

PRELIMINARY MARKET CONSULTATION FOR THE PURCHASE OF DESALINATED WATER

General

The Water Development Department (WDD), of the Ministry of Agriculture, Natural Resources and Environment, acting in accordance with Article 37 of the Public Procurement Procedures Regulation and related matters Law of 2016 [Law 73(I)/2016], is conducting this preliminary market consultation to investigate the available options for purchasing of potable water produced by desalination plants operated by economic operators. Any production capacity will be considered.

The following two options will be considered:

- **Inshore Desalination Plants:** These plants operate on ships and barges, in close proximity to the shore.
- **Onshore Desalination Plants:** These plants operate on land, in close proximity to the sea.

Expression of Interest

The WDD invites economic operators to express their interest by submitting a description of their proposal, which should include at least the following:

For Inshore Plants:

- The type of vessel (ship, barge, other).
- The plant capacity in m³/hour.
- Product water specifications.
- Time required for water delivery after an agreement has been reached.

For Onshore Plants:

- The plant location.
- The plant capacity in m³/hour.
- Product water specifications.
- Time required for water delivery after an agreement has been reached.

Tender Procedure

Based on the expression of interest (inshore/offshore, number of interested parties, etc.), the most suitable procurement method will be selected, using a suitable scoring formula that will enable the evaluation of parameters such as the time of commencement of delivery of water, cost of desalinated water, the delivery location, the water deficit in proposed area, the works required for the connection to WDD's network, etc.

Water Quality Parameters

It is crucial for economic operators to have preliminary indications of the Sea Water Quality and the required Desalinated Water Quality. The Sea Water parameters are indicative, and each economic operator must perform their own analysis. The Desalinated Water Quality parameters are also indicative, and their values could be slightly adjusted. Please find the parameters below:

Sea Water Quality

The values of the parameters below are from typical sea water analysis and may slightly vary according to the location:

- Conductivity: 60,000 $\mu\text{S}/\text{cm}$
- Total Dissolved Solids: 43,000 mg/L
- pH: 8.1 – 8.5
- Total Hardness as CaCO_3 : 7,500 mg/L
- Temperature: 16 - 29°C

Anions:

- Fluorides: <2.4 mg/L
- Chlorides: 23,500 mg/L
- Sulfates: 3,800 mg/L
- Total Alkalinity: 150 mg/L CaCO_3
- Nitrates: 2 mg/L

Cations:

- Sodium: 13,500 mg/L
- Potassium: 380 mg/L
- Calcium: 480 mg/L
- Magnesium: 1,700 mg/L
- Boron: 5.0 – 6.5 mg/L
- Iron: <0.7 $\mu\text{g}/\text{L}$

Desalinated Water Quality

The water produced by the Desalination Plant must comply with Law 46(1)/2023 (EEC Council Directive No. 2020/2184) for the quality of water intended for human

consumption, with the exception of the following parameters that are differently specified:

Differently Specified Parameters:

- Total Dissolved Solids: <600 mg/L
- pH: 7.5 - 8.6
- Total Alkalinity as CaCO₃: >80 mg/L
- Calcium (Ca): 30.0-50.0 mg/L
- Total Hardness as CaCO₃: 80.0-130 mg/L
- Calcium Carbonate Precipitation Potential (CCPP): 3.0 - 10.0 mg/L CaCO₃
- Langelier Saturation Index: ≥0.20
- Boron: ≤0.70 mg/L
- Turbidity: <1 NTU
- Colour: <5 Hazen (Pt/Co)
- Odour and Taste: NIL
- Free Chlorine: ≥0.20 mg/L
- Dissolved Oxygen: >60% of saturation
- Nitrates: <15 mg/L
- Ammonia: <0.1 ppm
- Total Organic Carbon: <2 ppm

Conclusion

The WDD welcomes comments and suggestions from interested economic operators. It is understood that comments and suggestions that are deemed to distort competition and violate the principles of transparency and non-discrimination will be rejected.

Interested Economic Operators are invited to declare their ability and interest in participating in the tender that will be conducted after this consultation is completed and to submit any comments and suggestions they may have by Monday, February 3rd, 2025. The declaration of interest to participate in the tender and any comments and suggestions must be submitted through the e-procurement website, or by sending an e-mail to the address: tenders@wdd.moa.gov.cy.