

**1. GENERAL INFORMATION:**

Client: \_\_\_\_\_

Site: \_\_\_\_\_

**2. TECHNICAL INFORMATION****2.1 Type of Plant etc**

Conventional \_\_\_\_\_

Containerised \_\_\_\_\_

Skid Mounted \_\_\_\_\_

For drinking water \_\_\_\_\_

For irrigation \_\_\_\_\_

What plot size is available (l x b x h) \_\_\_\_\_

**2.2 Design Requirements**

Plant capacity \_\_\_\_\_

Design water temperature \_\_\_\_\_

Ambient air temperature min. \_\_\_\_\_

Ambient air temperature max. \_\_\_\_\_

Electricity Supply Volts / Cycles \_\_\_\_\_

**2.3 Raw Water Analysis**

<b>Analysis</b>	As ppm of ions, CaCO <sub>3</sub> or meq/l		
Sodium	Na	_____	_____
Potassium	K	_____	_____
Calcium	Ca	_____	_____
Magnesium	Mg	_____	_____
Chloride	Cl <sup>-</sup>	_____	_____
Sulfate	SO <sub>4</sub> <sup>2-</sup>	_____	_____
Bicarbonate	HCO <sub>3</sub> <sup>-</sup>	_____	_____
Total dissolved solids		_____	ppm
Suspended solids		_____	ppm
pH value		_____	
Temp minimum		_____	°C

Temp maximum \_\_\_\_\_ °C

If other parameters are available, please complete them below.

<b>Analysis</b>	As ppm of ions, CaCO <sub>3</sub> or meq/l	
Strontium	Sr*	_____
Barium	Ba*	_____
Iron	Fe*	_____
Manganese	Mn	_____
Carbonate	CO <sub>3</sub> <sup>2-</sup>	_____
Free Carbon dioxide	CO <sub>2</sub>	_____
Bromide	Br-	_____
Boron	B	_____
Fluoride	F-*	_____
Silica	SiO <sub>2</sub> *	_____
Dissolved oxygen	O <sub>2</sub>	_____ ppm
Hydrogen sulfide	H <sub>2</sub> S*	_____ ppm
Oil (by UV or IR)*		_____ ppm
Odour		_____
Colour		_____

In case of well water or offshore platform installation analysis marked with asterisk\* must be available too.

## 2.4 Required Product Water Quality

Total dissolved solids max. at design T \_\_\_\_\_ ppm

Maximum chloride limit \_\_\_\_\_ ppm

Maximum boron limit \_\_\_\_\_ ppm

Is a positive LSI required? \_\_\_\_\_

What standard is to be applied. WHO, EU etc \_\_\_\_\_

### 3.0 SCOPE OF SUPPLY

#### 3.1 Intake

Not included \_\_\_\_\_

Open sea \_\_\_\_\_

Beach wells \_\_\_\_\_

Others \_\_\_\_\_

#### 3.2 Pipelines required for

*Raw water to the treatment plant* \_\_\_\_\_ y/n

If yes, length \_\_\_\_\_ m

    Geodet height difference \_\_\_\_\_ m

*Treated water to*

Existing storage tank \_\_\_\_\_ y/n

If yes, length \_\_\_\_\_ m

    Geodet height difference \_\_\_\_\_ m

    Network (work press) \_\_\_\_\_ bar

If yes, length \_\_\_\_\_ m

    Geodetical height difference \_\_\_\_\_ m

    Not required \_\_\_\_\_

#### 3.3 Storage tanks required for

Raw water \_\_\_\_\_ y/n

If yes, capacity \_\_\_\_\_ m<sup>3</sup>

    Type \_\_\_\_\_

Product / Treated water \_\_\_\_\_ y/n

If yes, capacity \_\_\_\_\_ m<sup>3</sup>

    Type \_\_\_\_\_

#### 3.4 Concentrate disposal

Pipeline length \_\_\_\_\_ m

Geodetical height difference \_\_\_\_\_ m

**4.0 CONTRACTUAL ARRANGEMENTS**

- Type of Contract. EPC, BOO, BOOT etc \_\_\_\_\_
- Who is the Client \_\_\_\_\_
- Where is the funding from \_\_\_\_\_
- What security of payment is proposed \_\_\_\_\_
- Any specific training requirements for Client personnel \_\_\_\_\_
- Is there an O&M period and if so how long \_\_\_\_\_

**4.0 SPECIAL CLIENT’S REQUESTS**

Please describe if you have any special requirements, which were not mentioned in the questionnaire.

**Additional Comments**

1. Points 2.2, 2.3, 2.4 from desalination questionnaire must be filled in.
2. More information about raw water supply is required:
  - From where the raw water is taken – existing structures, where will it be constructed, brief description of existing intake structure and chemical dosing would be beneficial (how deep is intake structure placed, are there possible disturbances of the bottom sediments, how far is the suction end from the shore line, is the raw water pre-screened or pre-treated and how etc.)
  - Description of deep wells for brackish water is required – materials of construction, depth of the aquifer, pressure
  - Description of the raw water supply to desalination unit – pipe dimensions and material, minimum and maximum pressure.
  - Description of the waste water disposal standards and existing drainage system if discharges from desalination plant are going to be connected to these systems. Are there some restrictions from the point of quality and quantity (max. average flow and max peak flow, quality restrictions)?
  - Description of the waste water disposal and drainage system – as in point 3.4 of our questionnaire if we have to supply this system.

## Questionnaire

### Desalination



MODERNWATER

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3. Availability of the service water, potable water, steam for heating – please specify available.
4. Is there an existing desalination plant on the site or in the vicinity using the same water source. If so please provide operational details of this plant, based on the information in this questionnaire.