation in the market consultation is entirely voluntary.
- No rights can be derived from the market consultation, nor will participation in the consultation lead to any advantage or disadvantage in the tender procedure that may follow after.
- Refusing to participate in the consultation will not lead to exclusion from the tender procedure that may follow after.
- The market consultation is not an invitation to tender for the intended contract for which this market consultation serves as preparation.
- Participating parties cannot claim compensation of any costs made in the context of the market consultation.
- IenW reserves the right to conduct the market consultation and the following invitation to tender in another way than as described in this document, and to suspend the market consultation process entirely or partially.
- The information provided by the participants does not automatically influence the choices to be made by IenW in the intended invitation to tender.
- The information provided by IenW during the market consultation may deviate from the information that is provided for the invitation to tender at a later stage.
- IenW will not, due to the government policy, award any payment to participants in the Market Consultation.