



## BULK SUPPLY TARIFF

### FOR BULK SUPPLY OF DESALINATED WATER

APPLICABLE 1 JANUARY -2015 TO 31 DECEMBER 2015

#### 1. Introduction

Pursuant to Article 74 of the Sector Law and Condition 21 of the Power and Water Procurement License granted by the Authority for Electricity Regulation, Oman (AER), Oman Power & Water Procurement Company (OPWP) is required to make Bulk Supplies of Desalinated Water to Water Departments in accordance with a Bulk Supply Agreement entered into for such purpose, and in consideration of a Bulk Supply Tariff.

OPWP has entered into Bulk Supply Agreements with, as follows:

- i. the Public Authority for Electricity and Water (PAEW), formerly the Ministry of Housing, Electricity and Water, covering *inter alia* the Bulk Supply of Desalinated Water from the **Al Ghubrah Power and Desalination Plant, Muscat City Desalination Plant, Barka Power and Desalination Plants (Phase I) and (Phase II), Sohar Power and Desalination Plant, and Sharqiyah Desalination Plant;**
- ii. Majis Industrial Services SAOC (MISC), the designated Water Department in the Sohar Industrial Port Area, covering the Bulk Supply of Distillate Water from the **Sohar Power and Desalination Plant;** and
- iii. the Water Department of the Governorate of Dhofar (WDGD) covering the Bulk Supply of Potable Water from the **Salalah Power and Desalination Plant.**

This document sets out the Bulk Supply Tariff, as determined by OPWP and approved by AER, in respect of Desalinated Water delivered to PAEW, Distillate Water delivered to MISC, and Potable Water delivered to WDGD from the respective plants for the period from 1 January 2015 to 31 December 2015.

It specifies (i) the fixed and variable charges payable by PAEW, MISC and WDGD (as applicable) and (ii) the arrangements for invoicing and payment.

Capitalized terms used in this document and which are defined in the Bulk Supply Agreement have the meanings given to them therein, and in addition:

**“Bulk Supply”**

means the bulk supply of Desalinated Water by OPWP to a Water Department, and **“Bulk Supplies”** shall be construed accordingly.



**“Bulk Supply Agreement”**

means an agreement entered into between OPWP and a Water Department in relation to the provision of Bulk Supplies of Desalinated Water.

**“Bulk Supply Tariff”**

means the consideration charged by OPWP for the Bulk Supply of Desalinated Water, as determined from time to time by OPWP and approved by AER.

**“Desalinated Water”**

means

- (i) in respect of the Al Ghubrah Power and Desalination Plant, Potable Water and Distillate Water;
- (ii) in respect of the Barka Power and Desalination Phase I Plant, water produced by the Plant (and delivered at the relevant Water Delivery Point) which complies with Oman Standard Number 8/98 for drinking water. As to quality, such water shall comply with the “Highest Desirable Values” stated in Oman Standard 8/98. In addition, such water shall have a minimum total hardness level of 50mg/l as CaCo<sub>3</sub> and an alkalinity level consistent with a positive Langelier Saturation Index (LSI) in the treated water at the design temperature. Further, such water shall have a minimum fluorine content of 0.4 ppm and a maximum fluorine content of 0.7 ppm;
- (iii) in respect of the Barka Power and Desalination Phase II Plant, water produced by the Plant (and delivered at the relevant Water Delivery Point) which complies with the Omani Standard Number 8/98 (save in respect of boron, for which the “Maximum Level” shall be deemed to be up to zero decimal five (0.5) mg/litre). In addition, such water shall have a total hardness level of not less than sixty (60) mg/litre and not more than one hundred (100) mg/litre as CaCO<sub>3</sub> and a total alkalinity level of not less than sixty (60) mg/litre and not more than eighty (80) mg/litre as CaCO<sub>3</sub> consistent with a positive Langelier Saturation Index (LSI) in the treated water at the design temperature. Further, such water shall have a minimum fluoride content of zero decimal five (0.5) mg/litre and a maximum fluoride content of one (1.0) mg/litre and a chlorine dose between zero decimal four (0.4) to zero decimal six (0.6) ppm; and
- (iv) in respect of the Sohar Power and Desalination Plant, Potable Water and Distillate Water;
- (v) in respect of the Salalah Power and Desalination Plant, Potable Water;
- (vi) in respect of the Muscat City Desalination Plant, Potable Water;
- (vii) in respect of the Sharqiyah Desalination Plant, Potable Water.





**“Desalinated Water Delivered”**

means

- (i) in respect of the Al Ghubrah Power and Desalination Plant, Potable Water Delivered and Distillate Water Delivered;
- (ii) in respect of the Barka Power and Desalination Phase I and II Plants, the Desalinated Water delivered at the Water Delivery Points in accordance with PAEW’s nominated requirement (as notified in accordance with the Grid Code), as measured by the Water Metering Systems;
- (iii) in respect of the Sohar Power and Desalination Plant, Potable Water Delivered;
- (iv) in respect of the Salalah Power and Desalination Plant, Potable Water Delivered;
- (vi) in respect of the Muscat City Desalination Plant, Water Output Delivered;
- (vii) in respect of the Sharqiyah Desalination Plant, Output Delivered.

**“Distillate Water”**

means

- (i) in respect of the Al Ghubrah Power and Desalination Plant, water produced by the Plant (and delivered at the Distillate Water Delivery Point) which complies with the quality standards required by the users of such water.
- (ii) in respect of the Sohar Power and Desalination Plant, water produced by the Plant (and delivered at the Distillate Water Delivery Point) which complies with the quality standards specified in the Bulk Supply Agreement entered into between OPWP and MISC.

**“Distillate Water Delivered”**

means

- (i) in respect of the Al Ghubrah Power and Desalination Plant, Distillate Water delivered at the Distillate Water Delivery Point to persons authorized by PAEW, as measured by the Distillate Water Metering System;
- (ii) in respect of the Sohar Power and Desalination Plant, Distillate Water delivered from the Plant at a Distillate Water Delivery Point in accordance with MISC’s nominated requirement, as measured by the Distillate Water Metering System.

**“Distillate Water Delivery Point”**

means

- (i) in respect of the Al Ghubrah Power and Desalination Plant, the tanker point near the Plant fencing where Distillate Water is delivered to tankers;
- (ii) in respect of the Sohar Power and Desalination Plant, (a) the connection point between the Plant and MISC’s facilities



where Distillate Water is delivered and (b) the tanker point within the Plant where Distillate Water is delivered to tankers.

**“Distillate Water Metering System”** means

- (i) in respect of the Al Ghubrah Power and Desalination Plant, the metering system utilised by PAEW and the Plant to measure the quantities of Distillate Water Delivered;
- (ii) in respect of the Sohar Power and Desalination Plant, the metering system utilised by MISC and the Plant owner to measure the quantities of Distillate Water Delivered.

**“Plant”**

means the Power and Desalination Plant (as specified).

**“Potable Water”**

means

- (i) with respect to the Al Ghubrah Power and Desalination Plant, water produced by the plant (and delivered at the Potable Water Delivery Points) which complies with Oman Standard Number 8/98 for drinking water as the same may be modified, amended, replaced, repealed or varied from time to time (issued by the Ministry of Commerce and Industry, Directorate General for Specifications and Measurements). As to quality, such water shall comply with the “Highest Desirable Values” stated in Oman Standard 8/98. In addition, such water shall have a minimum total hardness level of 50mg/l as CaCo<sub>3</sub> and an alkalinity level consistent with a positive Langelier Saturation Index (LSI) in the treated water at the design temperature. Further, such water shall have a minimum fluorine content of 0.4 ppm and a maximum fluorine content of 0.7 ppm.

- (ii) in respect of the Sohar Power and Desalination Plant, water produced by the Plant (and delivered at the Potable Water Delivery Point) which complies with Oman Standard Number 8/98 for drinking water. In addition, such water shall have a minimum total hardness level of 50mg/l as CaCo<sub>3</sub> and an alkalinity level consistent with a positive Langelier Saturation Index (LSI) in the treated water at the design temperature. Further, such water shall have a minimum fluorine content of 0.4 ppm and a maximum fluorine content of 0.7 ppm.

- (iii) in respect of the Salalah Power and Desalination Plant, water produced by the Plant and delivered at the Water Delivery Point which complies with the quality standards specified in the Bulk Supply Agreement entered into between OPWP and WGD.

- (iv) in respect of the Muscat City Desalination Plant, water delivered at the Water Delivery Point in compliance with the requirements of Oman Standard 8/2006. In addition, such water shall have a maximum total hardness level of 100 mg/l as CaCo<sub>3</sub>, an alkalinity level of 60-80 mg/l, a minimum fluoride





content of 0.5 ppm and a maximum fluorine content of 0.10 ppm.

(v) in respect of the Sharqiyah Desalination Plant, water produced by the plant which shall comply with the more onerous of the Omani Standard for Drinking Water Quality O.S. 8/1998 or subsequent editions, and parameter standards established in the Water Purchase Agreement, including a maximum total hardness level of 100 – 300 mg/l as CaCo<sub>3</sub> at 25C, and the optimal level for pH shall range from 7-8.5

**“Potable Water Delivered”**

means

(i) with respect to the Al Ghubrah Power and Desalination Plant, the net Potable Water delivered from the Plant at the Potable Water Delivery Point in accordance with PAEW’s nominated requirement (as notified in accordance with the Grid Code), as measured by the Potable Water Metering System, after deducting any Potable Water returned to the Plant from PAEW;

(ii) in respect of the Sohar Power and Desalination Plant, Potable Water delivered from the Plant at the Potable Water Delivery Point in accordance with PAEW’s nominated requirement, as measured by the Potable Water Metering System;

(iii) in respect of the Salalah Power and Desalination Plant, Potable Water delivered at the Water Delivery Point;

(iv) in respect of the Muscat City Desalination Plant, Water Output Delivered pursuant to dispatch instructions at the Water Delivery Point;

(v) in respect of the Sharqiyah Desalination Plant, Output Delivered pursuant to dispatch instructions.

**“Potable Water Delivery Points”**

means the connection points at the boundary fence between the Plant and PAEW’s facilities where Potable Water is delivered.

**“Potable Water Metering System”**

means the metering system utilised by PAEW and the Plant owner to measure the quantities of Potable Water Delivered.

**“Sector Law”**

means Royal Decree No. 78/2004 promulgating the law for the regulation and privatization of the electricity and related water sector.

**“Water Department”**

has the meaning given to it in the Sector Law.

**“Water Delivery Point”**

means

(i) in respect of the Barka Power and Desalination Plant (Phase I), the point which is immediately upstream of the relevant Water Metering System but after the tapping points for feed water utilised at the Plant; and



(ii) in respect of Barka Power and Desalination Plant (Phase II), the flanged connection of the Phase II Plant to PAEW's potable water storage facility at the boundary fence of the compound in which the potable water storage facility is located.

(iii) in respect of the Salalah Power and Desalination Plant, the points where Bulk Supplies of Potable Water are to be delivered from the Plant to WDGD facilities, being the flanged connection at the boundary fence of the Plant.

(iv) in respect of the Muscat City Desalination Plant, the points for produced potable water located in the water downstream of the online water quality monitoring system and downstream of the water output settlement meter located within the plant boundary near the fence.

(v) in respect of the Sharqiyah Desalination Plant, Output Delivery Point, located at the approximate location of 751692 E 2503384 N.

**“Water Desalination Capacity”**

means

(i) in respect of the Al Ghubrah Power and Desalination Plant, nominal capacity of the Plant to deliver Desalinated Water, being **140,880 m<sup>3</sup>/day** from 1 January 2015 to 31 December 2015

(ii) in respect of the Barka Power and Desalination Plant (Phase I), the nominal capacity of the Plant to deliver Desalinated Water, being **136,666 m<sup>3</sup>/day** from 1 January 2015 to 30 June 2015, **176,666 m<sup>3</sup>/day** from 1 July 2015 to 30 September 2015, **189,666 m<sup>3</sup>/day** from 1 October 2015 to 30 November 2015, and **202,366 m<sup>3</sup>/day** for the month of December 2015.

(iii) in respect of the Barka Power and Desalination Plant (Phase II), the nominal capacity of the Plant to deliver Desalinated Water, being 120,000 m<sup>3</sup>/day from 1 January 2015 to 31 December 2015.

(iv) in respect of the Sohar Power and Desalination Plant, the nominal capacity of the Plant to deliver Desalinated Water, being **150,000 m<sup>3</sup>/day** from 1 January 2015 to 31 December 2015.

(v) in respect of the Salalah Power and Desalination Plant, the nominal capacity of the Plant to deliver Desalinated Water, being **68,190 m<sup>3</sup>/day** from 1 January 2015 to 31 December 2015.

(vi) in respect of the Muscat City Desalination Plant, the nominal capacity of the Plant to deliver Desalinated Water, being **190,905 m<sup>3</sup>/day** from 15 July 2015 to 31 December 2015.

(v) in respect of the Sharqiyah Desalination Plant, the nominal capacity of the Plant to deliver Desalinated Water, being **80,000 m<sup>3</sup>/day** from 1 February 2015 to 31 December 2015.



**“Water Metering System”**

means, in respect of the Barka Power and Desalination Plants (Phase I and II), the metering system utilised by PAEW and the relevant Plant owner to measure the quantities of Desalinated Water Delivered.

**2. Charges for Bulk Supply**

The charges for Bulk Supply, with the exception of the Bulk Supply of Distillate Water to MISC (see below), shall be payable on a monthly basis and shall comprise (i) a fixed charge, payable for the provision of the Water Desalination Capacity; (ii) a variable charge, payable in relation to the quantity of Desalinated Water Delivered during the month; and (iii) a fixed charge payable (based on the Water Desalination Capacity) for the procurement and management service provided by OPWP. The charges are set out in Table 1 below.

**Table 1 – Schedule of Charges**

Charge	Rate
Fixed charge for Water Desalination Capacity	RO 0.374 per day per m <sup>3</sup> /day
Variable charge for Desalinated Water Delivered	RO 0.092 per m <sup>3</sup>
Fixed charge for OPWP service (based on Water Desalination Capacity)	RO 0.005 per day per m <sup>3</sup> /day

The fixed charge for Water Desalination Capacity specified in Table 1 shall be payable in respect of the nominal capacity of each Plant, based on such capacity being provided to minimum levels of availability, as specified in Table 2 below.





**Table 2 – Minimum Availability of Water Desalination Capacity**

Plant		Minimum Availability		
Al Ghubrah Power and Desalination Plant	Period	January-March	April-September	October-December
	%	82%	95%	82%
	m <sup>3</sup>	10,396,944	24,491,988	10,627,987
Sohar Power and Desalination Plant	Period	January-March	April-September	October-December
	%	85%	98%	85%
	m <sup>3</sup>	11,475,000	26,901,000	11,730,000
Barka Power and Desalination Plant (Phase I)	Period	January-April	May-September	October-December
	%	85%	92.5%	85%
	m <sup>3</sup>	13,939,932	22,745,656	15,166,526
Sharqiyah Desalination Plant	Period	January-March	April-September	October-December
	%	82%	92.5%	82%
	m <sup>3</sup>	3,870,400	13,542,000	6,035,200
Barka Power and Desalination Plant (Phase II)	Period	January-December		
	%	92.5%		
	m <sup>3</sup>	40,515,000		
Salalah Power and Desalination Plant	Period	January-December		
	%	92.5%		
	m <sup>3</sup>	23,022,649		
Muscat City Desalination Plant	Period	15 April -December		
	%	92.5%		
	m <sup>3</sup>	29,843,224		

In the event that the availability of the Water Desalination Capacity falls short of the levels specified in Table 2, PAEW or WDGD (as applicable) shall be entitled to a rebate on the fixed charges for Water Desalination Capacity. Any such rebate shall be calculated by OPWP at the end of the calendar year in accordance with a methodology approved by AER.

The charges for Bulk Supply of Distillate Water to MISC shall be payable on a monthly basis and shall be based on an all-inclusive daily charge payable in relation to the average daily quantity of Distillate Water Delivered in each month. The charge rate set out in Table 3 corresponds to each band.





Table 3 – Schedule of Charges for Distillate Water Supplied to MISC

Average Daily Distillate Water Delivered $DWD_d$ ( $m^3$ per day)	Distillate Water Charge Rate (RO per Day)
$DWD_d \leq 2000$	$0.9796 \times DWD_d$
$2000 < DWD_d \leq 3000$	$1583.32 + 0.188 \times DWD_d$
$3000 < DWD_d \leq 4000$	$1576.47 + 0.1902 \times DWD_d$
$4000 < DWD_d \leq 5000$	$1576.47 + 0.1902 \times DWD_d$
$5000 < DWD_d \leq 6000$	$1576.47 + 0.1902 \times DWD_d$
$6000 < DWD_d \leq 7000$	$1583.32 + 0.1891 \times DWD_d$
$7000 < DWD_d \leq 8000$	$1535.34 + 0.196 \times DWD_d$
$8000 < DWD_d \leq 9000$	$1562.76 + 0.1925 \times DWD_d$
$9000 < DWD_d \leq 10000$	$1645.01 + 0.1834 \times DWD_d$
$10000 < DWD_d \leq 11000$	$1507.93 + 0.1971 \times DWD_d$
$11000 < DWD_d \leq 12000$	$1658.72 + 0.1834 \times DWD_d$
$12000 < DWD_d \leq 13000$	$1603.89 + 0.188 \times DWD_d$
$13000 < DWD_d \leq 14000$	$1455.38 + 0.1994 \times DWD_d$
$DWD_d > 14000$	$0 + 0.3033 \times DWD_d$

### 3. Invoicing and Payment

OPWP shall issue invoices for Bulk Supplies to PAEW, WGD and MISC on a monthly basis. The variable charge rate specified in Tables 1 and 3 above shall be applied to the quantity of Desalinated Water Delivered each month, as certified by PAEW, MISC, and WGD (as applicable) and the relevant Plant owner and notified to OPWP. In the event that such certified data is not available within a reasonable time following the end of the month, OPWP shall estimate the quantity of Desalinated Water Delivered using such reasonable method as it sees fit and issue a provisional invoice. OPWP shall then issue a revised or supplemental invoice (or credit) as and when the certified data becomes available.



OPWP shall issue a full-year consolidated statement, including any rebate calculated in accordance with section 2 above, shortly following the end of the calendar year, together with a final reconciliation invoice (or credit).

Payment of invoices issued as described above shall be made by PAEW, MISC, and WDGD (as applicable) within thirty (30) days of receipt. Where a credit is issued to PAEW, MISC, or WDGD as described above, the amount shall be settled by way of deduction from subsequent payment(s) of Bulk Supply charges to OPWP unless PAEW, MISC or WDGD (as applicable) requests, in writing, that the relevant amount be refunded in cash by OPWP, in which case OPWP shall make such payment within thirty (30) days of receipt of the request.

#### 4. Amendments

Under certain circumstances it may become necessary to amend this Bulk Supply Tariff during its period of application. Any such amendment shall only be made in accordance with OPWP's License and with the approval of AER. OPWP shall provide PAEW, MISC, or WDGD (as applicable) with details (including the date of application) of any amendment on a timely basis.

**Hamdan Ali Nasser Al Hinai**  
Chairman