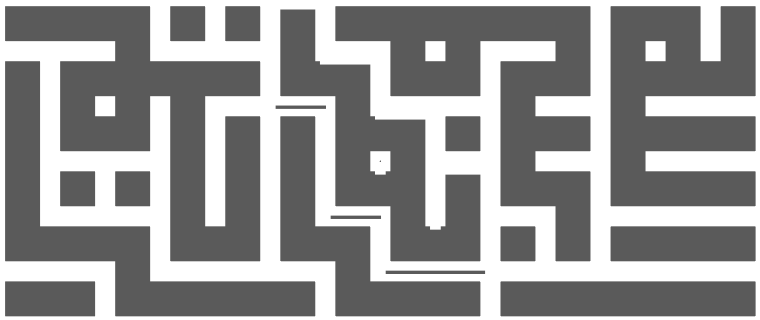
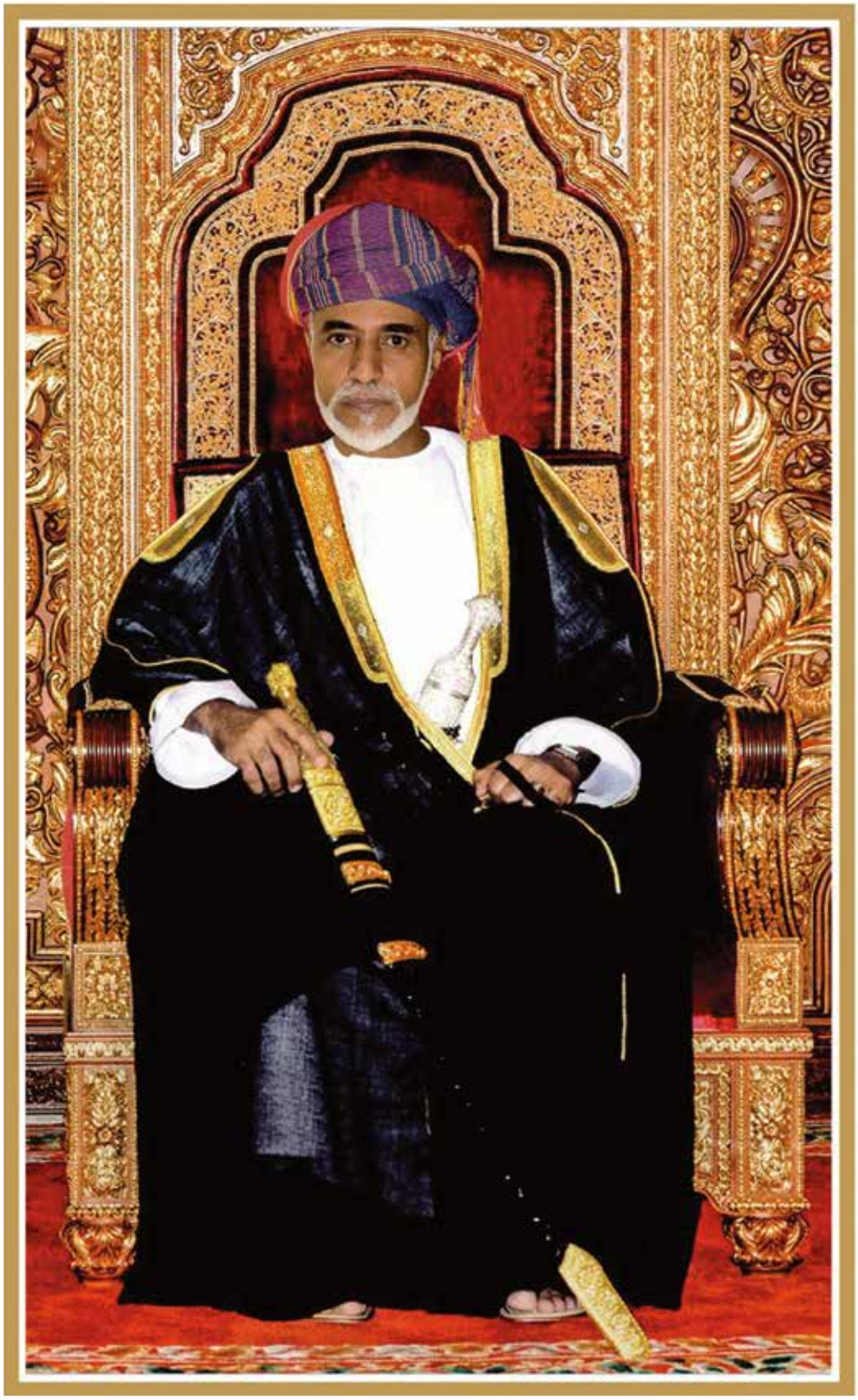
هيئة تنظيم الكهرباء - عمان
AUTHORITY FOR ELECTRICITY REGULATION, OMAN

رؤية عمان 2040
Oman Vision

نتقدم بثقة
Moving Forward with Confidence

ANNUAL REPORT





The Late His Majesty Sultan Qaboos bin Said

His Majesty Sultan Haitham Bin Tariq

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GLOSSARY OF TERMS

BOO	Build Own and Operate
Bulk Supply Tariff (BST)	Tariffs charged by PWP and RAEC for bulk supplies of electricity and water, where such tariffs are calculated each year and approved by the Authority;
DPC	The Dhofar Power Company SAOC
DPS	Dhofar Power System connecting the systems of DPC and OETC in Dhofar region
EPC	Engineering, Procurement and Construction
ERWS	Electricity and Related Water Sector
GCCIA	Gulf Cooperation Council Interconnection Authority
I(W)PP and IPP	Independent Power and Water Project
Main Interconnected System or MIS	The interconnected systems of OETC, and the Muscat, Majan and Mazoon Discos
Majan or MJEC	The Majan Electricity Company SAOC
Mazoon or MZEC	The Mazoon Electricity Company SAOC
MAR	Maximum Allowed Revenue
MHEW	The Ministry of Housing, Electricity and Water
OETC	The Oman Electricity Transmission Company SAOC
Omanisation	The policy for the employment of Omani nationals as issued from time to time by the Government of Oman
Permitted Tariff	Tariffs Customers are obliged to pay in consideration for Supply of electricity or for Connection to a Distribution System or a Transmission System, which tariff shall be determined in the manner stipulated in Article (9) of the Sector Law
PAW	The Public Authority for Water
PWP	The Oman Power and Water Procurement Company SAOC
RAEC	The Rural Areas Electricity Company SAOC
OMR	Omani Rial
ROP	Royal Oman Police
SCRC	Schedule Charge Restriction Condition
Sector Law	The law for the regulation and privatization of the electricity and related water sector promulgated by Royal Decree 2004/78 as amended by Royal Decree 2009/59 and 47/2013
Related Water	Desalinated water in the Sultanate of Oman which is combined or co-located with the electricity sector and which is subject to regulation
The Authority	The Authority for Electricity Regulation, Oman, being the authority established pursuant to Article (19) of the Sector Law as amended

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CHAIRMAN'S FOREWORD

On behalf of the Authority, it is with great pleasure that I present our Annual Report for 2019. The electricity and water sector sustained its growth and development since the restructuring. The main highlights of 2019 were as follows:

- The number of electricity customer accounts in the Sultanate increased by 58,122 or 4.8% from 1,219,156 in 2018 to 1,277,278 in 2019. Residential customers accounted for 66.0% of the increase in accounts. Since the 2005 market restructuring the number of electricity accounts has increased 747,027 or 141%.
- Electricity Supply in 2019 reached 33.8 TWh, 0.7% higher than in 2018 and 255% higher than in 2005.
- The Authority's measure of electricity Intensity (MWh per account) reached 26.5 in 2019, lower than 2018 by 3.8% and 47.8% higher than in 2005. Increasing intensity is an important driver of electricity demand that has implications for costs and subsidy. If the 1,277,278 registered accounts in 2019 had the same average intensity as in 2005, electricity supply in 2019 would have been 32%, or 10.9 TWh lower with corresponding reductions in costs and subsidy;
- Sector gas use increased by 9.8% in 2019 while gross electricity and water production increased by 1.3% and 8.2%, respectively due to efficient use of gas.
- The actual data of the supplied units and units included in the electricity networks in the Sultanate in 2019 - which represent approximately (90%) of the total supply to the

Sultanate - indicated in MIS losses, reaching (8.4%) while the Dhofar Power losses were (10.6%) in 2019, compared to (9.3%) in 2018. RAEC losses reached (11.7%) in 2018 to (15.1%) in 2019.

- In 2019 Direct employment was 12% higher than in 2018. Indirect employment in 2019 (9,901) was 31% higher than the previous year. Omani nationals accounted for 93% of Direct employment in 2019 and for 45% of Indirect employment, contributing to a sector Omanisation rate of 55%.

- The Authority received 91 new customer complaints and resolved 80 outstanding customer complaints.

- In 2019, Mohammed Al Tobi, Regulatory Engineer, completed an MSc in Energy and Sustainability with Electrical Power in Engineering from Southampton University- UK. The Authority extends to Mohamed the warmest congratulations for this achievement.

- The electricity sector benefited from 565.4 million Rial Omani of support from the Ministry of Finance in 2018: 418.0 million Rial Omani of MIS subsidy, 104.4 million Rial Omani of Dhofar Power System subsidy and 43.0 million Rial Omani of RAEC subsidy.

- Electricity licensees approved 355 electricity related projects in 2019 with a total value of OMR 132.6 million, these projects will support the provision of electricity services in all of the Sultanate's regions; and

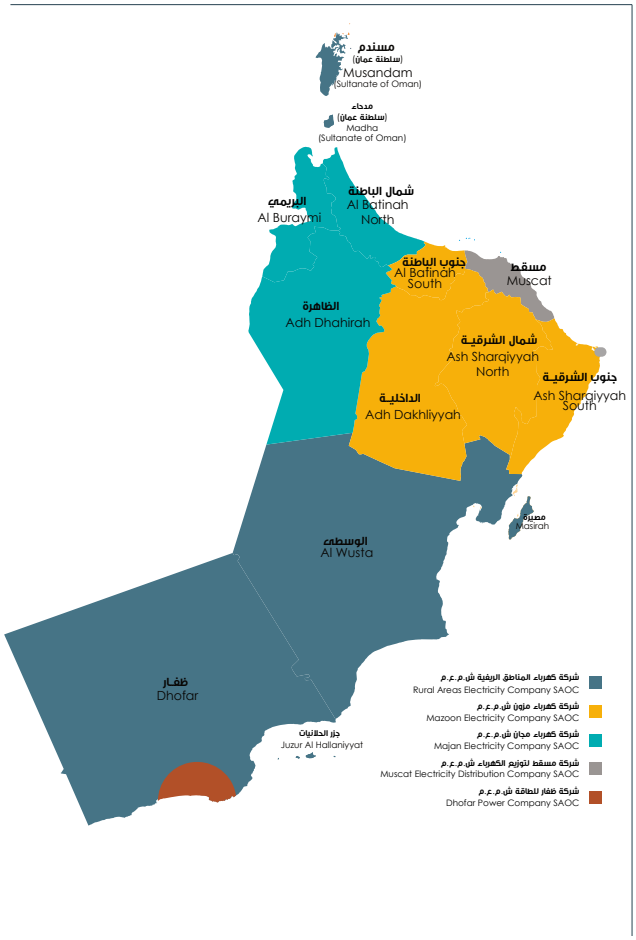
- The cost of regulating the electricity and related water sector in 2019 was around OMR 3.8 per Customer account, less than 1.58 baiza per kWh Supplied and less than 0.25% of total electricity and around water sector turnover, metrics we believe compare favourably to international benchmarks of regulatory costs.

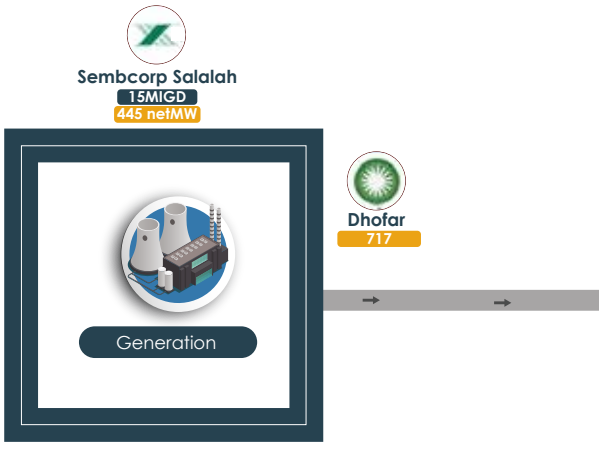
Members would particularly like to acknowledge with thanks the hard work of Authority staff who contributed to and are responsible for the activities and work described in this report.

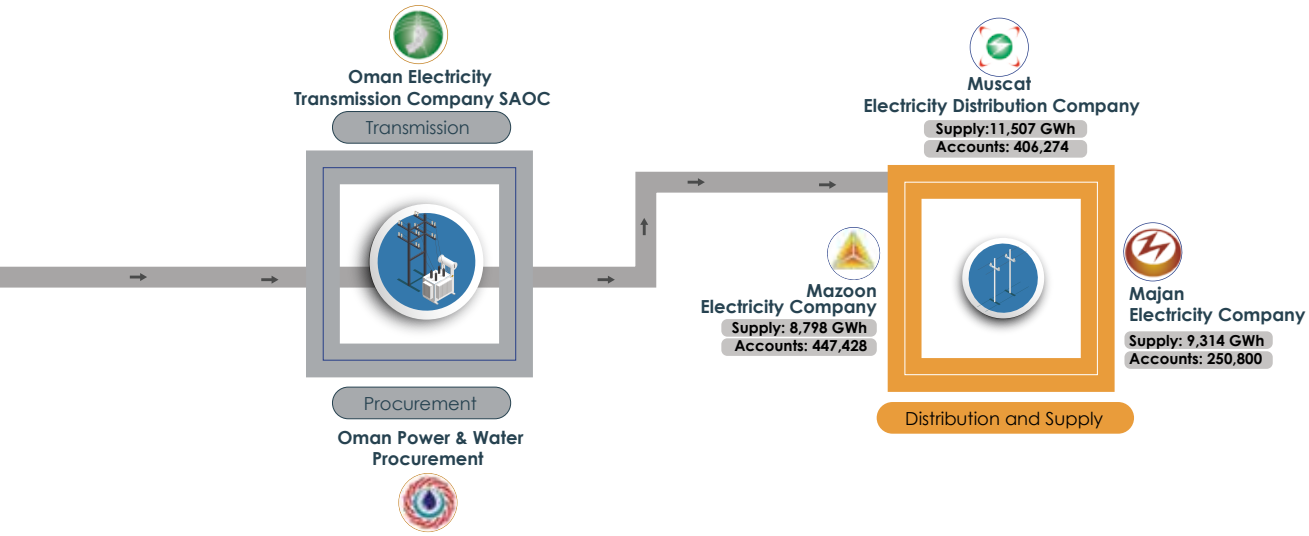
Saleh bin Hamood Al Rashdi
Chairman of Authority for Electricity Regulation, Oman

ELECTRICITY AND WATER SECTOR MARKET STRUCTURE

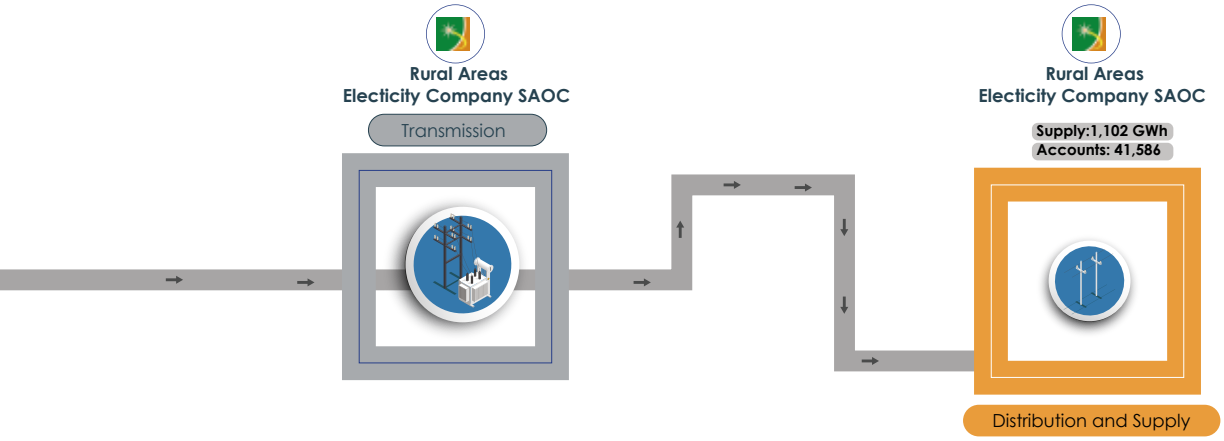
Main Interconnected System



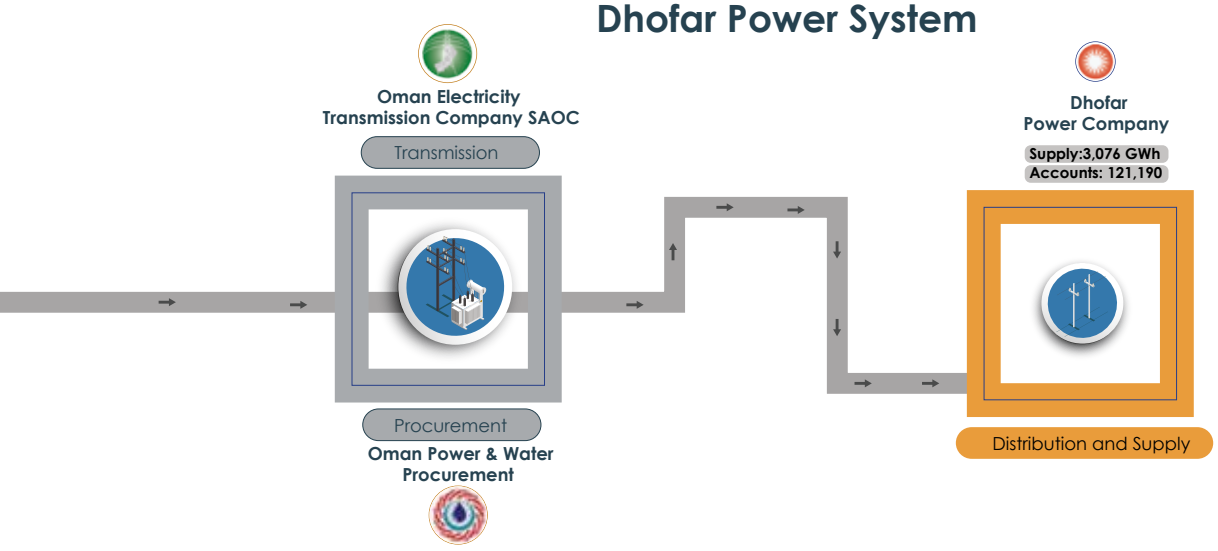




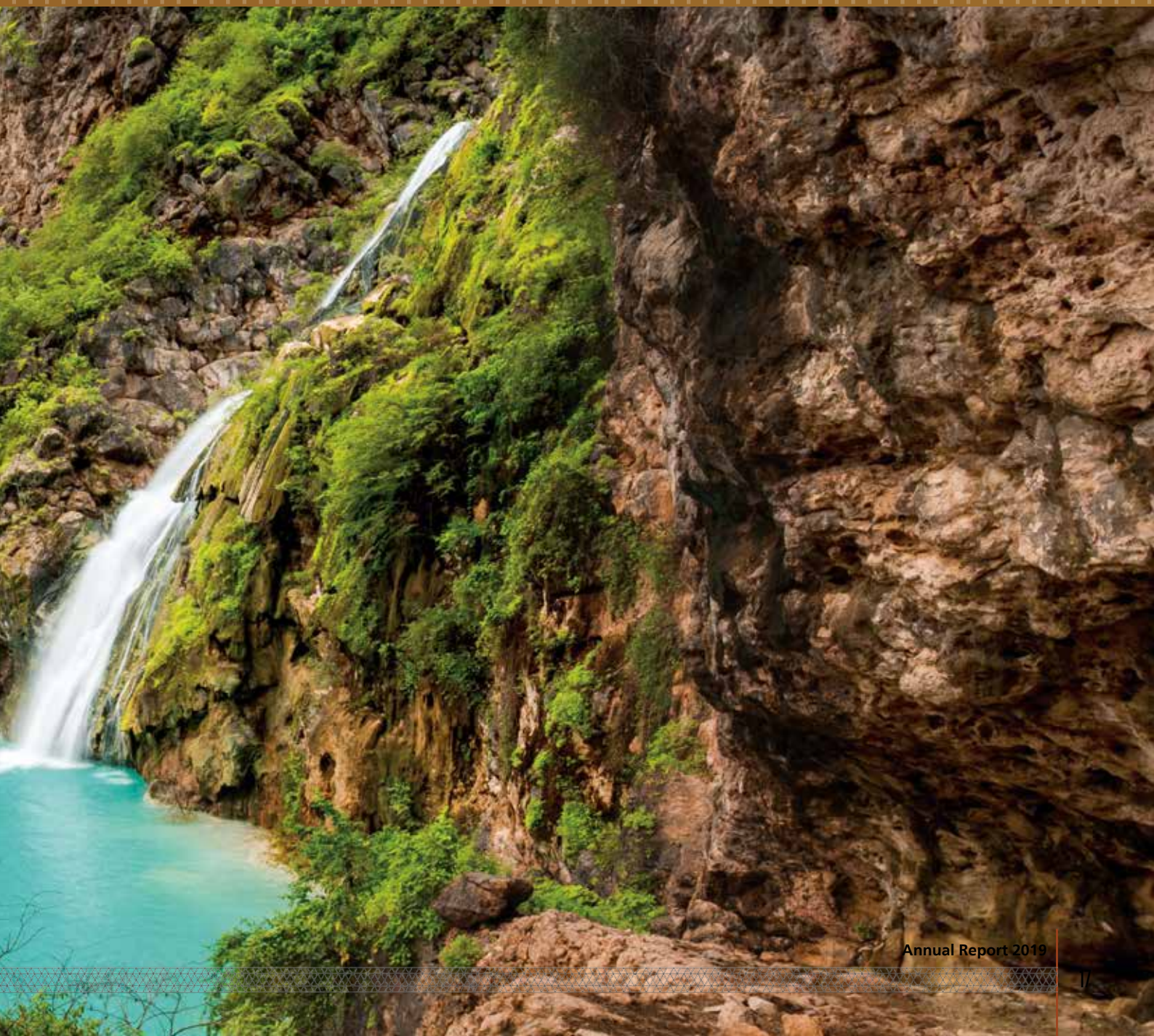
Rural Systems



Dhofar Power System



ELECTRICITY & WATER SECTOR ACTIVITY AND STATISTICS

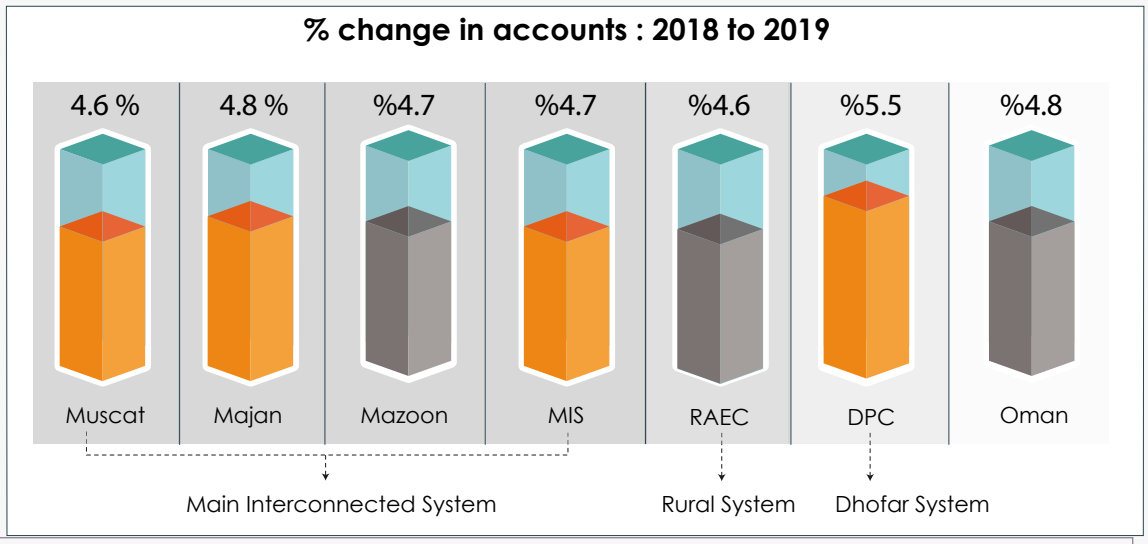


Customer Accounts: 2018 and 2019

The number of registered electricity customer 2018 to 2019

The number of registered electricity customer accounts in the Sultanate increased by 4.8% in 2019 from 1,219,156 in 2018 to 1,277,278. Growth in MIS accounts was 4.7% (85.9% of the increase in accounts, compared with 90.2% in 2018). Growth in DPC accounts was 5.5% (11.0% of the increase in accounts, compared with 6.6% in 2018). Growth in RAEC accounts was 4.6% ((3.1% of the increase, the same as for 2018). Please refer to the figure below and Table 1 of Annex C for precise account numbers.

Figure 1: Registered Customer Accounts 2018 & 2019



	Muscat	Majan	Mazoon	MIS	RAEC	DPC	Oman
2018 Account	388,548	239,239	436,774	1,064,561	39,773	114,822	1,219,156
2019 Accounts	406,274	250,800	457,428	1,114,502	41,586	121,190	1,277,278
% change in Accounts	4.6%	4.8%	4.7%	4.7%	4.6%	5.5%	4.8%

Source: Company returns

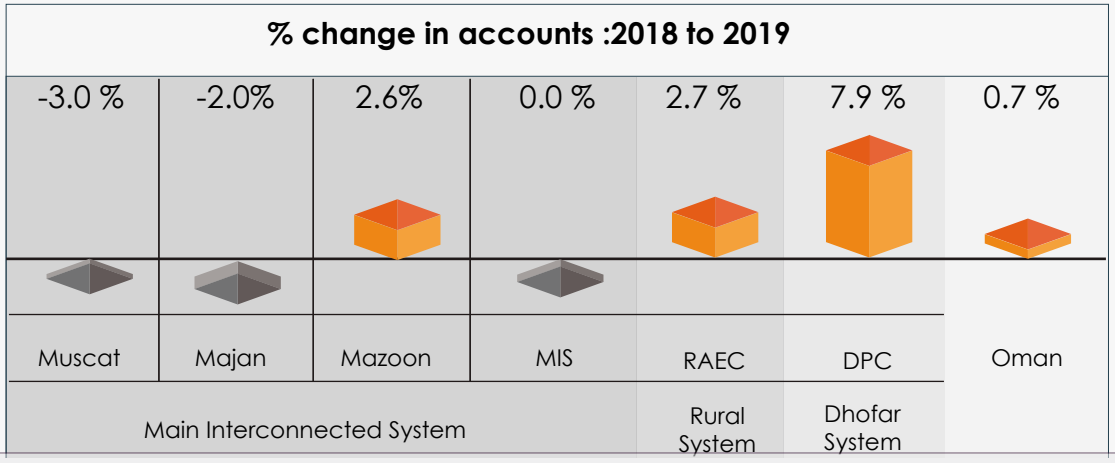
Overall Mazoon continued to register the largest number of customer accounts in 2019 (457,428) comprising approximately 35.8% of total registered accounts, followed by MEDC (406,274) with around 31.8% of the share of total accounts.RAEC had 41,586 registered customer accounts, which was around 3.3% of the total.

Electricity Supply: 2018 and 2019

Total electricity supply in the Sultanate increased by around 249 GWh in 2019 from 33,547 GWh in 2018 to 33,796 GWh, an increase of 0.7% (compared with a 3.7% increase in 2018). This reflects both the impact of reduced economic growth and customer reaction to the Cost Reflective Tariffs (CRT) that were introduced for large industrial, commercial and government consumers from January 2017. This is described more fully in the section headed "Regulatory Focus 2."

As can be seen from Figure 2 below, despite the overall increase of 0.7% across Oman, supply to the MIS decreased by 0.02% (or 5.0 GWh) compared with 2018. Geographically the picture was quite variable, with a 2.04% reduction in supply to Majan (which has a relatively high industrial load) and a 0.27% reduction in supply to Muscat, counterbalanced by a 2.55% increase in supply to Mazoon, a 2.67% increase in supply to RAEC and a 7.90% increase in supply to DPC. Table 2 of Annex C sets out further details.

Figure 2: Electricity Supply (MWh) 2018 & 02019



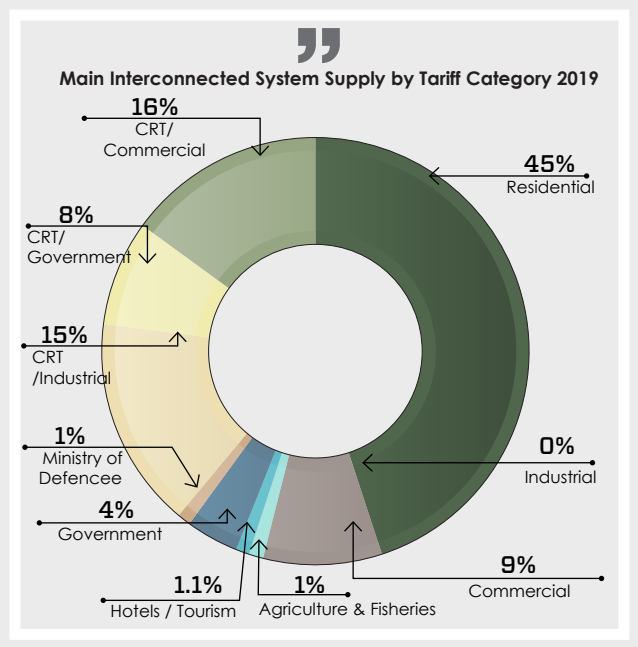
	Muscat	Majan	Mazoon	MIS	RAEC	DPC	Oman
2018 Account	11,538,036	9,507,184	8,578,761	29,623,982	1,072,950	2,850,557	33,547,489
2019 Accounts	11,507,193	9,313,628	8,797,948	29,618,769	1,101,589	3,075,685	33,796,043
% change in Accounts	-3.0%	-2.0%	2.6%	0.0%	2.7%	7.9%	0.7%

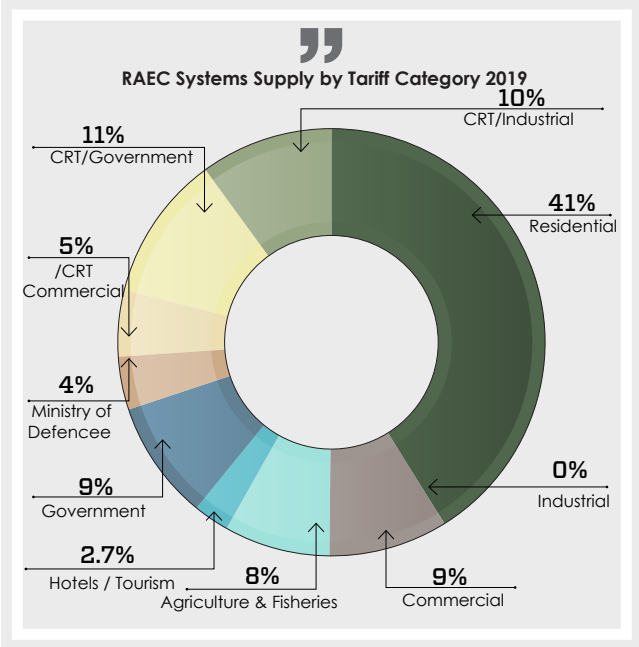
Source: Company returns

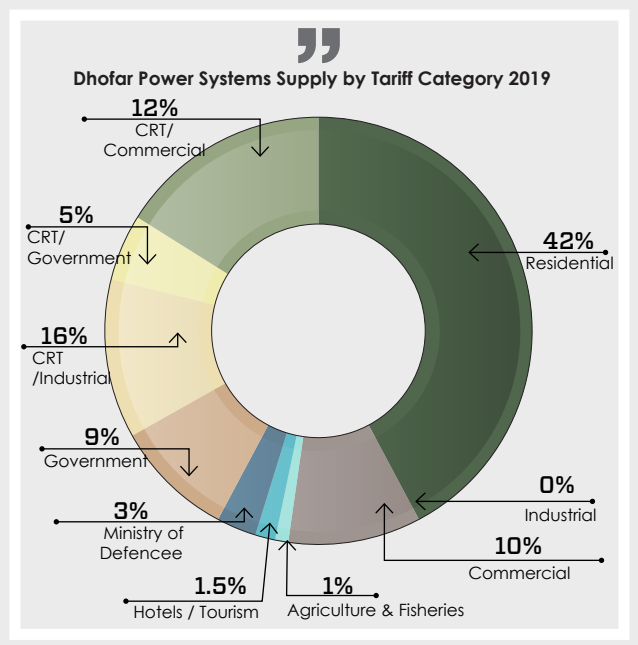
In terms of volume, the 11.5 TWh of supply from MEDC was the highest amongst the licensed suppliers, accounting for 34.0% of the total supply in Sultanate, followed by Majan (9.3 TWh) and Mazoon (8.8 TWh). Collectively, the MIS accounted for 87.6% of the total supply (compared with 88.3% in 2018) followed by DPC with 9.1% and RAEC with 3.3%.

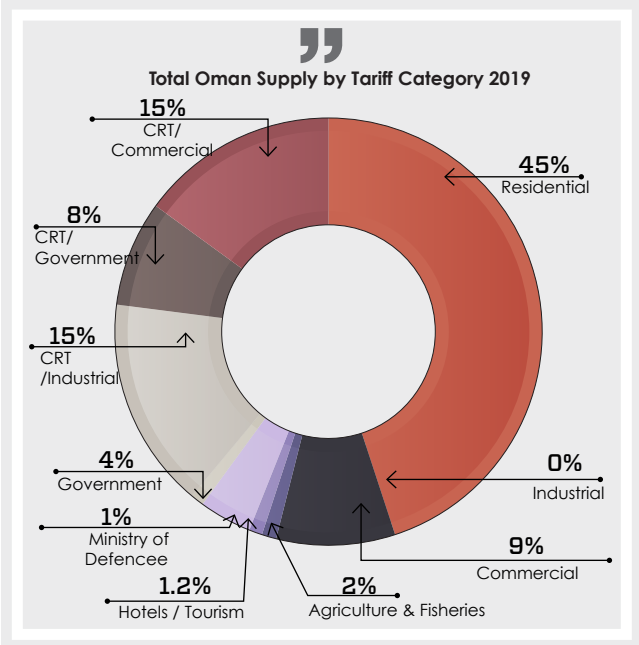
Government and Commercial (CRT) customers were the primary driver of the overall 248.5 GWh growth in supply. On the other hand, supply to Industrial (CRT) and Residential customers reduced slightly, though the extent of the reduction was offset by some growth in those categories within the RAEC and Dhofar systems.

Figure 3: Electricity Supply by Tariff Category & System 2018 & 2019



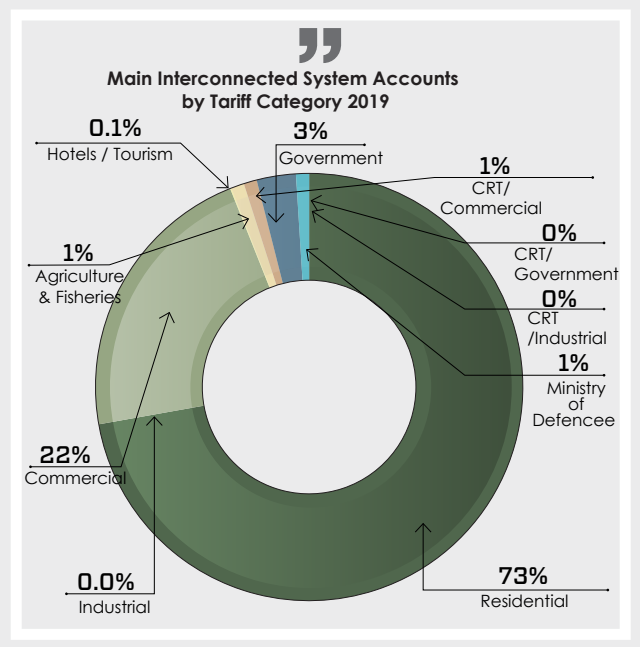


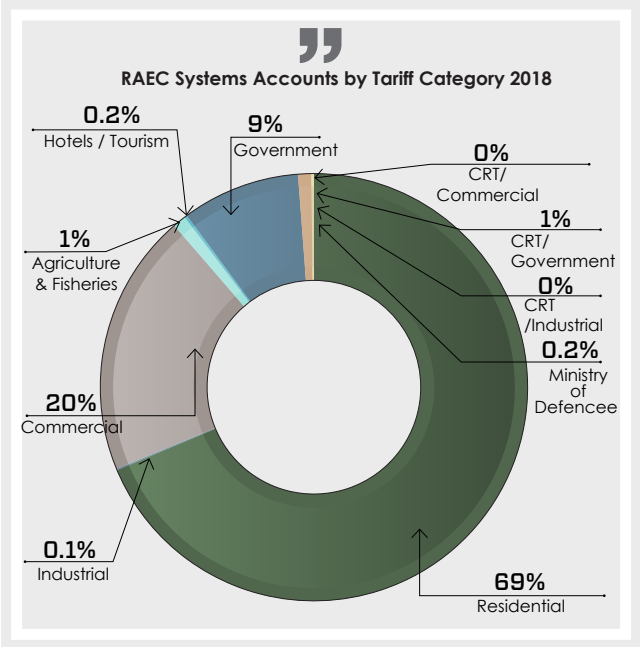


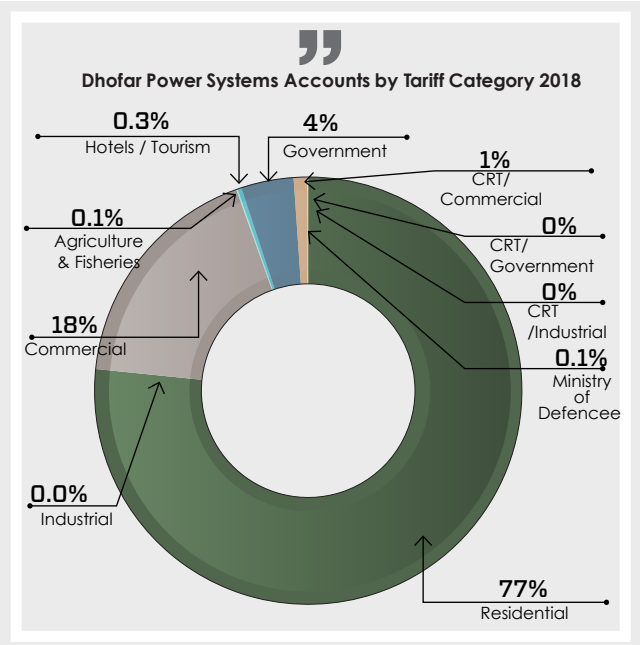


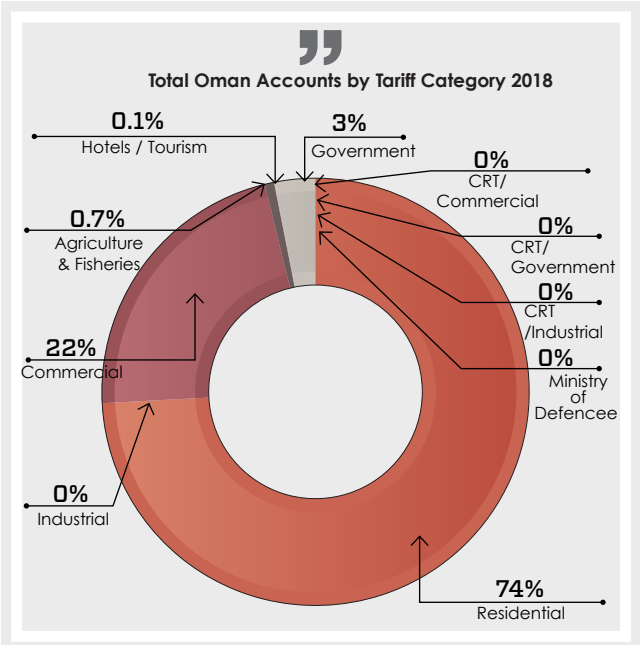
For more details, please refer to Annex C, Table1

Figure 4: Registered Customer Accounts by Tarff Category & System - 2018 & 2019







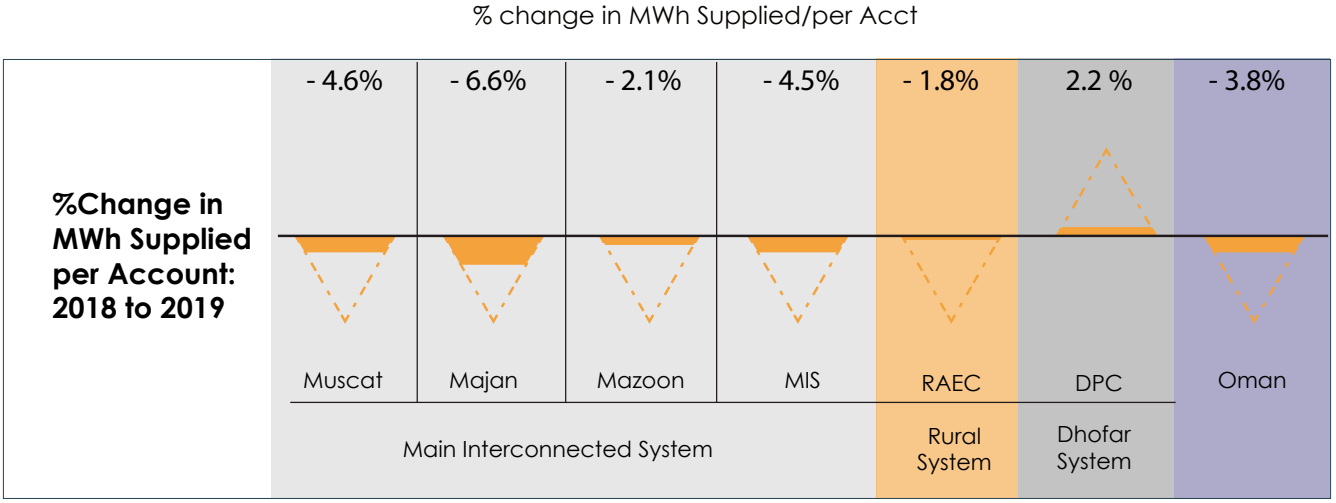


For more details, please refer to Annex C,Table 2

Electricity supply per account : 2019 & 2018

Electricity intensity (MWh per account) decreased by 3.8% in 2019, from 27.5 MWh/account in 2018 to 26.5 MWh/account in 2019, reflecting a 4.8% increase in total registered accounts compared to a 0.74% increase in supply during the year. Please refer to the figure below and Table 3 of Annex C for further details.

Figure 5: MWh Supplied per Registered Account: 2018 & 2019



	Muscat	Majan	Mazoon	MIS	RAEC	DPC	Oman
2018 MWh Supply/per Acct	29.7	39.7	19.6	27.8	27.0	24.8	27.5
2019 MWh Supply/per Acct	28.3	37.1	19.2	26.6	26.5	25.4	26.5
net change MWh S/per Acct	-1.4	-2.6	-0.4	-1.3	-0.5	0.6	-1.1
% change in MWh S/per Acct	-4.6%	-6.6%	-2.1%	-4.5%	-1.8%	2.2%	-3.8%

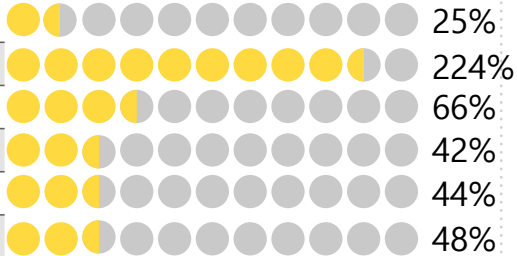
Source: Company returns

The reduction in electricity intensity for a fourth successive year reflects the continued overall slowdown in the rate of supply growth. It is notable that electricity intensity continued to grow in DPC but showed significant reductions in the MIS, especially in Majan, which has a relatively high industrial load.

The following figure shows that despite the recent decline in electricity intensity, between 2005 and 2019, the average electricity intensity across all customers increased by 48%, with a significant variation in intensity changes across customer categories.

Figure 6: Changes in Electricity Intensity between 2005 and 2019

MWh/Account	2005	2018	2019	% change
Residential	12.8	17.0	16.0	25%
Industrial*	1,561.5	5,252.7	5,051.5	224%
Commercial*	17.2	29.6	28.6	66%
Agriculture & Fisheries	41.4	57.3	58.8	42%
Government & MOD	75.5	105.7	109.0	44%
All Categories	17.9	27.5	26.5	48%



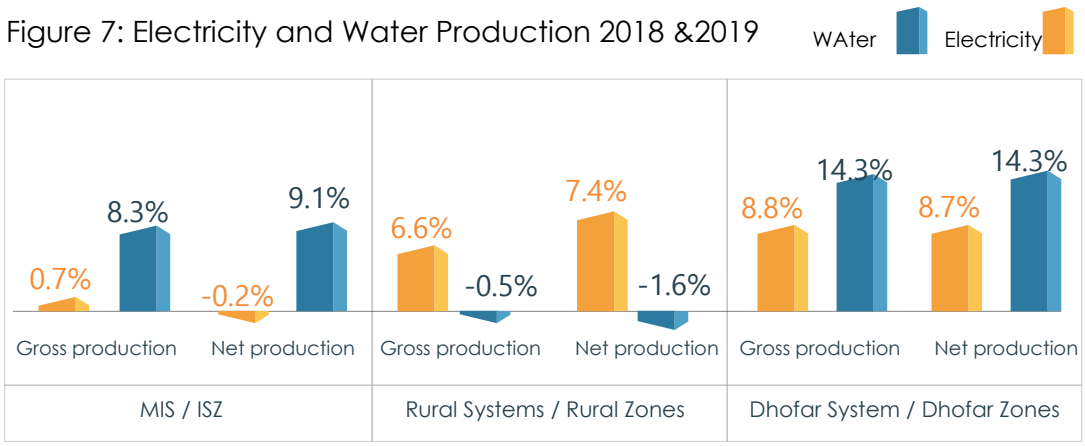
The overall growth in intensity since 2005 reduced to 48% in 2019, compared with 54% in 2018. Customer categories with reduced intensity in 2005-2019, compared with 2005-2018 include Industrial (224% compared with 236%) Residential (25% compared with 33%) and Commercial (66% compared with 75%). On the other hand Agriculture and Fisheries (42% compared with 38%) Government & MOD (44% compared with 40%) exhibited some increases in energy intensity.

Increasing intensity is an important driver of electricity demand which has implications for costs and subsidy. If the 1,277,278 registered accounts in 2019 had the same average intensity as in 2005, electricity supply in 2019 would have been 32% or 10.9 TWh lower with corresponding reductions in costs and subsidy.

Electricity and Water Production: 2018 & 2019

In 2019 gross electricity production of 38.3 TWh was 1.6% higher than in 2018. The 37.5 TWh of net electricity generation (including PWP and RAEC purchases from other sources) was 0.8% higher than in 2018. Gross and net water production increased by 8.6% and 9.4% respectively (to 350.4 million m³ and 346.8 million m³). Please refer to the figure below and to Table 6 of Annex C for further details.

Figure 7: Electricity and Water Production 2018 &2019



System	Item	Electricity GWh 2018	Electricity GWh 2019	Electricity GWh % change	Water 000 m3 2018	Water 000 m3 2019	Water 000 m3 % change
MIS / ISZ	Gross production	33,216	33,463	0.7%	297,378	322,040	8.3%
	Net production	32,858	32,791	-0.2%	292,039	318,697	9.1%
Rural Systems / Rural Zones	Gross production	1,130	1,205	6.6%	3,663	3,644	-0.5%
	Net production	1,216	1,305	7.4%	3,451	3,397	-1.6%
Dhofar System / Dhofar Zones	Gross production	3,368	3,665	8.8%	21,654	24,739	14.3%
	Net production	3,143	3,417	8.7%	21,654	24,739	14.3%
Total Oman	Gross production	37,714	38,332	1.6%	322,694	350,423	8.6%
	Net production	37,219	37,513	0.8%	317,143	346,833	9.4%

Source: Company Returns

MIS net generation was 0.2% lower in 2019 than 2018, Rural Systems was 6.6% higher and generation for the Dhofar Power System was 8.8% higher. The net desalinated water production in the Interconnected and Sharqiyah Zones (ISZ) increased by 9.1% in 2019 which accounted for 92% of the increase in total desalinated water production in 2019. Net water production in Rural Zones decreased by 1.6% in 2019 while that in Dhofar Zone increased by 14.3%.

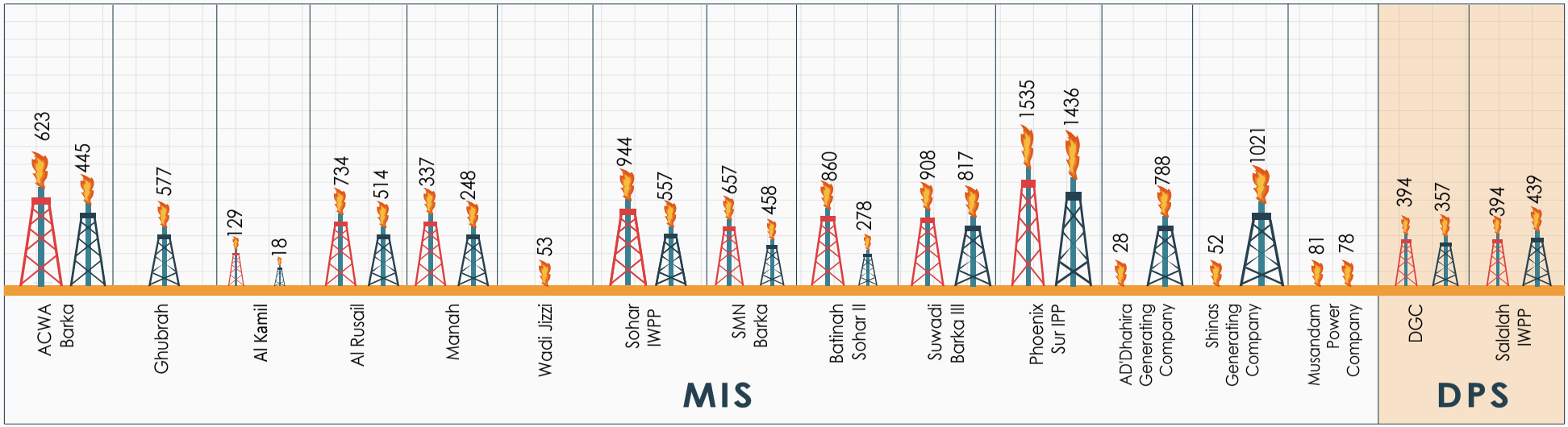
ERWS Fuel Use in 2019

Natural Gas

The electricity and related water sector consumed 9.8% less gas in 2019 than 2018, compared to an increase of 1.3% and 8.2% in electricity and water production respectively (excluding RAEC Production Facilities).

The specific gas consumption of MIS connected facilities fell to 198 Sm3/MWh in 2019 from 224 Sm3/MWh in 2018 (a 11.8% reduction), and was 44% lower than in 2005.

Figure 8: Gas Consumption at Major Production Facilities: 2018 & 2019



Production Facility:	ACWA Barka	Ghubrah	Al Kamil	Al Rusail	Manah	Wadi Jizzi*	Sohar IWPP	SMN Barka	Batinah Sohar II	Suwadi Barka III	Phoenix Sur IPP	AD'Dhahira Generating Company	Shinas Generating Company	Musandam Power Company	DGC	Salalah IWPP	MuscatCity IWP**	Sharqyiyah Sur IWP**	Qurayyat Desalination SAOC	Barka Desalination Company	Myah Gulf Desalination Compnay	Total
gas use: Sm3 2018 10^6	623	577	129	734	337	53	944	657	860	908	1,535	28	52	81	349	394	-	-	-	-	-	8,260
gas use: Sm3 2019 10^6	445		18	514	248		557	458	278	817	1,436	788	1,021	78	357	439	-	-	-	-	-	7,453
% of total 2019 gas use	6%	0%	0%	7%	3%	0%	7%	6%	4%	11%	19%	11%	14%	1%	5%	6%	-	-	-	-	-	100%
% change in gas use	-28.5%	-100.0%	-86.2%	-30.0%	-26.4%	-100.0%	-41.0%	-30.3%	-67.7%	-10.1%	-6.4%	2708.3%	1849.4%	-	-	-	-	-	-	-	-	-9.8%
% change in Gross Electricity and Gross Water Output: 2018 to 2019																						
Electricity	-23%	-100%	-86%	-30%	-31%	-100%	-43%	-39%	-70%	%-9	%-5	4098%	6387%	15%	%-3	21%						1.3%
Water	-45%	-100%	-	-	-	-	-42%	31%	-	-	-	-	-			14%	9%	4%	77%	81%	0	8.2%

Source: PWP & Company returns

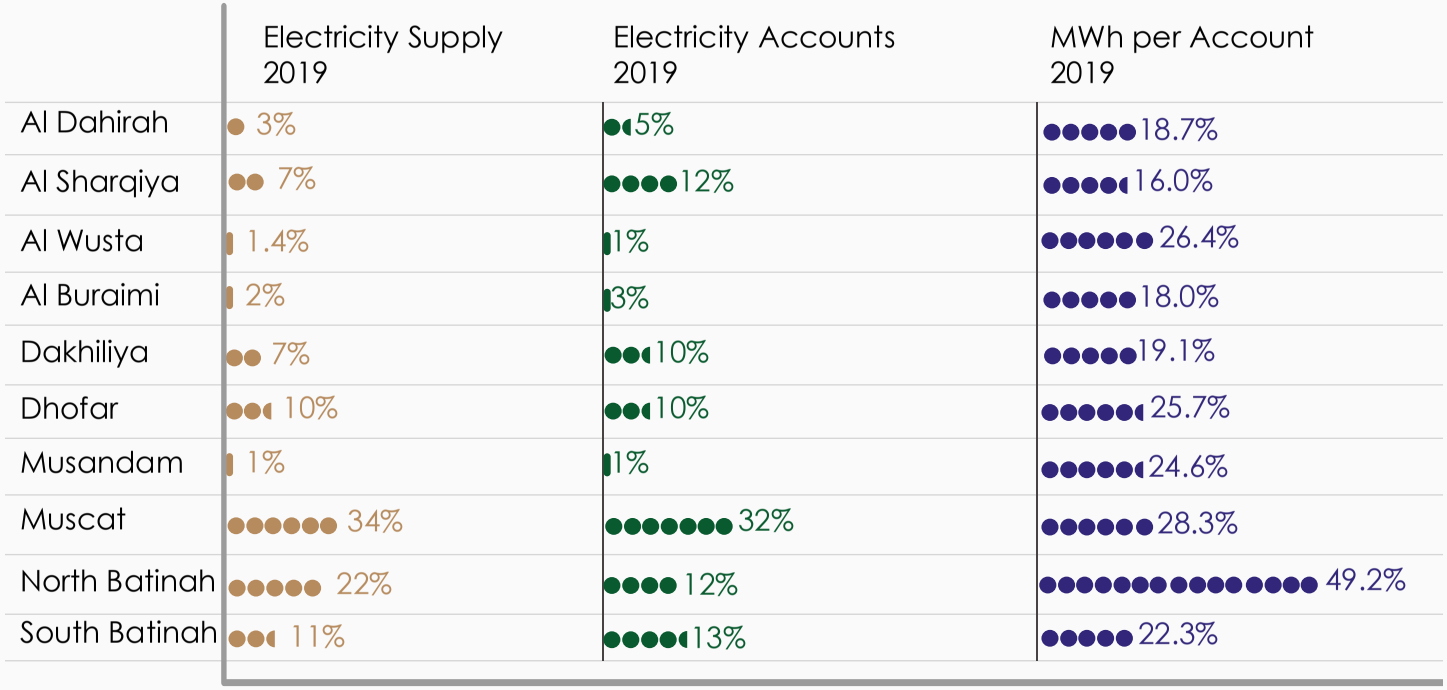
* Wadi Jizzi Power Plant only, excludes OMCO units

** Muscat CityIWP & Sharqyiyah Sur IWP plants,Qurayyat Desalination and Barka Desalination no direct gas utilization.

EWS Activity by Region: 2019

While all regions of Oman benefited from electricity and water sector activity in 2019, activity is heavily concentrated in Muscat, North Batinah and South Batinah. These three areas accounted 67% of supply, 57% of customer accounts.

Figure 9: Gas Consumption at Major Production Facilities: 2018 & 2019

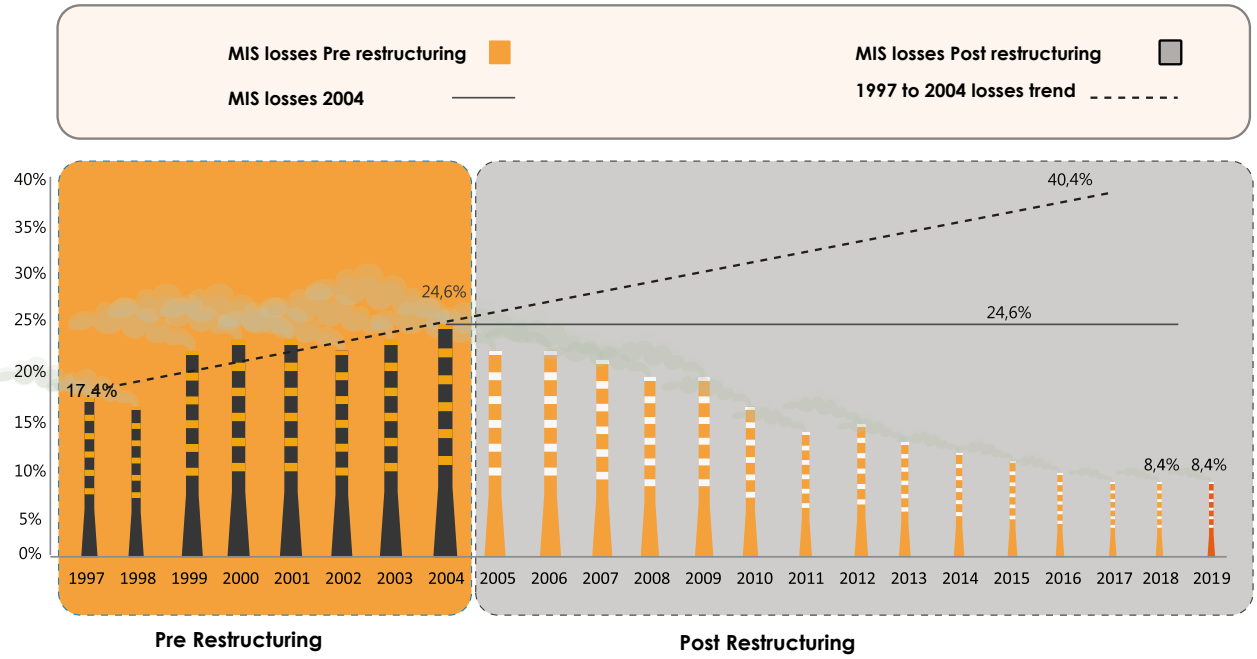


Electricity Supply & Accounts

Region	MWh Gr MWh Supplied oss	Accounts	MWh per Account
Al Dahirah	1,103,327	58,949	18.7
Al Sharqia	2,524,945	157,460	16.0
Al Wusta	474,614	17,971	26.4
Al Burami	708,031	39,310	18.0
Al Dakhliyah	2,512,871	131,224	19.1
Dhofar	3,315,492	129,094	25.7
Musandam	387,169	15,711	24.6
Muscat	11,507,193	406,274	28.3
North Batinah	7,502,271	152,541	49.2
South Batinah	3,760,132	168,744	22.3
Totals	33,796,043	1,277,278	26.5

When looking at the returned data from 2019 relating to units of electricity supplied and entering the system, it reveals that the losses for MIS were 8.4% whilst accounting for approximately 90% of the total share of electricity supply in Oman. Losses for Dhofar Power System stood at 10.6% for 2019 with RAEC showing losses at 15.1%.

Figure 10: Annual MIS losses reductions since 2005

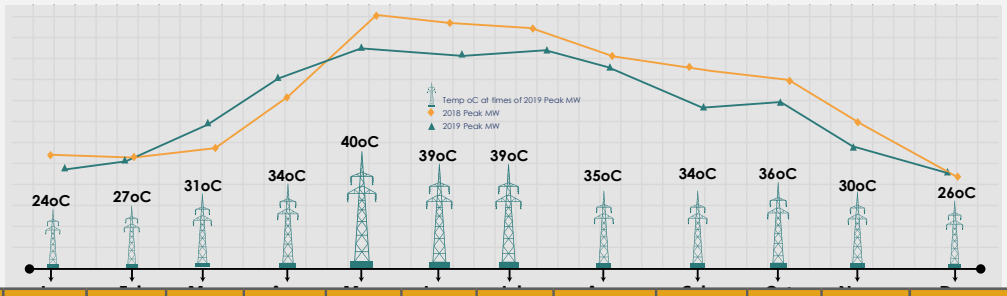


Source: Pre-restructuring data from MHEW reports; post-restructuring data from AER

Reductions in losses are a reflection of the restructuring done across the sector in 2005, the application of a clear incentive-based price control mechanism and the constructive responses received from licensees. As losses approach long-term loss targets, the rate of improvement is expected to reduce, though the Authority assures further improvements can still be enacted. Reductions in losses result in considerable future cost savings, with outturn losses in 2019 close to the 2018 outturn, these reductions are already becoming visible. For example, MIS losses in 2019 were similar to 2018 levels at 8.4%. Based on a 1 MWh reduction in losses being equivalent to OMR 9 (approximately the average variable MIS generation cost), the benefit 2019 was OMR 47.7 million compared with the 24.6% level of 2004. In cumulative terms, the value of MIS' reduced losses since 2004 is OMR 344.2 million which, in present value terms and using a discount rate of 6%, amounts to a total of OMR 794 million. Note that these figures do not take into account any investment savings in generation and network infrastructure, which would significantly increase the value of the reported losses reductions.

System Peak Demands:MIS and Dhofar Power System in 2018 and 2019

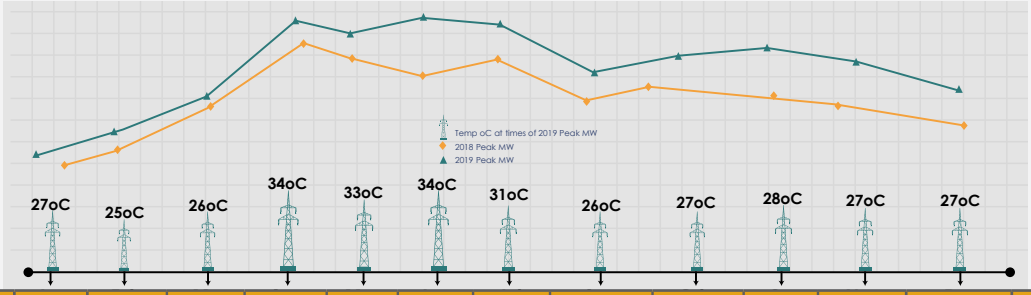
Figure 11: Main Interconnected System Peak Demand - 2018 & 2019



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Peek MW
2018 Peak MW	3,163	3,417	4,238	5,737	5,955	6,339	6,279	6,256	5,804	5,535	4,241	3,396	6,339
2019 Peak MW	3,377	3,373	3,929	5,332	6,048	6,540	6,445	6,264	6,330	5,818	4,557	3,396	6,540
% change	7%	-1%	- 7%	-7%	2%	3%	3%	0%	9%	5%	7%	-4%	3 %
Temp oC at times of 2019 Peak MW	24	27	31	34	40	39	39	35	34	36	30	26	

Source: OETC

Figure 12: Dhofar Power System Peak Demand - 2018 & 2019



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Peek MW
2018 Peak MW	319	368	441	522	539	485	505	466	415	453	454	415	539
2019 Peak MW	355	413	458	553	582	594	571	516	512	521	508	478	594
% change	11%	12%	4%	6%	8%	22%	13%	11%	23%	15%	12%	15%	10%
Temp oC at times of 2019 Peak MW	27	25	26	34	33	34	31	26	27	28	27	27	

Source: OETC

Electricity Demand Forecasts

Every year, Oman Power and Water Procurement (PWP) publishes a statement in which an official 7-year forecast for electricity and desalinated water demand is presented. This is done in accordance with Condition 5 of the Power and Water Procurement License and relates directly to a planning strategy to reach the capacities required to meet forecast demand for MIS and Dhofar Power. The current forecast was initiated at the beginning of 2020 and is valid until the end of 2026. Although freely available for review and download on the PWP website, www.omanpwp.com. The highlights are as follows:

MIS

n the "expected case", MIS peak demand is projected to grow at 4% per year to reach 8,490 MW in 2026 which is slightly lower than previously forecast. The "low case" projects 2% annual growth, resulting in peak demand of 7,080 MW in 2026, the "high case" projects 7% annual growth and peak demand at 10,220 MW in 2026, about 1,730 MW higher than the expected case. In terms of energy, the expected, low and high case forecasts for 2026 are 42 TWh, 38 TWh and 48 TWh respectively.

DPS

in the "expected case", peak demand is expected to grow at 5% per year, reaching 793 MW in 2026. The "low case" projects 4% annual growth, reaching 706 MW by 2026. The "high case" allows for more rapid industrialization, and has peak demand increasing at 8% per year to reach 938 MW in 2026.

In terms of energy, the expected, low and high case forecasts for 2026 are 5 TWh, 4 TWh and 5 TWh respectively.

For a more in-depth analysis of the electricity demand forecast, please refer to Issue 14 of the PWP 7-year statement. The statement also outlines how PWP plans to ensure a sufficient supply capacity will be generated to meet forecast demand for electricity and related water.

Approved Projects and Capital Expenditure: 2019

Licensed system operators (OETC, MEDC, Mazoon, Majan, RAEC and DPC) approved 355 projects in 2019, with a total value of OMR 132.6 million. The below figure presents details of the approved projects by Licensee, region and value.

Figure13: Project Approvals by Licensee in 2019

Region		OETC	MEDC	MZEC	MJEC	RAEC	Dhofar	Totals	Total %
Muscat	OR	18,244,251	16,726,573					34,970,824	26.4%
Al Batinah	OR			12,957,145	14,142,245			27,099,390	20.4%
Dhofar	OR	9,153,568				2,474,244	10,619,044	22,246,856	16.8%
Al Dakhiliyah	OR			12,676,661				12,676,661	9.6%
Sharqiyah	OR			12,177,225				12,177,225	9.2%
Buraimi	OR				8,133,108			8,133,108	6.1%
Al Dhahira	OR				6,422,279			6,422,279	4.8%
Al-Wusta	OR					1,424,862		1,424,862	1.1%
Musandam	OR					990,193		990,193	0.7%
*Other	OR	5,644,000			779,567			6,423,567	4.8%
Total Value		33,041,819	16,726,573	37,811,031	29,477,199	4,889,299	10,619,044	132,564,965	
of Total %		24.9%	12.6%	28.5%	22.2%	3.7%	8.0%		
Number of Projects		9	31	22	29	14	250	355	

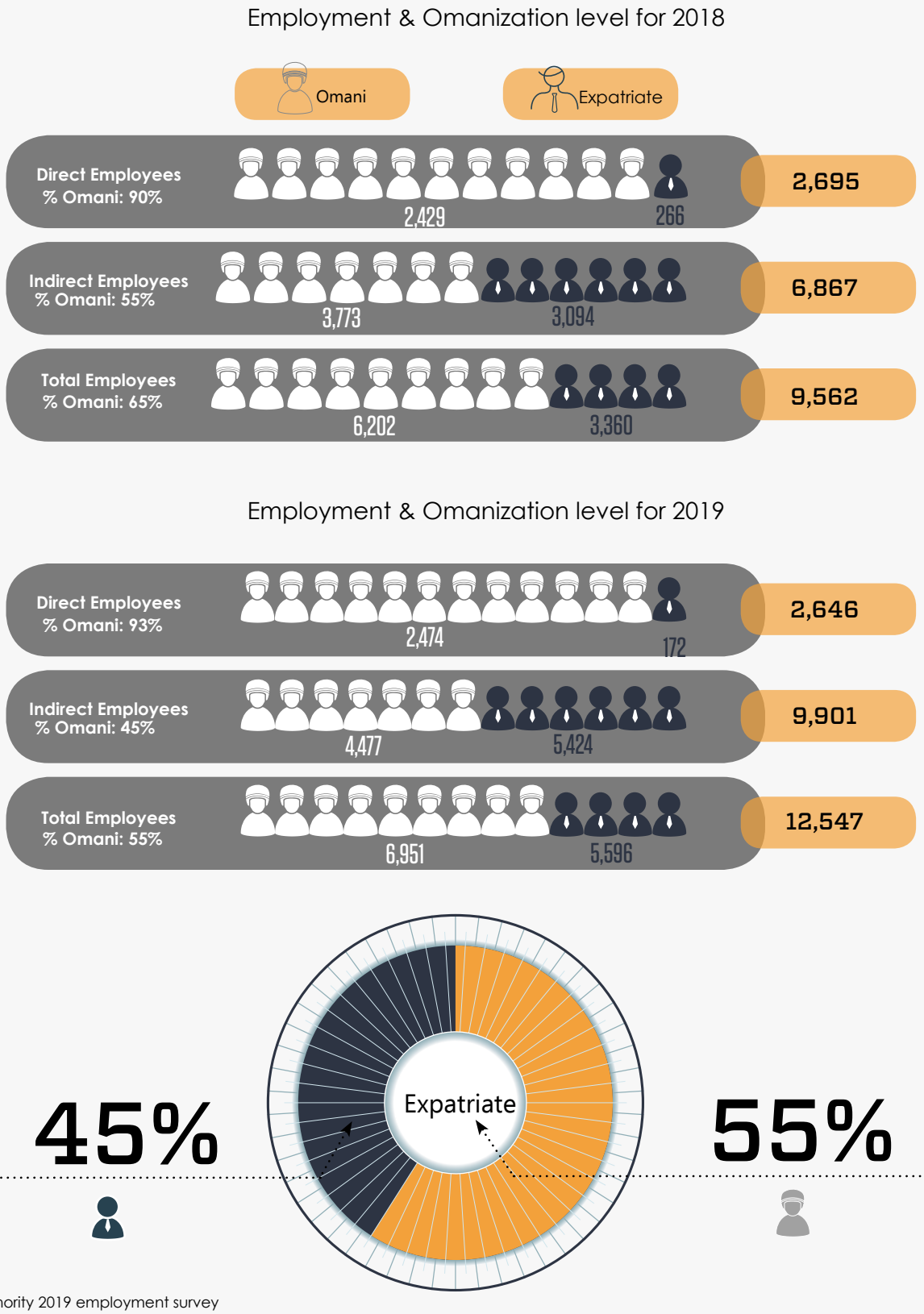
Source: Company returns
* Other : include material costs and any other costs that are general to the whole region, not specific to one region

OETC accounts for 24.9% of approved projects by value, which reflects the significant investment made to connect and transport electricity from production facilities. Mazoon accounts for 28.5% of projects value, Majan 22.2%, MEDC 12.6%, Dhofar 8.0% and RAEC 3.7%. In terms of regional investment, Muscat region accounts for 26.4% (OMR 35.0 million) due to significant network investments by OETC and MEDC in this region. All regions benefited from ERWS sector investment in 2019 in line with the government's policy commitment to provide electricity and related water services throughout the Sultanate.

EWS Employment & Omanisation: 2018 and 2019

The Authority undertakes an annual survey of electricity sector employment and Omanisation. The survey provides information on Direct and Indirect (contractor& sub-contractor) employment. The below summarises the results of the 2019 survey.

Figure 14: Total EWS Employment & Omanisation – 2018 & 2019



Source: Authority 2019 employment survey

In 2019 Direct employment was 12% higher than in 2018. Indirect employment in 2019 (9,901) was 31% higher than the prevous year. These significant changes to the sector employment survey are mainly due to improvements in the survey methodology and the response rate, providing a more accurate overall figure.
Omani nationals accounted for 93% of Direct employment in 2019 and for 45% of Indirect employment, contributing to a sector Omanisation rate of 55%. Since 2005, total (Direct and Indirect) employment has almost tripled from 4,796 to 12,547 in 2019, with direct employment accounting for 20% of this increase.

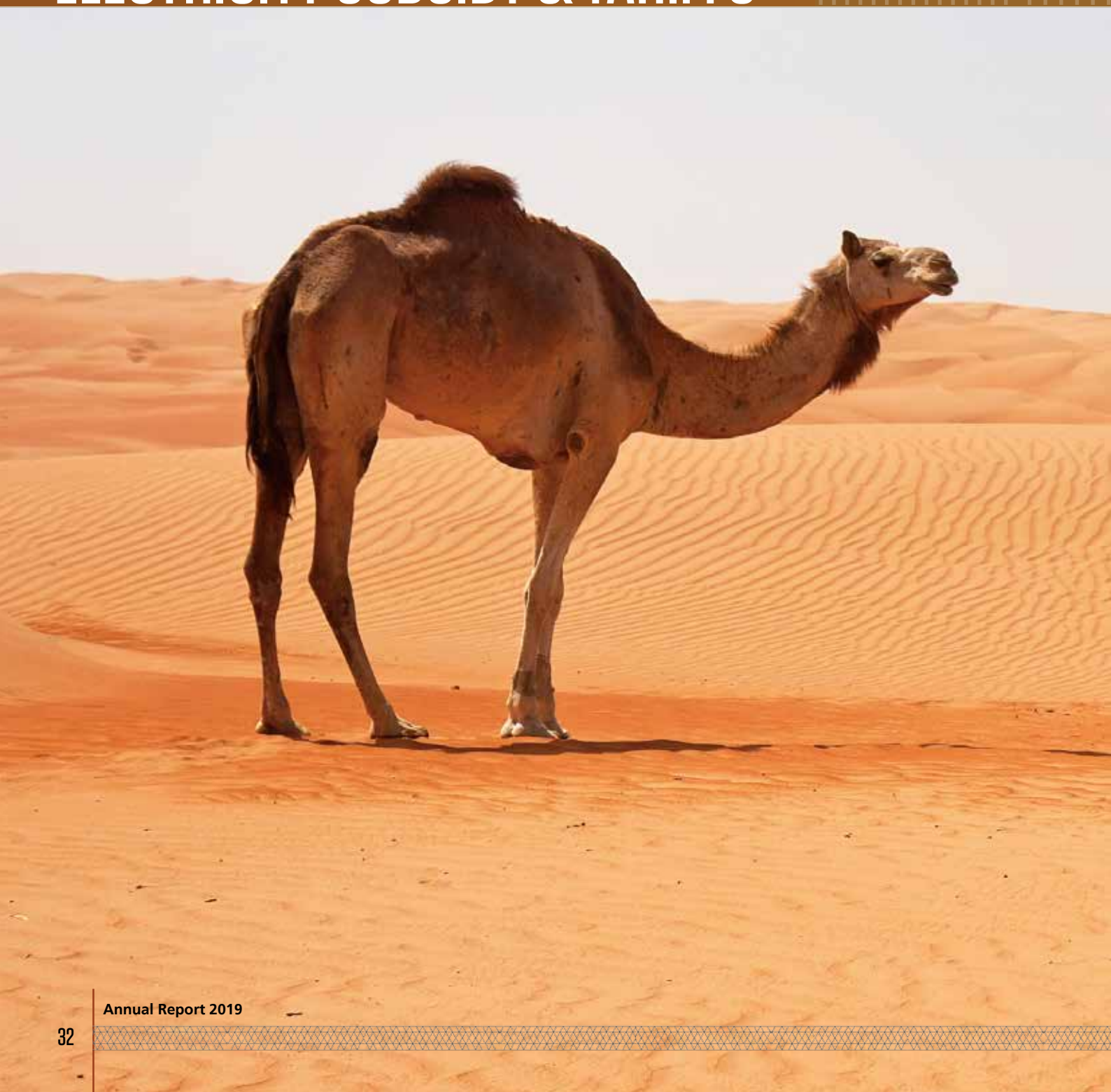
Figure 15:Total Contractors Staff & Omanisation by Function: 2019

Job Function	Omani	Foreign	Total	% Omanisation
Managers	204	126	330	62%
Engineers	363	800	1,163	31%
supervisors	174	179	353	49%
Cables Connector	29	275	304	10%
Lineman	-	4	4	0%
Electrical Lines connector	72	1,309	1,381	5%
Electricians	-	11	11	0%
Technicians	632	1,011	1,643	38%
HSE Officer	30	112	142	21%
Other Jobs	2,973	1,597	4,570	65%
Grand Total	4,477	5,424	9,901	45%

* Skilled manpower : employees who do not fall into any of the above categories.
e.g. ITs, Finance, Administration, drivers, cleaners, warehouse staff, ...etc

During Q4 2019, the Authority was tasked by the Government of Oman to lead a Technical Team including the Ministry of Manpower (MOMP), the National Centre for Employment, the National Training Fund, and the Implementation Support & Follow-up Unit (ISFU) to lead the monitoring, implementation, and enforcement of the Omanisation policy in the electricity and related water sector (as per Economic Activities ISIC 4 registered at MOMP). Working along with relevant bodies, the Authority intends to ensure the promotion of further employment opportunities for Omanis, especially in electricity sub-contracting businesses.

ELECTRICITY SUBSIDY & TARIFFS



Electricity Subsidy

Subsidies are an integral factor of the electricity sector and are implemented through Article 18 of the Sector Law wherein the Ministry of Finance (MoF) provides subsidies based on annual calculations by the Authority to licensed suppliers. These calculations are divided into three subsidy categories:

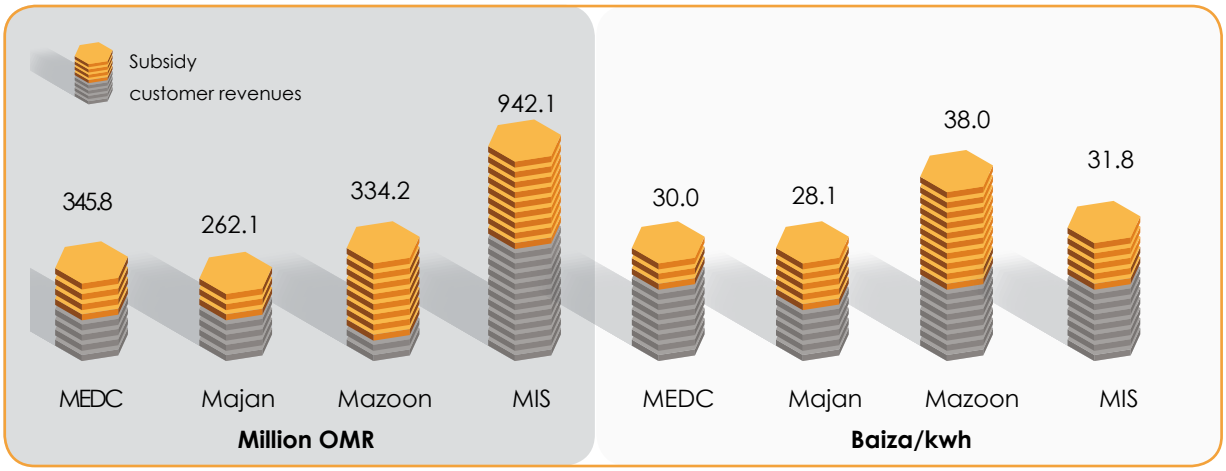
- Main Interconnected System Subsidy (required by MEDC, Majan and Mazoon)
- Dhofar Power System Subsidy (required by DPC)
- Rural Systems Subsidy (required by RAEC)

For the purposes of these calculations, a subsidy is defined as the difference between the economic cost of supply (including financing costs) and Permitted Tariff (and other) revenue.

MIS Subsidy in 2019

At OMR 441 million, the outturn subsidy for MIS reflects total economic costs of OMR 942.1 million and customer revenues of OMR 501.1 million.

Figure 16: 2019 MIS Outturn Subsidy by Company



	Million OMR				Baiza/kwh			
Item	**MEDC**	**Majan**	**Mazoon**	**MIS**	**MEDC**	**Majan**	**Mazoon**	**MIS**
Customer Revenue	210.9	152.6	137.5	501.0	18.3	16.4	15.6	16.9
Subsidy	134.9	109.5	196.7	441.0	11.7	11.8	22.4	14.9
Economic Cost	345.8	262.1	334.2	942.1	30.0	28.1	38.0	31.8
Subsidy % Economic Cost	39%	42%	59%	47%	39%	42%	59%	47%
Company share of Subsidy	31%	25%	45%	100%				

Source: 2019 audited SCRC Statements & Authority calculations

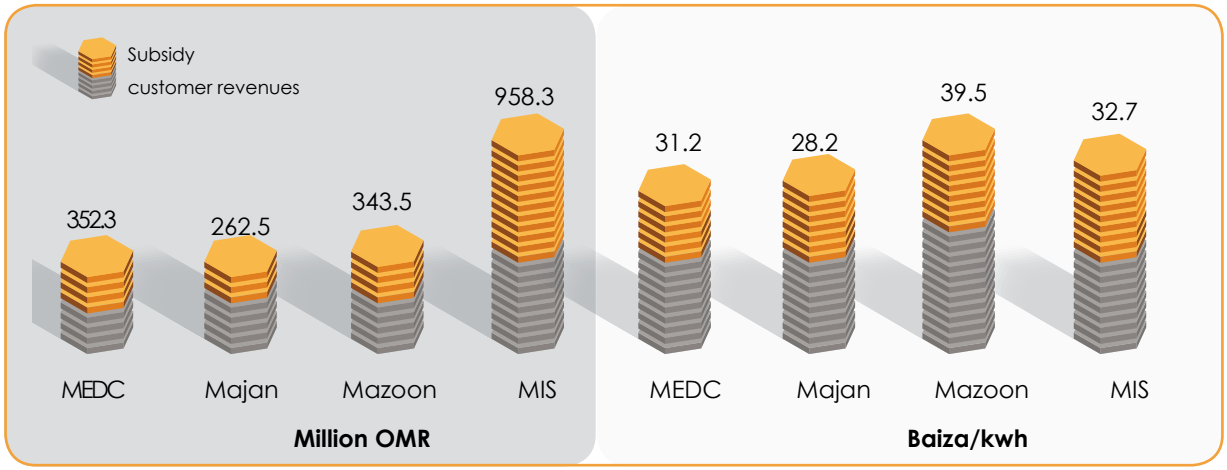
47% of MIS' total economic cost of supply, OMR 942.1 million, was covered by subsidies in 2019; the remaining 53% of costs were recovered through customer revenue. The 2019 subsidy reflects two new power plants coming on line, the Ibri IPP and Sohar IWPP, with a combined capacity of 3,283 MW as well as new 4-year Transmission and Dispatch price controls which came into effect from 1st January, 2019. MIS witnessed no growth in supply in 2019 over 2018 outturns, lower than anticipated when compared to recent annual average growth rates of approximately 5% (3-year average for 2015-2018). The general economic slowdown in 2019 and, to some extent, the impact of Cost Reflective Tariffs to large customers in 2017 are likely causes of this

stunted growth. Of the total MIS subsidies in 2019, MEDC, Majan and Mazoon accounted for 31%, 25% and 45% respectively. Mazoon's subsidy of OMR 196.7 million accounted for 59% of its total economic cost requirements, with Majan receiving OMR 109.5 million and MEDC getting OMR 134.9 million. These figures consitute 41% and 39% of their respective 2019 economic costs and reflects the differences in customer mix and characteristics of their respective distribution systems. Please refer to Annex D for further details of the 2019 MIS outturn subsidy.

2020 MIS Subsidy Forecast

For 2020, the Authority estimates a subsidy of OMR 451 million for MIS, reflecting a total estimated economic cost of OMR 958.3 million, of which 53% (or OMR 507.3 million) is expected to be recovered through customer revenues.

Figure 17: Subsidy Forecast - Main Interconnected System 2020



	Million OMR				Baiza/kwh			
Item	MEDC	Majan	Mazoon	MIS	MEDC	Majan	Mazoon	MIS
Customer Revenue	212.2	153.8	141.3	507.3	18.8	16.5	16.2	17.3
Subsidy	140.1	108.7	202.2	451.0	12.4	11.7	23.2	15.4
Economic Cost	352.3	262.5	343.5	958.3	31.2	28.2	39.5	32.7
Subsidy % Economic Cost	40%	41%	59%	47%	40%	41%	59%	47%
Company share of Subsidy	31%	24%	45%	100%				

Source: 2019 audited SCRC statements and Licensee returns

The Authority's estimate of MIS' 2020 subsidy requirement is 2.3% higher than 2019, reflecting the increase of 1.7% in economic costs of OMR 958.3 million. It is anticipated that 2020 will witness the first overall negative growth in supply since the restructuring of the electricity sector in 2005, a sharp fall from the decade after restructuring which saw consistent double-digit annual growth rates in supply. Supply growth in 2020 is expected to decrease by 1.1% from 2019 outturn, mainly driven by the impact of the outbreak of the COVID-19 pandemic and the resulting downturn in the general economy.
Please refer to Annex D for further details of the 2020 MIS subsidy estimate.

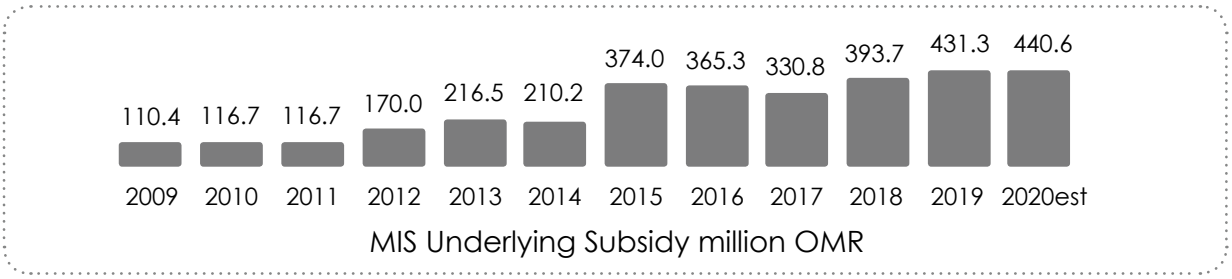
Underlying Movement In Mis Subsidy:2009 To 2019, And 2020 Estimate

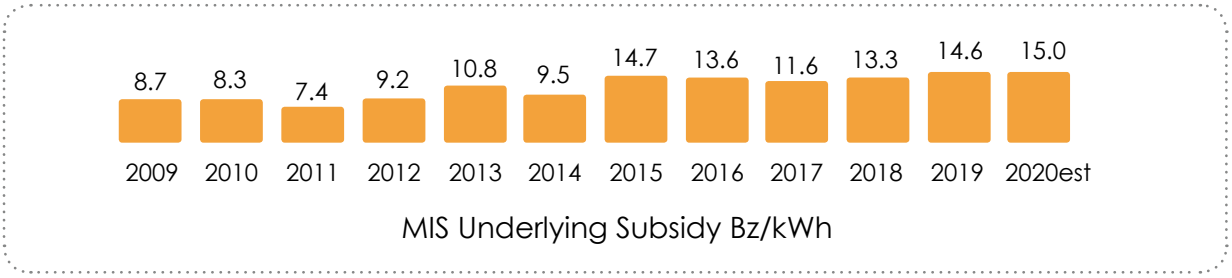
The following figure presents the Authority's underlying measure of MIS subsidies between 2009 and 2019 and the expected rate for 2020 assuming revenue, costs and efficiencies were correctly forecast between 2009 and 2019 so as to return zero-correction factors. The 2020 estimate of MIS Subsidy reflects the 2020 MAR of PWP, OETC, MEDC, Majan and Mazoon and an assumed reduction in Supply of -1.1%.

Figure 18: Underlying Movement in MIS Subsidy: 2009 to 2019 & 2020 Forecast

Economic Cost (OMR m)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PWP (MAR excluding Kt)	177.6	198.3	222.5	249.6	570.5	566.5	551.4	522.8	504.5	551.4	566.5	570.5
OETC (MAR excluding Kt)	38.5	41.4	44.0	46.9	101.5	99.9	73.4	73.2	74.1	73.4	99.9	101.5
MEDC (MAR excluding Kt)	32.3	34.9	38.8	55.8	84.8	82.1	78.0	67.9	67.8	78.0	82.1	84.8
Majan (MAR excluding Kt)	26.0	28.0	30.8	40.8	69.9	70.9	67.0	53.5	50.6	67.0	70.9	69.9
Mazoon (MAR excluding Kt)	37.5	41.2	45.2	63.3	121.1	112.9	112.5	87.9	83.8	112.5	112.9	121.1
Underlying Economic Cost	311.9	343.8	381.3	456.4	947.8	932.3	882.3	805.3	780.8	882.3	932.3	947.8
Permitted Tariff (& other) Revenue	201.5	227.1	259.9	286.4	507.3	501.0	488.6	474.5	415.5	488.6	501.0	507.3
Underlying Economic Subsidy Requirement	110.4	116.7	121.5	170.0	440.6	431.3	393.7	330.8	365.3	393.7	431.3	440.6
Total Units Supplied (GWh)	12,714	14,122	16,374	18,502	29,294	29,619	29,624	28,582	26,843	29,624	29,619	29,294
Nominal												
Underlying Economic Cost per kWh Supplied	24.5	24.3	23.3	24.7	26.4	25.2	30.3	29.1	28.2	29.8	31.5	32.4
Customer Revenue per kWh Supplied (bz/kWh)	15.9	16.1	15.9	15.5	15.5	15.7	15.6	15.5	16.6	16.5	16.9	17.3
Underlying Subsidy per kWh Supplied (bz/kWh)	8.7	8.3	7.4	9.2	10.8	9.5	14.7	13.6	11.6	13.3	14.6	15.0
Real (2019 prices)												
Underlying Economic Cost per kWh Supplied	29.4	28.8	26.6	27.0	28.1	26.6	31.6	30.3	28.8	30.3	31.5	32.4
Underlying Subsidy per kWh Supplied (bz/kWh)	10.4	9.8	8.5	10.1	11.5	10.0	15.3	14.2	11.8	13.5	14.6	15.0

Source: 2009 to 2018 audited SCRC Statement, Authority calculations.





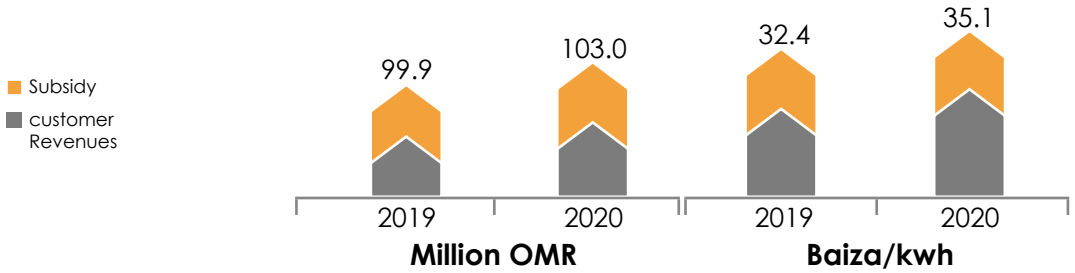
Source: 2009 to 2019 audited SCRC Statement, Authority calculations.

Following increases in gas prices, the level of underlying MIS subsidies in 2019, at OMR 431.3 million, was 15% higher than 2015, compared to a 16% increase in units supplied over the same period. On a per/kWh basis, underlying subsidy showed a real-term decline of around 5% from 15.3 bz/kWh in 2015 to 14.6 bz/kWh in 2019.
The Authority estimates the total underlying MIS subsidy will increase by OMR 9.3 million, 2.2%, in 2020.

Dhofar Power System

At OMR 43.8 million, the outturn DPS subsidy in 2019 reflects a total economic cost of OMR 99.7 million and customer revenue of OMR 56.0 million. The 2019 subsidy accounted for 44% of the total economic cost of supply, OMR 99.7 million,with the remaining 56% of costs recovered through customer revenue.

Figure 19: DPS 2019 Outturn & 2020 Subsidy forecast



Item	2019	2020	2019	2020
Customer Revenue	56.0	53.0	18.2	18.1
Subsidy	43.8	50.0	14.2	17.1
Economic Cost	99.7	103.0	32.4	35.1
Subsidy % Economic Cost	44%	49%	44%	49%
Total Units Supplied	3,076	2,932		

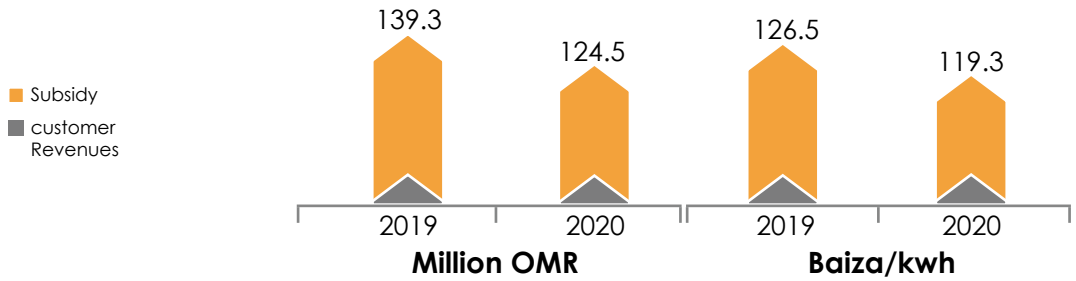
Source: 2019 audited SCRC Statements & Authority calculations

The Authority's estimates a DPS subsidy for 2020 at OMR 50 million, OMR 6.2 million, 14.2%, higher than the outturn 2019 DPS subsidy. The Authority estimates that OMR 53.0 million, 51%, of the total DPS economic cost will be recovered through customer revenue. Due to the economic slowdown and the COVID-19 pandemic, the supply of units is expected to decrease by 4.7% whilst customer revenue will see an anticipated decrease of around 5.3%. Please refer to Annex D for further details of the 2019 outturn DPS subsidy and the estimated 2020 DPS subsidy.

Rural Areas Electricity Company Systems

At OMR 117 million (106.2 baiza/kWh), the outturn RAEC subsidy in 2019 reflects a total economic cost of OMR 139.3 million (126.5 baiza/kWh) and customer revenue of OMR 22.3 million (20.3 baiza/kWh).

Figure 20: RAEC Outturn 2019 & Forecast Subsidy in 2020



Item	2019	2020	2019	2020
Customer Revenue	22.3	20.3	20.3	19.4
Subsidy	117.0	104.2	106.2	99.8
Economic Cost	139.3	124.5	126.5	119.3
Subsidy % Economic Cost	84%	84%	84%	84%

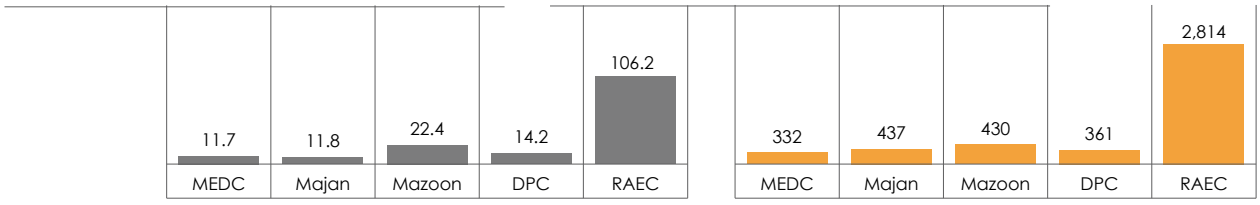
Source: 2019 audited SCRC Statements & Authority calculations

Subsidies to RAEC in 2020 are expected to see a reduction to OMR 104.2 million (99.8 baiza/kWh), 10.9% lower than outturn subsidy in 2019. Similar to subsidy decreases for MIS and DPS, it is mainly attributed to the COVID-19 pandemic outbreak, with supplied units for 2020 projected to be 5% lower than 2019. Combined with international fuel prices going down, an 18% decrease in RAEC's fuel costs is anticipated. The impact on RAEC's 2020 subsidy is also due to the government's decision regarding areas overseen by the Special Economic Zone Authority of Duqm (SEZAD) that form part of RAEC's authorized area also be regulated by SEZAD. As a result, the costs, revenues and subsidy pertaining to RAEC's SEZAD area are not accounted for in the above calculation. The 2020 subsidy calculation for RAEC pertaining to the SEZAD area is calculated by SEZAD at OMR 9.3 million, implying a total 2020 subsidy requirement by RAEC of OMR 113.5 million. Please refer to Annex D for further details of the 2019 outturn RAEC subsidy and 2020 RAEC subsidy estimate.

Comparison of 2019 Subsidy by Company

A comparison of subsidies provided to MEDC, Majan, Mazoon, RAEC and DPC in 2019 is shown in Figure 6 with the left-hand panel showing subsidy (in baizas) per kWh supplied and the right-hand panel showing subsidy (in OMR) per customer account.

Figure 21: 2019 Subsidy Comparisons by Company



2019 Subsidy Baiza/KWh Supplied

2019 Subsidy OMR per Account

Item	MEDC	Majan	Mazoon	DPC	RAEC	MEDC	Majan	Mazoon	DPC	RAEC
Subsidy per KWh/Account	11.7	11.8	22.4	14.2	106.2	332	437	430	361	2,814
Subsidy OMR m	134.9	109.5	196.7	43.8	117.0	134.9	109.5	196.7	43.8	117.0
GWh/000 Accounts	11,507	9,314	8,798	3,076	1,102	406	251	457	121	42

Source: 2019 audited SCRC Statements & Licensee returns

Of the OMR 601.9 million of subsidies provided in 2019 to all the companies, Mazoon accounts for 32.7%, MEDC for 22.4%, RAEC for 19.4%, Majan for 18.2% and DPC for 7.3%.
When viewed by account, the RAEC Subsidy per kWh supplied is significantly higher than that of the other companies (and excludes RAEC electrification funding provided in accordance with Article (87) of the Sector Law), confirming the significant subsidy support provided to customers in rural areas.
The subsidy requirements of all the companies reflect nominal increases in costs and permitted tariffs that are not indexed to inflation, hence the decline in real terms year on year.

Electricity Tariffs

Permitted Tariffs

Electricity supplied to consumers is charged at a Permitted Tariff approved by the Council of Ministers. Figure 1 presents details of the present Permitted Tariffs for different customer categories, and Permitted Tariff fees for the disconnection and reconnection of customer accounts.

Figure 22: Permitted Tariffs

Permitted Tariff Category	Tariff Structure (Bz/kWh)				
Industrial 1	All Regions except Dhofar			Dhofar Region	
	September to April: 12			August to March: 12	
	May to August: 24			April to July: 24	
Commercial	Flat rate @ 20 Baiza per KWh				
Ministry of Defense and the Sultan Special Forces	Flat rate @ 20 Baiza per KWh				
Residential	0-3000 kWh	3001-5000 kWh	5001-7000 kWh	7001-10000 kWh	above 10000 kWh
	10 Bz / kWh	15 Bz / kWh	20 Bz / kWh	25 Bz / kWh	30 Bz / kWh
Government	0-3000 kWh	3001-5000 kWh	5001-7000 kWh	7001-10000 kWh	above 10000 kWh
	10 Bz / kWh	15 Bz / kWh	20 Bz / kWh	25 Bz / kWh	30 Bz / kWh
Agriculture & Fisheries	0-7000 kWh			7001 kWh & above	
	10 Baiza per kWh			20 Baiza per kWh	
Tourism 2	0-3000 kWh	3001-5000 kWh	5001-7000 kWh	above 7001 kWh	
	10 Bz / kWh	15 Bz / kWh	20 Bz / kWh	20 Bz / kWh	
Aflaj Pumps 3	Flat rate @ 10 Baiza per KWh				
Note 1 Customers require a MOCI letter of recommendation and must maintain a power factor of least 0.9 Note 2 Subject to Ministry of Tourism regulations and approval Note 3 Ministerial Decision 3/2019 Issuing the Regulation of the Approved Tariff for the Supply of Electricity to Auxiliary Well Pumps for the Aflaj (Irrigation Systems) Affected by Drought					

Permitted Tariff fees for Disconnection & Reconnection of accounts
Disconnection fee (all types of metered accounts): 7.500 Rial Omani
Reconnection fee (all types of metered accounts): 7.500 Rial Omani

Cost Reflective Tariffs

Large Government, Commercial and Industrial customers whose annual consumption exceeds 150,000 kWh are charged at Cost Reflective Tariffs for their electricity consumption. As the name implies, Cost Reflective Tariffs do not include any element of subsidy and is designed to more accurately reflect the actual costs of electricity supply. The figure presents the component elements of the Cost Reflective Tariffs and sets out the approved 2019 charges of each componentaccounts.

Figure 23: Cost Reflective Tariffs

Cost Reflective Tariff = BSTt + Tt + Dt + St

Where

BST_t	is the cost of energy charged at the electricity Bulk Supply Tariff in year t;
T_t	is a transmission use of system charge;
D_t	is a distribution use of system charge; and
S_t	is a charge for the administrative cost of supply

[1]not applicable to transmission connected customers

Figure 24: Approved 2020 CRT charges

CRT component	Charge	Type of Charge	Calculation of charge
BST_t	See Tables below	Energy	Applied to hourly MW consumption
T_t	15,900 RO/MW	Demand	Charge per annum applied to customer's contribution to system peak
D_t	Network level 33kV 4.0RO/MWh Network level 11kV 5.0 RO/MWh Network level 0.415kV 9.0 RO/MWh	Energy	Applied to each MWh consumption based on customers' connection to each respective distribution voltage level
S_t	50 RO/customer	Standing	Charge per account per annum for administering each customer account

Source: AER approved charges

Charges for subsequent calendar years will be revised based upon changes in underlying production costs as well as transmission, distribution and supply costs.

Electricity and Water Bulk Supply Tariffs

Electricity Bulk Supply Tariffs ("BST") relate to the tariff charged by PWP for the Bulk Supply of electricity to Licensed Suppliers in the MIS (MEDC, Majan, and Mazoon) and DPS. The approved 2020 PWP electricity Bulk Supply Tariffs are shown in the following figure.

2020 Electricity Bulk Supply Tariffs

Figure 25: Electricity Bulk Supply Tariff for MIS - 2020

Baiza/kwh	Off-Peak	Night-Peak	Weekday Day-Peak	Weekend Day-Peak
Jan – Mar	12.0	12.0	12.0	12.0
Apr	14.0	14.0	14.0	14.0
May - Jul	17.0	26.0	67.0	37.0
Aug - Sep	17.0	24.0	28.0	22.0
Oct	14.0	14.0	14.0	14.0
Nov - Dec	12.0	12.0	12.0	12.0

Source:PWP 2020 Electricity BST Leaflet for MIS

Figure 26: Electricity Bulk Supply Tariff for DPS - 2020

Baiza/kwh	Night - Peak		Off-Peak Morning	Day - Peak		Off-Peak Afteroon
	Weekday	Weekend	All Days	Weekday	Weekend	All Days
Jan – Mar	12.0	12.0	12.0	12.0	12.0	12.0
Apr	32.0	23.0	18.0	23.0	18.0	18.0
May - Jun	48.0	32.0	27.0	45.0	25.0	26.0
Jul - Aug	16.0	14.0	13.0	13.0	13.0	13.0
Sep - Oct	20.0	16.0	14.0	16.0	16.0	16.0
Nov - Dec	12.0	12.0	12.0	12.0	12.0	12.0

Source:PWP 2020 Electricity BST Leaflet for DPS

Figure 27: Electricity Bulk Supply Tariff for Musandam - 2020

Baiza/kWh	Capacity Charge	Variable Charge (Baiza/ kWh)
Jan – Mar	4.570	16.919
Apr	8.150	16.919
May - Jul	19.190	16.919
Aug - Sep	13.700	16.919
Oct - Dec	4.660	16.919

Source: PWP 2020 Electricity BST Leaflet for Musandam

The Authority also approves water Bulk Supply Tariffs charged by PWP and RAEC for the Bulk Supply of water to Water Departments. The figure below shows the approved 2020 PWP and RAEC water Bulk Supply Tariffs.

A Charges for Bulk Supply to PAW Rate

Fixed charge for Water Desalination Capacity
Rate: OMR 0.206 per day per m3/day

	On Peak	Off Peak
Jan – Mar	0.083	0.083
Apr	0.090	0.090
May - Jul	0.284	0.112
Aug - Sep	0.142	0.108
Oct	0.090	0.090
Noc - Dec	0.083	0.083

On Peak (13:00 to 16:59 Daily)

Off-Peak (00:00 to 12:59 and 17:00 to 23:59 daily)

Source: PWP 2020 Water BST Leaflet

B Charges for Bulk Supply to WDGD

Fixed charge for Water Desalination Capacity
Rate: OMR 0.251 per day per m3/day

	On Peak	Off Peak
Jan – Mar	0.083	0.083
Apr	0.158	0.120
May - Jun	0.232	0.163
Jul- Aug	0.101	0.096
Sep - Oct	0.095	0.086
Noc - Dec	0.083	0.083

On Peak 00:00 to 02:59 and 10:00 to 15:59 and 20:00 to 23:59 Daily

Off-Peak 03:00 to 9:59 and 16:00 to 19:59 Daily

Source: PWP 2020 Water BST Leaflet

RAEC Water Bulk Supply Tariff - 2020

	Rate
RAEC Water Bulk Supply Tariff of a capacity charge	OMR 1.280 per m3/day
RAEC Water Bulk Supply Tariff of a variable charge	0.564 OMR/m3

Source: RAEC BST Leaflet

Transmission Use of System Charge

Transmission Charge (Tt): 15,900 RO/MW

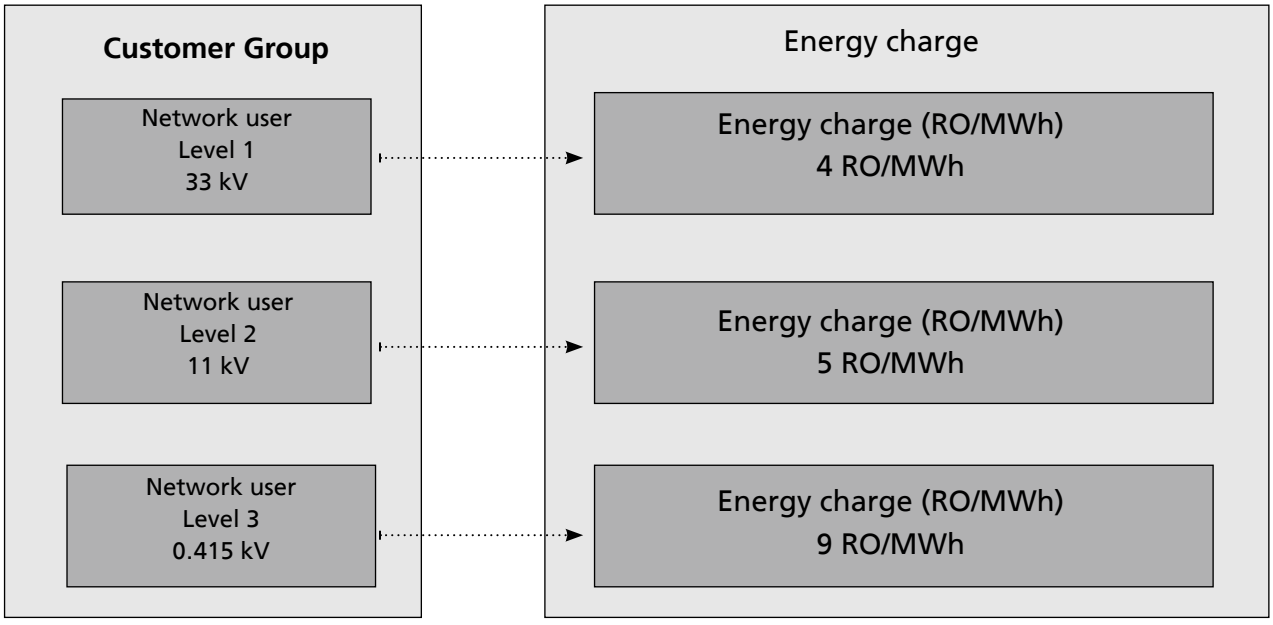
Transmission Use of System Charge (Tt) is a demand charge based on customers' contribution to the transmission network's average system peak; also known as Maximum Transmission System Demand (MTSD). MTSD is calculated as an average across three snapshots, at least 21 days apart, during which total system demand is at its highest.

$$\text{Average MTSD} = \frac{\text{snapshot 1} + \text{snapshot 2} + \text{snapshot 3}}{3}$$

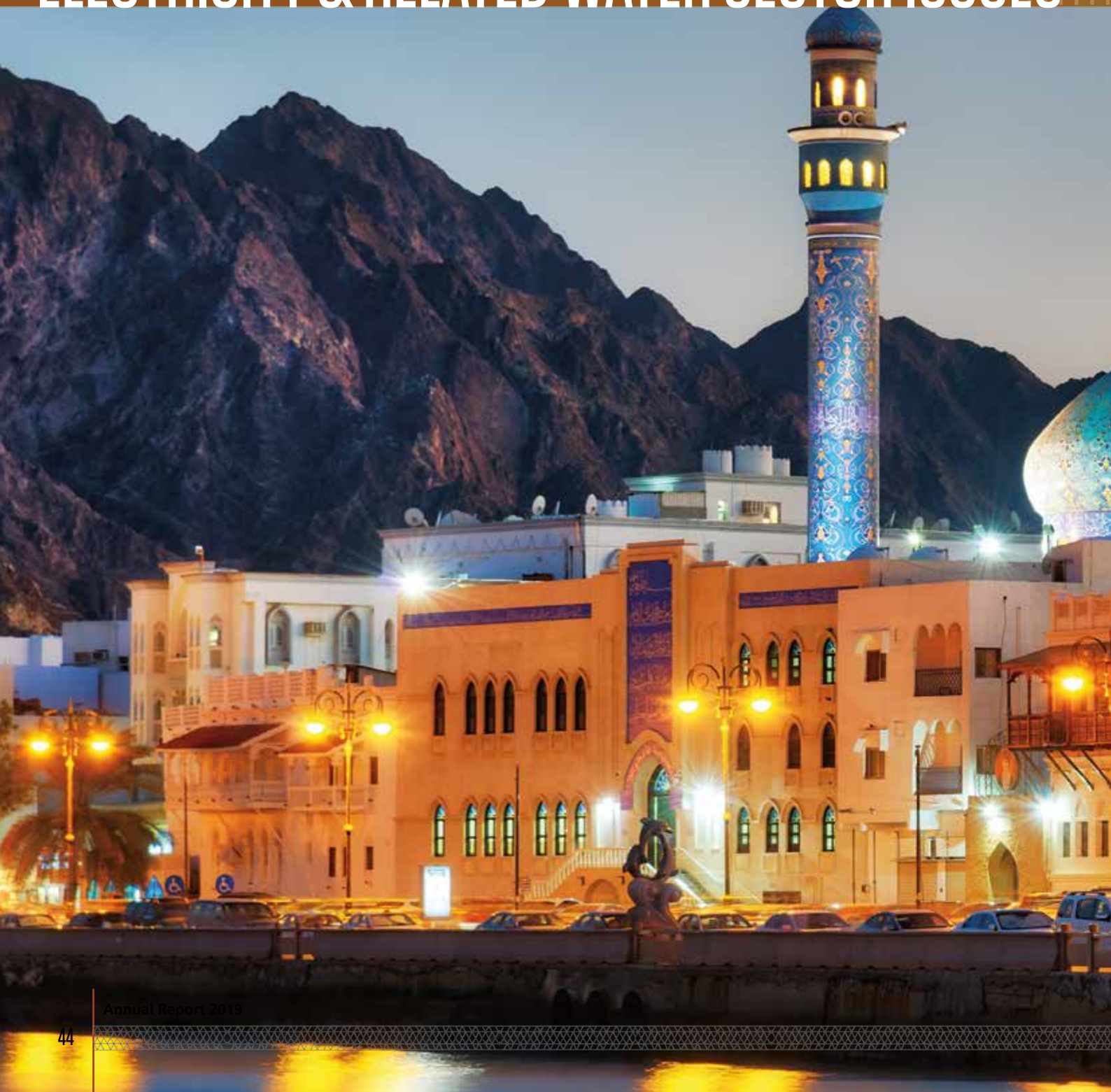
Tt is applied to customers' average consumption over the three MTSD snapshot hours.

Distribution Use of System Charges

Distribution Use of System Charges (Dt) are energy charges that apply to every customer connected to the distribution network. Customers are charged distribution charges based on each respective network level they are connected to as follows:



ELECTRICITY & RELATED WATER SECTOR ISSUES



Health and Safety

Increasing awareness of health and safety to the public is an obligation for the Authority under the Sector Law and is a responsibility carried out through many channels, including:

1. Continuous routine inspections of licensee assets in public areas to identify unsecure and potentially unsafe installations; issuing fines in cases of non-compliance to reduce further occurrences.
2. In cooperation with sector companies, the Authority conducted public health and safety sessions to raise awareness of the risks inherent to electric water coolers and how to maintain them for safety.
3. Comprehensive health and safety audits of OETC and DPC are regularly conducted.

Fatal Accidents

The highly unfortunate instances of three fatalities related to water-coolers in 2019 were found to be unrelated to electricity sector activities, but were still reported to the Authority through alternate channels. Despite increased efforts to improve safety across the electricity sector, the number of fatal injuries continued to be a concern in 2019 as lives are still regrettably being lost by workers in the sector.

Figure 29: Fatal Accidents

Date	Location	Licensee	Incident
18th May 2019	Salalah	DPC	A boy died after being electrocuted while drinking from an outdoor water cooler.
11th June 2019	Yanqul	MJEC	A boy died after being electrocuted while drinking from an outdoor water cooler.
2nd October 2019	Khasab	RAEC	The Lineman fell off a ladder, from approximately 5m height, on to concrete interlock blockwork and died 5 days later.
3rd October 2019	Khabourah	MJEC	The Lineman was unbinding the HT conductor of an intermediate pole which broke at ground level, causing him to fall and sustain fatal injuries.
9th October 2019	Ibri	MJEC	A boy died after being electrocuted while drinking from an outdoor water cooler.
10th November 2019	Salalah	DPC	A fire occurred in one of the subcontractor (DOHI) containers in the laydown area, resulting in one employee death.

Conducting public health and safety awareness about the risks of electric water coolers

In 2019, several fatal electrocution incidents were reported to the Authority as a result of contact with defective water coolers, resulting in the Authority conducting a public health and safety awareness campaign on social media. Working with the sector companies, the campaign raised public awareness about the risk of electric water coolers and aimed to reduce such unfortunate incidents. Several initiatives were included in the campaign, such as approaching government entities that own water coolers in public areas to inspect the safety of their water coolers and eradicate electrocution risks. Recommendations for communication through channels such as TV and radio, newspapers and social media to advise the public and raise awareness about how to ensure electric water coolers are installed safely were put forward.

Health and Safety Audits of OETC and DPC

The Authority completed a health and safety audit of OECT and DPC which identified some areas of good practice, but also others where the two licensees could easily make significant improvements. The Authority will continue to follow-up with the licensees to ensure these safety requirements are implemented efficiently and effectively.

Regulatory Focus1: Energy Efficiency Initiatives

Various sectors across Oman are becoming increasingly aware of the importance of energy efficiency and, in the absence of a dedicated entity dealing with energy efficiency in the country, the Authority was assigned responsibility in 2015. Tasked with establishing and executing a master plan for energy efficiency in Oman, the Authority promptly instituted several initiatives, including a direct role in implementing the government strategy on energy efficiency and supporting the national implementation strategies of various government entities.

Government Building Retrofit Programmes:

Government buildings in Oman have shown to be high consumers of electricity and, since the introduction of Cost Reflective Tariffs (CRT), they have encountered higher bills. As a result, many government bodies found ways of reducing their energy consumption, thus reducing costs to each building. The Authority conducted energy audits of several government buildings to understand their energy consumption and possible solutions for energy efficiency, the results of which revealed that an average of 30% savings could be achieved in government buildings by implementing an Energy Service Company (ESCO) model. Internationally, ESCOs have long served the public sector and are considered highly viable solutions for improving energy efficiency in the government sector. The Authority initiated a programme to enable government facilities to acquire the services of ESCOs, the overarching objective being the long-term reduction of energy consumption and operational costs in CRT government buildings.

Phase 1:

The Authority appointed Danish Energy Management (DEM) as a Technical and Legal Advisor to assist in establishing a working model for ESCOs in Oman and to provide procurement support throughout the tendering process of the first phase. Fourteen government buildings were selected and tendered in August 2019, with interested ESCOs carrying out walkthrough audits to familiarize themselves with the respective sites, meet the focal persons in each building and collect the necessary details to identify opportunities for energy reduction. Once they had carried-out sufficient auditing processes, they each submitted Energy Conservation Measures (ECMs) for individual buildings.

A total of seven proposals were received and the ESCOs will be awarded by April 2020, subject to the finalization of the Investment Grade Audit (IGA) of each government building. The IGA is a detailed energy audit that analyses the financial aspects of energy savings and the return on investment. Upon agreement of the IGA report submitted by the selected ESCOs, the awarded ESCOs will commit to retrofitting buildings through signing Energy Savings Performance Contracts (ESPCs) with the government entities.

Phase 2:

in 2019 the Authority and the Supreme Council of Planning (SCP) initiated the establishment of Oman's first 'Green Zone'. This was achieved by combining the ESCO model developed in phase 1, and the residential solar project Sahim, to improve building energy efficiency and installation of solar capacity in government buildings located in Muscat's ministries district. The initiative will help reduce consumption and cost of electricity, reduce reliance on conventional fuels, enable the government to align itself with international efforts and push towards a greener future. The Authority initiated Phase 2 by identifying eligible buildings and preparing a project management and execution plan. The Authority intends to conduct a site assessment study of the buildings over the course of 2020 and to hire a technical and legal advisor who will develop the project's framework and prepare documents for tendering the buildings for energy efficiency and solar services.

Energy Efficiency Awareness:
AC Label

The Authority collaborated with the Ministry of Commerce & Industry (MoCI) to introduce and promote energy efficiency labels for air conditioners. The label was issued according to the Omani Gulf standard specifications for energy efficiency and minimum energy efficiency requirements for air conditioners GSO 2530/2016 which came into effect in July 2019. Stuck to window-mounted and split-style air conditioning units, the label shows a star-rating to help consumers choose better quality and energy-efficient air conditioners.

In order to help consumers and retailers understand the information on the label, the Authority developed and published reading material which was circulated and displayed prominently. They launched an awareness campaign about the new labelling policy in newspapers, published three informative videos and promoted social media posts through the Authority's social media accounts (Facebook, Instagram, and Twitter). The campaign ran for five months, from August to December 2019, and generated more than 1.8 million views.

Energy Efficiency Guide:

The Authority is planning to publish a comprehensive guide for homeowners in the second quarter of 2020 which will provide them with the necessary information and solutions to improve energy-efficiency levels in their homes. The guide will also provide information on home energy audits, home weatherization and the residential solar project (Sahim), as well as giving tips on efficient cooling, lighting, designing for efficiency and best practices when using home appliances. The project started in 2019 with content research and development , followed by the tendering process for translation and design services needed for the guide.

Appliance Energy Efficiency Standards:

The Authority and MoCI will issue and implement the standards and specifications for refrigerators, water heaters, LED lighting, and washing machines during 2020. In 2019, the Authority initiated the project with the appointment of an experienced technical advisor to review the draft specifications submitted by MoCI. The advisor is required to review the latest applicable standards used in similar climatic conditions to Oman, produce the final standards for Oman and publish them for public consultation before they are issued as national standards.

National Building Code:

The Authority is assisting the Supreme Council of Planning with the development of energy efficiency and sustainability codes to establish clear outcomes and performance modelling for power, energy, water and waste management for all new buildings in Oman. In 2019, the Supreme Council of Planning appointed the British Standards Institution (BSI) as project advisor and formed a steering committee, chaired by the Authority, that will mainly be responsible for approving project phases and providing support and guidance to the technical team formed under its supervision. The Authority invited stakeholders from relevant government entities, the private sector and academia to join the technical team.

Regulatory Focus (2): CRT Impact Survey

On the 1st January 2017, AER introduced Cost Reflective Tariffs (CRT) for large industrial, commercial and government customers of electricity whose annual consumption exceeds 150 MWh per annum. Accounting for only 1% of total customer accounts in Oman, it represents close to 37% of total electricity supplied.

The principal objective of the CRT was to provide a strong signal for more efficient use of electricity and to make certain reductions, including:

- The need for future investments in generation and transmission system capacity, especially at peak times.
- The consumption of natural gas, thus contributing to Oman's self-sufficiency.
- The level of government subsidies to the sector.

In 2019, the Authority appointed London Economics, a UK-based business management consultant, to survey the impacts of the CRT and assess the elasticity of demand for this customer group. It would also lead to a better understanding of the extent to which the CRT's objectives were being met and to advise on the potential implications for future tariff reforms. The study consisted of a survey of a cross-section of 450 customers and was carried out through online and physical questionnaires. Surveys were followed by an analysis of the data provided to assess the customers' reported ability and incentive to react to the CRT, the measures they had taken, the barriers they faced in adapting their behaviour and an analysis of consumption data and changes in demand patterns.

Customer responses were grouped into two main categories:

- Demand measures, such as demand reduction (reducing total usage) and load shifting (using less electricity at peak times and more at other times).
- Energy efficiency measures, including operational and technical measures.

These responses are further illustrated below.

Demand Measures:

- 65.7% of all CRT customers reduced their annual electricity consumption post-CRT, contributing to all of the CRT's objectives.
- All customer categories saw reductions in peak-to-off-peak ratio, including industrial (53.6%), commercial (46.1%) and government (42.2%), thus reducing the need for future investments in new generation and transmission capacity.
- The contribution of CRT customers to peak demand hours decreased from 22% to 16% (2017-2018) with industrial customers being the most responsive to this pricing signal.

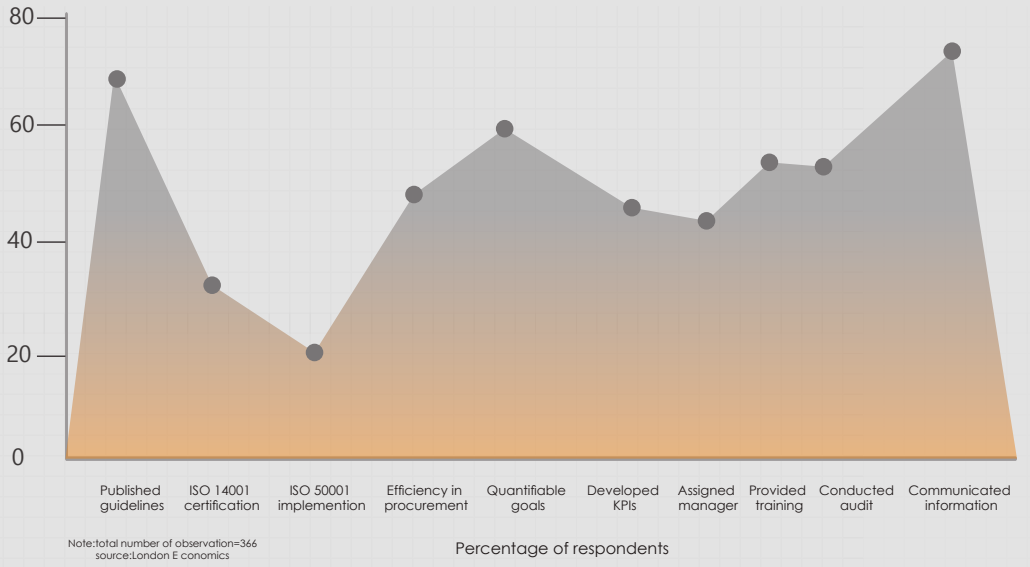
Energy Efficiency Measures:

In overall terms, industrial customers were more likely to respond to the CRT than commercial or government customers and, in some cases, customers reported that they were already planning to introduce efficiencies. It is not possible, however, to come to the simple conclusion that all improvements should be ascribed to the impact of the CRT.

Operational Measures:

During the survey period, representing only the initial phase of the CRT, inexpensive measures, such as publishing guidelines and setting KPIs, were selected by more than 60% of respondents. They were more common than costlier measures, such as energy efficiency certification, as illustrated in figure below.

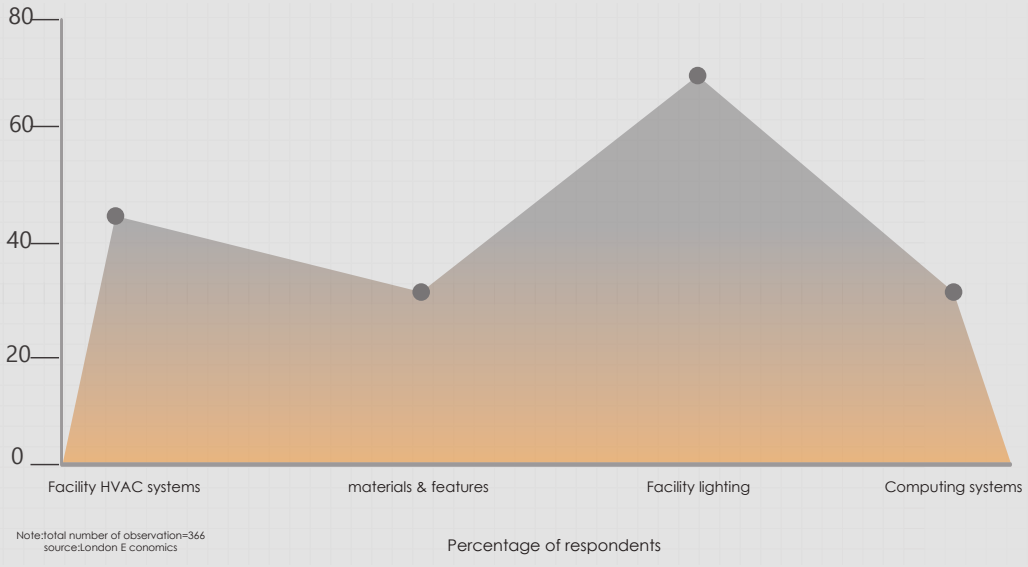
Figure 30: Operational measures undertaken by the respondents CRT



Technical measures:

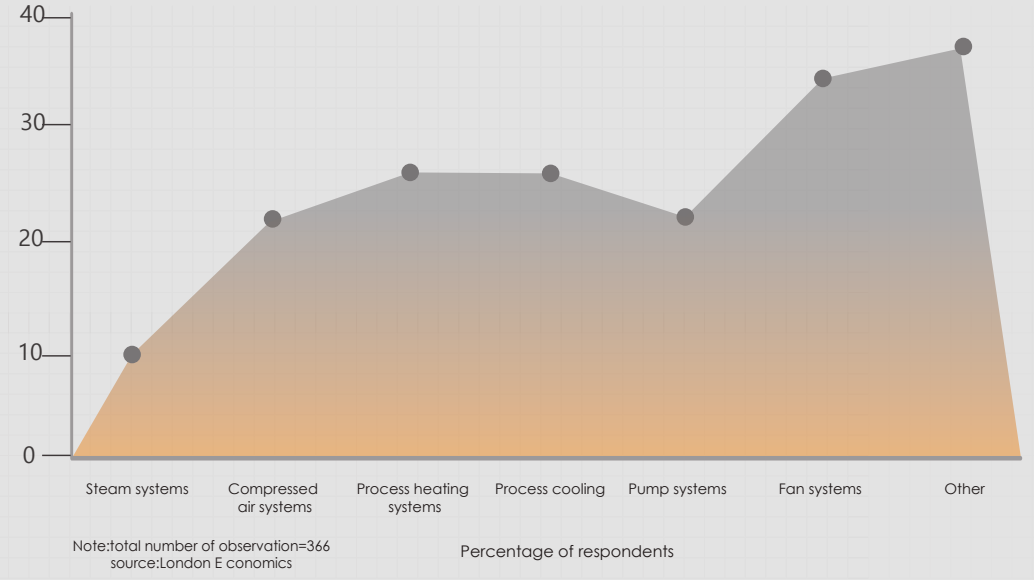
The survey focussed on a broad range of specific subjects, including technical standards. One such focus was on the installation and/or retrofit of equipment, machines and systems carried out since the introduction of the CRT in January, 2017. In this instance, the survey first focussed on whether participants had made any changes to their general-purpose systems in response to the introduction of CRT.

Figure 31: Upgrades made to general-purpose systems to improve energy efficiency



A key observation of the survey was that comparatively cheap measures were more popular than expensive ones, with a noteable 65% of the respondents reporting having modified their facility lighting. In comparison, 31% cited improvements to either their building materials and features or computing systems. Very similar results were received when the behaviour of commercial respondents were compared with their industrial counterparts.

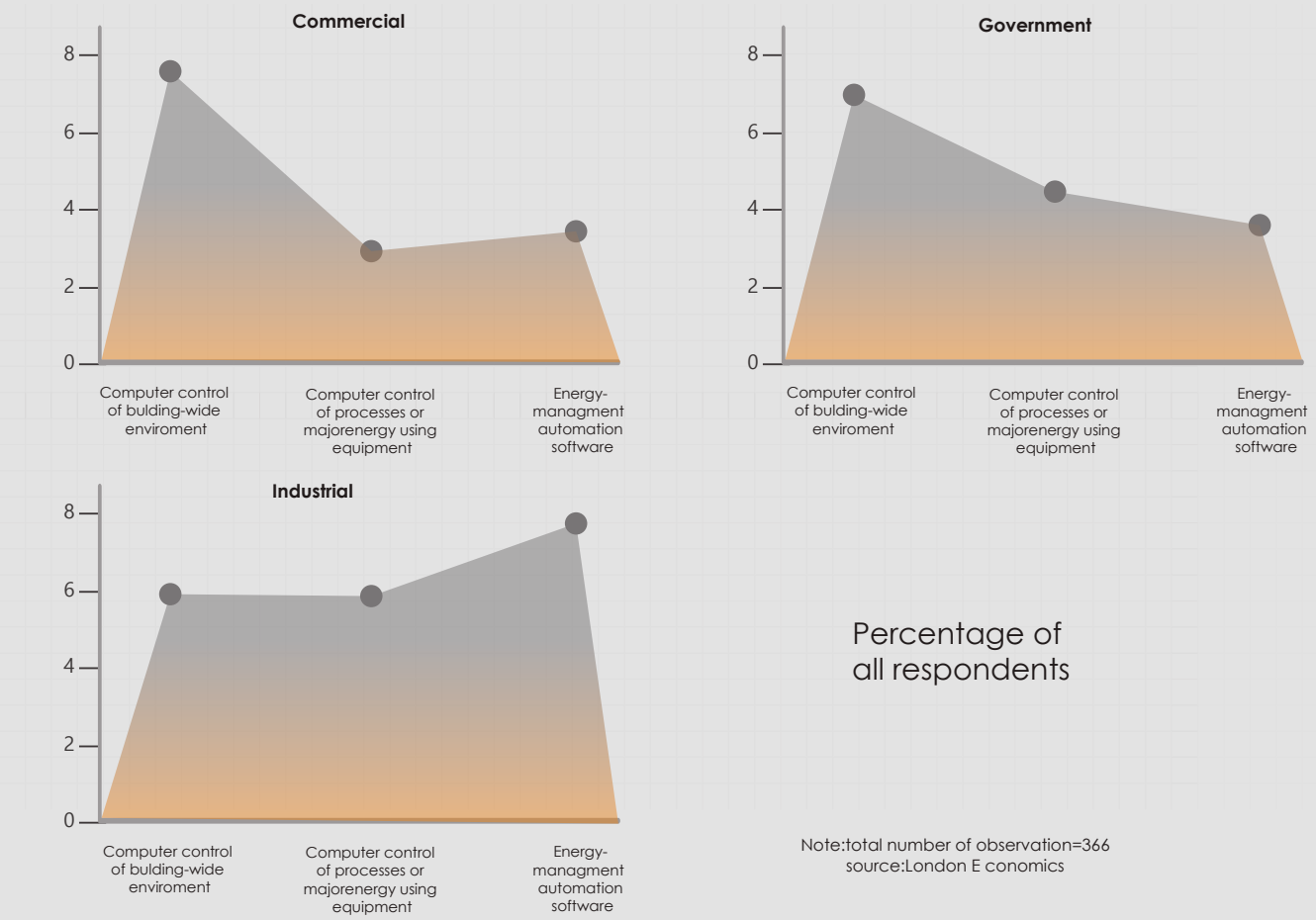
Figure 32: shows the results for plants and machinery systems



Four particular measures (process cooling, fan systems, pump systems and compressed air respondents, adopting these 5 out of 1 or ,%20 systems) appeared to be relatively popular with solutions. Higher costs for these measures, and that they are mostly applicable to industrial contexts, may have played a part in these results. An additional contributing factor could also be that such solutions are adopted when existing systems reach the end of their operational .usage and the impact of the CRT may have a delayed effect that grows with time

Overall, industrial respondents were substantially more likely to adopt broader measures than their commercial counterparts. Government customers, despite being largely underrepresented in the sample, generally displayed high adoption rates for technical measures to enhance .efficiency

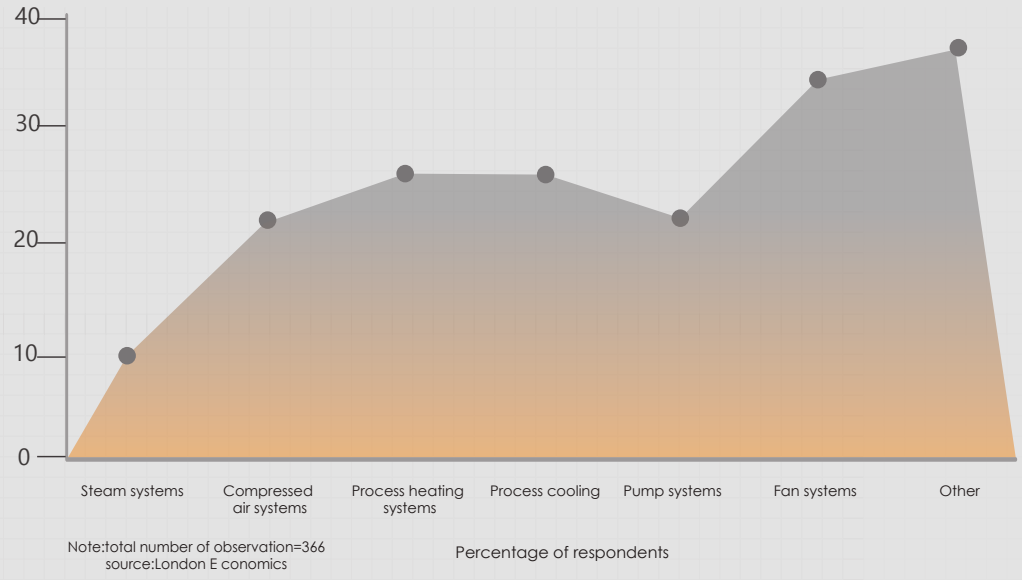
Figure 33: Upgrades made to advanced control systems to improve energy efficiency



Commercial and government respondents were more likely to have upgraded their building-wide computer control systems than other control systems, a matrix not high among industrial customers who are more likely to upgrade their energy-management automation software. A final measure is the introduction of electricity generating capacity onsite, a measure in which the survey responses show very high use of own-generation for which there is no process to externally validate.

The relevant percentages are displayed in figure 34: below Solar power dominates all other available options across all tariff categories (not shown here) with similar rates of adoption across tariff categories at 24%, 29% and 33% for commercial, industrial and government customers respectively.

Figure 34: Installation of electricity generating capacity onsite



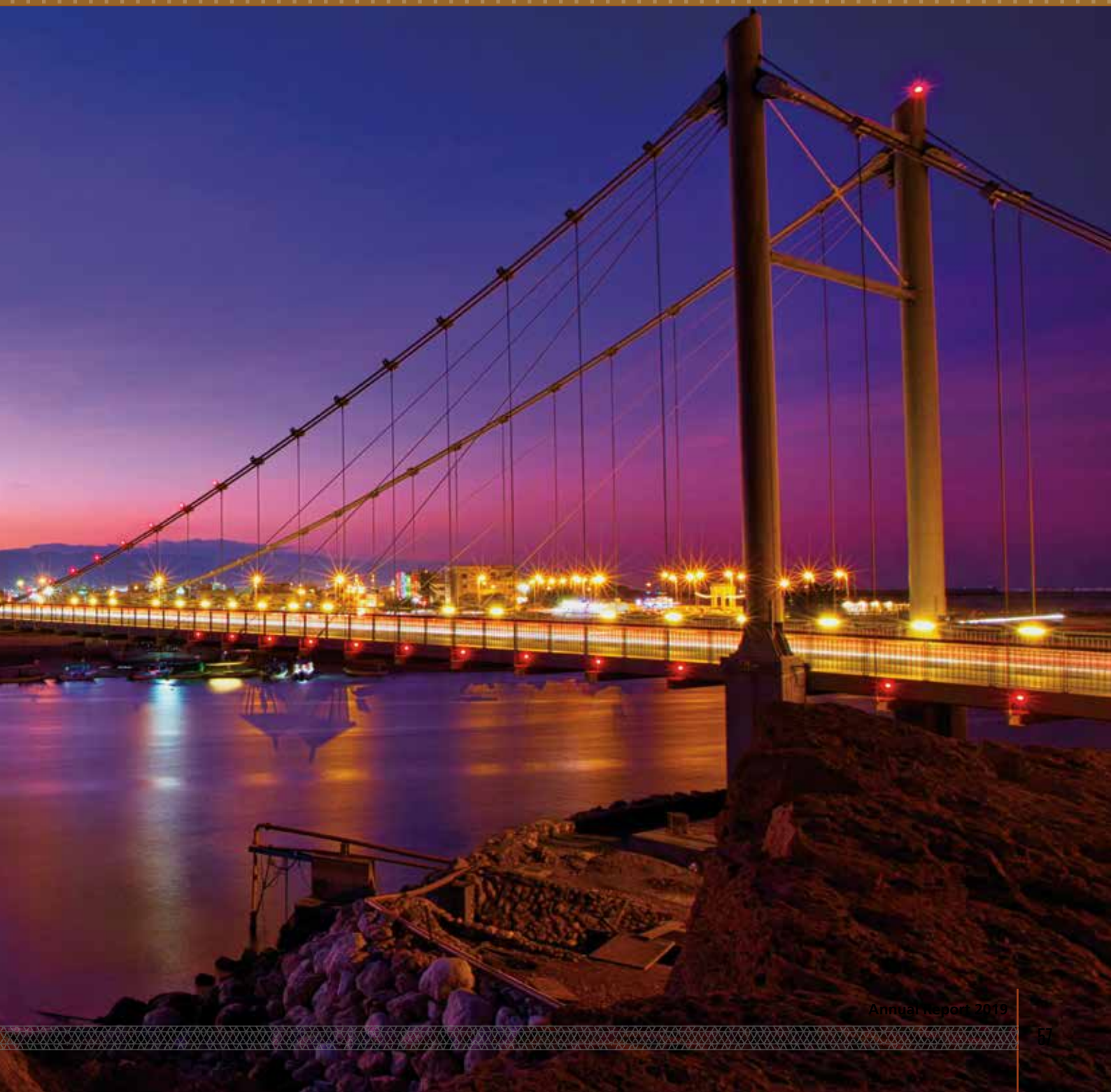
In summary, technical measures, with the exception of some inexpensive general-purpose ones, such as facility lighting, are less popular than operational ones. Additionally, there is considerable variation across tariff categories regarding the solutions adopted, but industrial respondents were generally the most likely to engage in adopting energy-saving solutions.

ARTICLE (29) REPORTING

Further Market Liberalisation
The following table presents the Authority's assessment of the possible implementation of the four liberalisation measures identified in the Sector Law.

Liberalisation measure	Authoritys assessment of market readiness
1. Disposal of the government's interest in the Electricity Holding Company SAOC or the Oman Power and Water Procurement Company SOAC	**The Authority supports the government's decision to dispose of a proportion of its interest in the Electricity Holding Company.** Throughout 2019, the Authority continued to support the disposal of assets owned by the government, through the Electricity Holding Company, in both the transmission and the distribution and supply licensees. On 15th December 2019 it was announced that 49% of the shares in the Oman Electricity Transmission Company would be sold to China State Grid International Development. The Authority also worked through the year to support the disposal of shares in Muscat Electricity Distribution Company. It held extensive discussions with the Electricity Holding Company, its advisors and prospective investors to respond to numerous questions and points of clarification concerning the Sector Law, the distribution and supply licence obligations and related aspects of Oman's regulatory framework.
2. Permitting licensed production facilities to sell to entities other than Oman Power and Water Procurement Company SAOCSAOC	**The Authority did not consider the market was ready for this liberalisation measure in 2019.** The Authority has continued to support the work led by the Oman Power and Water Procurement Company (OPWP) to develop a compulsory day-ahead spot market to complement the use of (long-term) power purchase agreements. In particular, the Authority implemented appropriate modifications to the licenses of generating companies, published a consultation paper on market share issues in the context of the spot market and actively monitored the preparations (market readiness) of OPWP and other relevant licensees. The spot market is expected to commence during 2021. The Authority appointed consultants to review the potential for direct sales of power between licensed or exempted producers and customers. This could be achieved either outside of the spot market mechanism (for example, through so-called 'wheeling' arrangements) or through the spot market mechanism, but supported by separate financial contracts designed to hedge potential volatility in spot market prices. These are complex matters that require prudent consideration as it is essential to continue the allocation of less utilised generation capacity costs fairly. This plays a role in ensuring both the security of supply for the whole system and that the costs relating to the transmission system, which is designed and operated as an integrated network, benefits all users. The Authority intends to carefully review advice from consultants and discuss potential options and implementation measures with concerned stakeholders, including the potential for a pilot programme. This would be done with careful monitoring of the policy and techno-economic background which continues to evolve rapidly.
3. Permitting entities other than Oman Power and Water Procurement Company SAOC and the Rural Areas Electricity Company SOAC to import or export electricity from or to another country	**The Authority does not consider the market ready for this liberalisation measure.** Oman became a formal signatory to the Gulf Cooperation Council Interconnectivity Authority (GCCIA) in 2014. Since then, the Authority has ensured all proposals are consistent with the regulatory regime in Oman and provides safeguards to protect the interests of customers and other stakeholders.
4. Creation of competition amongst licensed suppliers	**The Authority believes the market is ready for supply competition.** The Authority believes the market is ready for supply competition. Throughout 2019 the Authority continued to review the potential for competition amongst licensed suppliers in Oman's market as it continues to believe it is both feasible and desirable. It sees that the essential building blocks and institutional arrangements are well understood internationally, do not constitute a serious barrier and can be completed relatively quickly at the appropriate time. The Authority did note, however, that several key features of the Oman market have the potential to reduce its attractiveness for potential new supply licence holders, including: • Government subsidies • The application of uniform tariffs • Immature wholesale market development • The privatisation programme for state-owned distribution companies The Authority also noted that measures, such as the first steps toward privatisation, were taken and further measures that would eliminate or reduce the impact of those barriers had been proposed. Depending on the progress of these measures, the Authority will carry out a further review of the potential nature, form and optimum timing of introducing supply competition.

REGULATION



Authority for Electricity Regulation, Oman

The Authority was established as an administratively and financially independent entity subject to State Audit Law by Article (19) of the Sector Law. The Authority is competent to regulate the electricity and related water sector pursuant to Article (2) of the Sector Law. Authority Members are appointed by the Council of Ministers for three year terms.

The present Members of the Authority are:

Eng Saleh bin Hamood Al Rashdi
Chairman and Non-executive Member (A part time appointment)

Qais bin Saud Al Zakwani
Executive Director and Member
(A full time appointment)

Mohammed bin Ahmed Al Shahri
Non-executive Member
(A part time appointment)

Ayisha bint Zaher Al Mawali
Non-executive Member
(A part time appointment)

Hamed Ali Matar Al Jabri
Non-executive Member
(A part time appointment)

Organisation Structure & Staffing

While Members are collectively responsible for managing the Authority's affairs and ensuring the Authority fulfils all of its statutory functions and duties, most day to day work is undertaken by four Directorates that are responsible for different aspects of regulation.

Authority Organisation Structure

Excluding Members, the Authority has a total compliment of 68 Directors and staff, most of whom are Omani national. Professional staff have qualifications relevant to their respective areas of regulation: 36 staff have Bachelor's Degrees and 15 have Master Degrees.

Professional Development of Authority Staff

The Authority is committed to the professional development of Omani staff. In 2019, staff member of the Authority completed Masters Programmes. Mohammed Al Tobi, Regulatory Engineer, completed an MSc in Energy and Sustainability with Electrical Power in Engineering with distinction from Southampton University- UK. Mohammed Al Habsi also started a master's program in translation at Sultan Qaboos University.

Members Meetings in 2019

	Eng Saleh Al Rashdi	Qais Al Zakwani	Ayisha Al Mawali	Mohammed Al Shahri	Eng Hamad Al Jabri
Appointed for term in:	Chairman & Member	Executive Director & Member	Member	Member	Member
Meeting Dates	May- 2017	May- 2017	May- 2017	May- 2017	March- 2018
9 -January- 2019	✓	✓	✓	✓	✓
3 -March- 2019	✓	✓	✓	✓	–
2 -May- 2019	✓	✓	✓	–	✓
13 -June- 2019	✓	✓	✓	✓	✓
6 -August- 2019	✓	✓	✓	✓	✓
16 -September- 2019	✓	✓	✓	✓	✓
30 -October- 2019	✓	✓	✓	✓	–
25 -November- 2019	✓	✓	✓	✓	✓

Funding & Regulatory Costs

The Authority recovers all of its costs through licence fees that apportion the Authority's costs on the basis of the time expected to be spent regulating each activity. The table presents licence fee income by regulated activity and the number of Licence Holders by activity, for 2010 to 2020, inclusive

Table 12: Licenses Fees 2012 to 2020

Rial Omani		Generation	Generation & DeSALINATION	DeSALINATION	Transmission& Despatch	Distribution & Suppy	RAEC /activities	PWP Activites	PWP AElectricity	PWP : Related Water	PWP : Salalah	Generation (Renewables	Total Fee income
2012	Fees	213,048	241,359		427,785	620,676	211,216	386,074	145,075	14,176	386,074	0	2,100,158
	#Licenses	6	5		1	3	1	1					17
2013	Fees	312,470	241,359		410,674	777,914	211,216	179,733	151,381	28,353	0	0	2,133,367
	#Licenses	8	5		1	4	1	1					20
2014	Fees	359,341	334,117		595,477	1,127,975	306,263	283,776	227,071	56,705	0	2,000	3,008,949
	#Licenses	8	5		1	4	1	1				1	21
2015	Fees	427,491	417,316		848,124	908,704	331,875	356,897	272,611	84,286	0	2,000	3,292,407
	#Licenses	8	5		1	4	1	1				1	21
2016	Fees	386,040	366,045		553,799	855,872	275,805	296,600	226,554	70,046	0	2,000	2,736,161
	#Licenses	8	5		1	4	1	1				1	21
2017	Fees	413,696	375,822		539,405	1,382,226	470,514	410,417	337,128	73,289	0	2,000	3,664,437
	#Licenses	8	5		1	4	1	1				1	24
2018	Fees	496,377	416,560	112,636	910,757	1,593,824	635,550	782,063	683,067	98,995	0	2,000	4,949,767
	#Licenses	9	5	4	1	4	1	1				1	26
2019	Fees	597,386	423,643	124,950	673,560	1,571,640	716,511	771,177	673,560	97,617	0	2,000	4,880,868
	#Licenses	10	5	5	1	4	1	1				1	28
2020	Fees	652,233	362,751	152,786	549,076	1,921,472	947,381	785,815	686,345	99,470	0	2,000	5,373,514
	#Licenses	10	4	6	1	4	1	1				1	28

Annual changes in licence fees reflect the changing scope of the Authority's regulatory work based on ever-shifting developments in the electricity and related water sector market.
The cost of regulation in 2019 was around OMR 3.8 per customer account, less than one tenth of one baiza per kWh supplied and less than 0.25% of total electricity and related water sector turnover. Collectively, the Authority sees these metrics as comparing favourably to international benchmarks of regulatory costs.

2020 Forward Work Programme

Article 34 of the Sector Law requires the Authority to prepare a Forward Work Programme for 2020 through consultations with persons who may be affected by any aspect of proposed work. At the end of 2019, the Authority proposed and published its 2020 Forward Work Programme in accordance with Article 34 of the Sector Law and is in the process of implementing all of its constituent tasks. The 2020 Forward Work programme is presented in Annex D of this annual report.

Customer Affairs Directorate

The Customer Affairs Directorate takes responsibility for protecting and promoting the interests of electricity customers in Oman, all of whom are entitled to a high standard of service and delivery. The Directorate carries out these functions by resolving complaints, monitoring and ensuring the performance of customer-related licence obligations by distribution and supply licensees and enhancing customer awareness of the legal and regulatory framework.

In carrying out its responsibilities to electricity customers, the Directorate fulfilled its mandate throughout 2019 through:

I. Continuous monitoring of the performance by distribution and supply licensees against several Key Performance Indicators (KPIs) as per the customer service incentive scheme for 2018-2021 price control.
II. Before the distribution and supply licensees were allowed to appoint external auditors responsible for their 2018 Customer Service KPI audit, the Directorate reviewed their proposed methodology and past experience.
III. The reported performance documents related to the 2018 Customer Service KPIs of the electricity distributors, MEDC, MJEC, MZEC, DPC and RAEC, were reviewed and approved.
IV. A unified audit methodology, for use by all the distribution and supply licensees to verify their performance against the customer's service KPIs, was developed.
V. Industry-specific insight was submitted for the 'Doing Business Report 2019', published by the World Bank, in relation to the 'Getting Electricity' indicator.
VI. Two stakeholder awareness programmes concentrating on Ash Sharqiyah North and Al Batinah South governorates were successfully launched.
VII. Continued support was given to the Sahim 2 initiative and the energy-efficiency project teams.
VIII. Contributions were made to an investigation launched by the Authority according to Article 147 of the Sector Law.
IX. 91 new customer complaints were received, while 80 outstanding customer complaints were resolved satisfactorily.
X. 163 customers were advised on their consumer rights and how they could progress their grievances through the approved complaint handling procedure.

Customer Awareness Programme

It is paramount that customers are aware of what they should expect from licensed electricity suppliers and, in order to ensure this awareness reaches all customers and stakeholders, the Authority organized several successful events targeted to engage with all customers.

Ash Sharqiyah North Region and Al Batinah South governorates were areas of increased focus for 2019 with the Authority clarifying the importance of understanding their consumer rights by explaining the Customer Complaint Handling Procedure and other codes of practices. The meetings generated lively debate whilst providing the Authority with sharp insights into the views and experiences of their customers. To ensure a unified and accurate message regarding consumer rights from all distribution and supply companies, the Directorate actively continued to monitor their customer communication programmes.

The Authority's Awareness Team supported the Sahim 2 initiative by preparing and reviewing communication messages that were shared with the public via press releases, video production and social media as well as attending to customer queries and clarifications.

Licences, Codes, Procedures and Charters

The Directorate is placing considerable monitoring efforts to drive performance in poorer performing companies while encouraging companies with efficient performance to maintain their position. Throughout 2019 the Directorate continued to monitor the distribution and supply licensees' performance against their KPIs covering activities such as meter reading, billing, customer complaints and customer connections. The KPIs were linked to financial rewards,

or penalties in cases of non-compliance, as part of a customer service incentive scheme implemented in January 2018 in relation to the price control 2018-2021 document.
Under a scheme specified in the Schedule Charge Restriction Conditions, the Authority evaluated the licensees› performance for 2018 based on rewards and penalties, with the outcomes communicated to each licensee.
The Directorate also developed a unified audit methodology for the appointed external auditors to use when auditing their performance against their KPIs. This methodology was to be implemented before the final report was sent to the Authority and would facilitate the review by the Authority and avoid any misinterpretations of the KPIs, including information extractions or calculations.

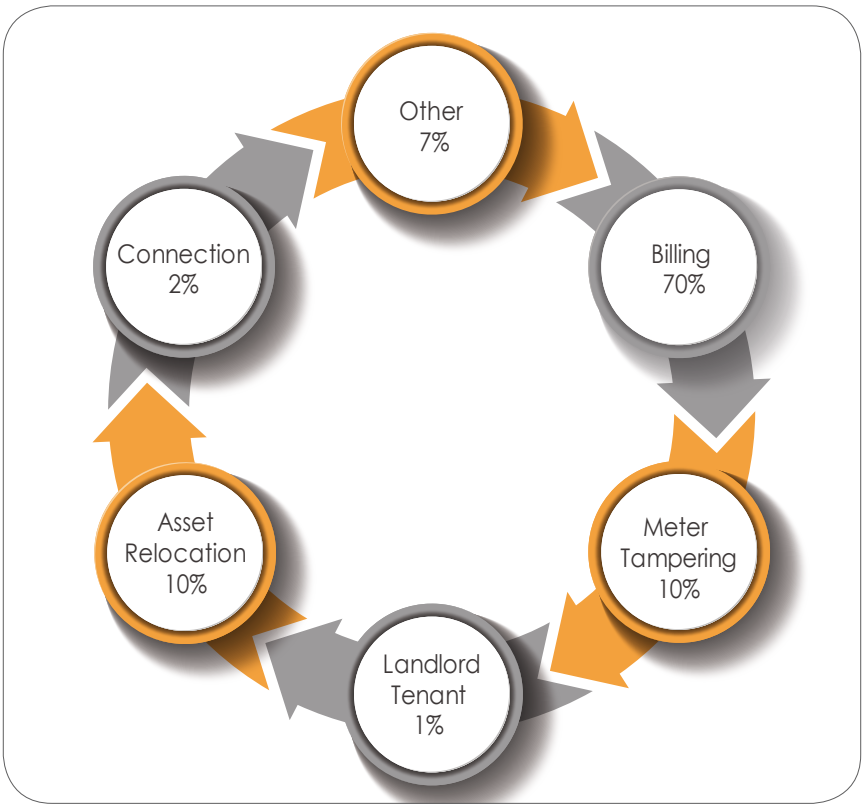
Complaints and Determinations

As per the approved Complaint Handling Procedure, it is the Authority's policy that licensees must first be given a fair opportunity to satisfactorily resolve customer complaints. Should they fail to resolve the matter to the satisfaction of the customer, or within the timeframes specified in the Complaint Handling Procedure, the customer may refer the case to the Authority, who has legal powers to determine how such complaints should be resolved.
The Authority made 75 Determinations between 2005 and 2017, covering all main categories of complaints. Using this body of precedent for reference, the Authority was able to resolve a further 80 unresolved complaints, compared with 91 complaints received during the 2019.
The Authority continues to make further determinations when it is necessary to set further precedents, or when a customer does not accept the resolution of his dispute based on previous precedents and wishes to pursue the matter in court.
91 complaints received during 2019 was a slight increase on the 87 complaints received during 2018 and Figure X below presents an analysis of the issues related to the 91 complaints.
The number of billing-related complaints recorded in 2019 increased from 51 to 64, 70% of the annual total, which reflects issues experienced by licensees and their agents with meter readings and the accuracy of estimated bills. These problems continue to be addressed through the implementation of a new billing system, a new meter reading contract and by promoting the benefits of adopting electronic channels for meter reading and bill delivery.
The number of complaints relating to asset relocation was lower in 2019, with 9 compared to 20 in 2018.

Categories of Customer Complaints in 2019

Complaint Issue	2018		2019	
	#	%	#	%
Billing & Meter Reading	51	59%	64	70%
Meter Tampering	9	10%	9	10%
Landlord-Tenant	0	0%	1	1%
Asset Relocation	20	23%	9	10%
Connection	0	0%	2	2%
Other	7	8%	6	7%
Total	87		91	

Categories of Customer Complaints in 2019



Customer Support

Although the Directorate deals with all formal complaints they receive, it also provides advice to customers who contact the Authority before raising the matter formally with their licensed supplier or before they have receive a formal response from their supplier. The Authority advises customers of their rights and procedures, but also informs them of previous decisions taken in similar cases where appropriate. In 2019 the Directorate advised 163 customers on their rights, a continued drop when compared with 175 in 2018, 249 in 2017 and 182 in 2016. Of the 163 cases, 98 were related to billing issues; a 23% reduction from the 128 in 2018. Customer connections represented 14 cases, an increase from zero in 2018.

Economic Affairs

The Directorate is responsible for the economic regulation of the electricity and related water sector in Oman, including the development of a wholesale electricity spot market and to set and monitor RPI-X price controls to avoid a monopoly within the sector. It also reviews and approves intra-sector and cost-reflective tariffs for large customers as well as calculating the annual subsidy requirements for licensed suppliers.

The Directorate engaged in a cross-section of activities within the sector over the course of 2019, the highlights of which are:

- Continued support of work led by OPWP to develop a compulsory day-ahead spot market to complement the use of (long-term) power purchase agreements (PPA). A particular focus was the continued work concerning market parameter determination (capacity payment mechanism) and actively monitoring preparations (market readiness) of OPWP, OETC and licensees. The Authority* also implemented appropriate modifications to the licenses of generating companies, a significant increase in workload for which the Authority recruited two new members of staff.
- A consultation document in relation to market share issues in the context of the spot market was published. In the document, the Authority proposed a new approach to calculating market share in the generation of electricity and invited comments on the matter from Stakeholders. Taking into consideration the comments received during the consultation, the Authority will make a decision on the next steps during 2020.

- Consultants to review the potential for direct sales of power between licensed or exempted producers and customers, either outside of, or through the spot market mechanism, were appointed. The consultants will also review arrangements about PPA contracts and the spot market mechanism.
- The PWP 7-Year Statement (2019-2025) submission was reviewed and approved.
- A mid-period price control review of RAEC was completed. The review focused only on necessary capital and associated operating expenditures in 2020 and 2021 that they would require to fulfil the statutory obligations. The mid-period price controls came into effect on the 1st January 2020.
- A review of the 2019 PWP and RAEC electricity and water bulk-supply tariff proposals was undertaken.
- A study, and full review, of the distribution charge (Dt) component of the CRT was carried out. The objective of the study was to reassess the structure of the Dt charge and consider any modifications required to enhance cost-reflectivity as well as further reflect different customers' characteristics, including voltage-wise differentiation and cost causality. As a result of the study, the Authority moved away from a single energy charge that is the same across all CRT customers in favour of three different energy charges that differ according to the customers' voltage level connection to the distribution network. This new Dt charge structure became effective from the 1st January 2020 .
- A survey investigating the impact of the introduction of Cost Reflective Tariffs (CRT) that were effective from the 1st January 2017 and applied to large government, industrial and commercial customers whose consumption exceeds 150MWh per annum was completed. The main objectives of the survey were to understand the characteristics of CRT customers, their reactions to changes in the electricity price and to understand customers' experience since the introduction of CRT .
- In-depth analysis confirming outturn (2018) and estimated (2019 and 2020) electricity sector subsidy requirements was successfully executed

Directorate of Technical Regulation

The Directorate of Technical Regulation is responsible for a broad range of regulatory procedures, including the approval of technical standards, monitoring compliance with industry codes, planning and operating standards and Oman's electrical standards. The Directorate represents the Authority on the grid code and distribution code review panels and plays a lead role in technical and health and safety investigations.
Over the course of 2019, the Directorate engaged in several initiatives to reach its goals and objectives, including:

1. A review covering the Authority's readiness to allocate distribution licensees for summer 2019 was conducted.
2. Two supply interruptions under the RAEC remit, one in Al Hijj and one in Lima, were reviewed.
3. A new version of OES 4 to the electricity sector and stakeholders was published.
4. A CAPEX review to support the mid-price control of RAEC was undertaken.
5. All 2019 system capability statements of MEDC, MJEC, MZEC, DPC, RAEC and OETC were reviewed.
6. Health and Safety audits of OETC and DPC were carried out.
7. There was a full follow-up to ensure the recommendations from health and safety audits of MEDC and RAEC for 2015, MZEC and MJEC for 2016 and OPWP for 2018 were implemented.
8. Conducted a Scheduling and Dispatch Audit of OETC.
9. Participation in a public health and safety awareness campaign regarding the potential risks of poorly-maintained electric water coolers.
10. Routine inspections of licensed distribution systems to ensure the safety and physical security

of the network's assets were ongoing throughout the year.

11. Progress of MIS distribution licensees concerning the compliance of their networks with the Distribution System Security Standards were reviewed to assess the level of non-compliance and to determine resulting penalties.
12. Cybersecurity audits phase 1 and 2 of industrial control systems of different licensees were conducted.
13. Drafts of the standards and regulations for electricity metering systems were worked on with the Ministry of Commerce and Industry.
14. Participated in discussions with OPWP on the development of the spot market.
15. Contingency plans of the different distribution licensees against the requirements to comply with the Distribution System Security Standards were reviewed.

Cyber Security Audit Phase 1 and 2

In 2019, the Authority completed industrial control systems cybersecurity audits for 25 licensees in light of the SCADA and DCS cybersecurity standard, issued by the Authority in August of 2015. Phase 1 of the audit included 12 generation licensees, 4 distribution licensees, OETC and RAEC whilst phase 2 included 2 Generation Licensees and 5 desalination plants. The audit identified some areas of good practice as well as areas where improvements could be made, for which the Authority will follow-up with the licensees to ensure compliance through implementation of the SCADA and DCS cybersecurity standard requirements.

Lima Blackout

On Monday 1st July 2019, Lima, in Musandam, experienced a sustained blackout. As a result, the Authority conducted a review of the actions taken by RAEC and identified several serious safety, operational and customer service deficiencies that contributed to the outage being extended far beyond an acceptable limit. The Authority was disappointed to note that the generic failings that led to the sustained outage had been identified many times to RAEC management in recent years and that there was no justification for the extent of the customer interruptions.

Scheduling and Dispatch Audit of Oman Electricity Transmission Company (OETC)

A comprehensive scheduling and dispatch audit of OETC was conducted by the Authority at the end of 2019. The audit focused on auditing and reviewing OETC's scheduling and dispatch activities as well as internal processes and procedures to implement and record such scheduling and dispatch decisions in accordance with their license and grid code requirements.

Grid Code Review Panel

The Grid Code Review Panel (DCRP) met four times during 2019, see Figure below.

Grid Code Review Panel meetings in 2019

Meeting	Meeting date	Chaired by	Location
GCRP 56	11-Feb-19	OETC	Muscat
GCRP 57	30-April-19	OETC	Muscat
GCRP 58	05-Aug-19	OETC	Muscat
GCRP 59	11-Nov-19	OETC	Muscat

Distribution Code Review Panel

The Distribution Code Review Panel (DCRP) met four times during 2019, see Figure 31.

Distribution Code Review Panel meetings in 2019

Meeting	Meeting date	Chaired by	Location
1/2019	12-Feb-19	MEDC	Muscat
2/2019	5-May-19	MEDC	Muscat
3/2019	27-Aug-19	MEDC	Muscat
4/2019	05-Nov-19	MEDC	Muscat

The DCRP continued its efforts to improve the product and contractor approval processes throughout 2019 and continued to improve internal processes and procedures to be more efficient in product and contractor approvals. They also improved their processes for expediting SMEs, companies that filfil their Omanisation requirements and those who prioritised the supply of Omani products. DCRP also took proactive steps to enhance the capability of the market to provide competent PV installers, thereby improving the safety of workers in the electricity sector.

In 2019 the DCRP issued 22 new product approvals, including 8 Omani products, and certified 76 contractors. In line with the national strategy to enhance the deployment of solar energy, DCRP certified 45 solar installers, approved 2 solar energy training programmes and 3 HSE training institutes. The DCRP continued to assess and approve protection engineers, resulting in 93 protection and testing and commissioning engineers with valid DCRP competency certificates working for contractors and consultants by the end of 2019, including 39 engineers from the distribution companies. In addition to these, 189 electrician licenses were issued in 2019 by the DCRP.

The Directorate of Legal and Regulatory Affairs

The Directorate is responsible for providing advice and legal opinions to members of the Electricity Authority and all its Directorates. This ensures that all decisions of the Authority comply with the law for the Regulation and Privatisation of the Electricity and Related Water Sector as stated in Royal Decree No. 78/2004 (Sector Law) and other applicable laws and regulations. The Directorate also takes responsibility for maintaining channels of communication with the relevant government entities and authorities for all regulatory matters and data.
The functions of the Directorate are divided into two streams: legal affairs and regulatory affairs.

Legal Affairs

The Directorate handles all legal cases internally, without appointing external lawyers, and represents the Authority before the courts of various degrees. It also plays a crucial role in drafting regulations and other regulatory documents issued by the Authority as well as preparing, drafting and reviewing contracts and agreements between the Authority and other parties. Some employees of both the Authority and the Directorate enjoy judicial authority, entitling them to inspect and investigate work when a breach of the provisions of the Sector Law and/or License occurs.

Regulatory Affairs

The Directorate is responsible for handling and processing licenses, exemptions, approvals for Change of Control and approvals for Article (106) applications submitted to the Authority.
The Directorate must also monitor compliance of licensees and exemption holders to the provisions of the Sector Law and the conditions of their license or exemption, respectively, and the directions issued by the Authority. It must also manage and maintain the public register whilst supporting the actions and regulatory measures taken by the other Directorates of the Authority.

In 2019, the Directorate took responsibility for several important objectives pertaining to licensing and legal affairs. These include:

1. Granting a Generation License to Shinas Generating Company (SGC), effective from 12 March 2019 for a period of 25 years. The license allows SGC to generate electricity from its production facilities located in Sohar, Al Batinah North, with a maximum production capacity of 1,710 MW. This license replaces SGC's existing Exemption Order No (1/2018) based on the successful completion of the regulatory requirements set by the Authority.

2. Reviewing and processing a license application by Myah Gulf Oman Desalination SAOC (MGODC). The Authority granted a Desalination License of a Special Nature to MGODC to allow regulated desalination of water from a desalination facility of a special nature for a period of 25 years, effective from 9 April 2019. The desalination facilities are located in Sohar Industrial Port Area, with a production capacity of 250,000 m3/day.

3. Reviewing, processing and granting a Desalination License of a Special Nature application by Dhofar Desalination Company (DDC). This allows regulated water desalination at a facility of a special nature for a period of 25 years, effective from 8 October 2019. The production facilities are located in Salalah, with a total capacity of 120,000 m3/day.

4. A public consultation in December 2019 on the proposal to grant a Generation License to Amin Renewable Energy Company (AREC). The consultation was called for after a license application was submitted to generate electricity through renewable energy from its solar PV production facilities. Located in Shalim in the Dhofar Governorate, the facility has a total capacity of 100 MW which will be procured by PDO.

In 2019, the Directorate carried out modifications of licenses or license exemption, including:

5. Modified the licenses of all Generation and Generation and Desalination Licensees by adding new conditions related to the inception of the spot market. The modifications became effective from 1st January, 2019.

6. A public consultation on modifying PWP and OETC licenses by adding new conditions to reflect the licensee's role in the spot market. Notices in newspapers were issued which resulted in no comments or objections being received during the consultancy period. The modified licenses were scheduled for issuance in Q1 of 2020.

7. A public consultation based on Royal orders based on the proposed modification to Schedule 1 – Authorized Area of the Rural Areas Electricity Company SAOC (RAEC) License. The modification would allocate the regulatory responsibilities in the Authorised Area of Al Duqm to the Duqm Special Economic Zone Authority (SEZAD) and was expected to be effective from 1st January, 2020.

The Directorate revoked several licenses over the course of 2019, including:

1. Wadi Al Jizzi Power Company and Al Ghubrah Power and Desalination Company. The licenses were revoked on the 8th May, 2019 on completion of the operational and commercial service period of their production facilities.
2. Muscat Water LLC. Their Desalination License of a Special Nature was revoked on the 8th December, 2019 due to defaulted payments of their license fee for the whole of 2018.

In 2019, the Directorate oversaw several matters related to consent for the disposal of assets, transfer of assets and Article (106), including:

1. Receiving letters from the licensees requesting the Authority's approval on the disposal of scrap assets, old vehicles other materials. All requests were reviewed in coordination with the Technical and Economic Directorate.
2. Reviewing and granting Article (106) consent to Amin Renewable Energy Company.
3. Reviewing and approving the process of transfer of RAEC assets in the Ayoon region of Dhofar Governorate to Dhofar Power Company, pursuant to provisions of Article (88) of the Sector Law.

Regulations Issued:

1. In execution of Royal orders, publication of the Permitted Tariff Regulation for Aflaj Pumps in the Official Gazette by Decision No. (3/2019), effective from 13th December 2019, was drafted and finalised.

Court Cases:

Represented the Authority in all court cases involving the Authority in litigation levels; Preliminary, Appeals and Supreme Courts.

GCC Meetings:

Participated in international conferences and seminars, including GCC Interconnection Authority (GCCIA) advisory and regulatory committee meetings.

Annex A

Audited Financial Statements

Financial Statements and Independent Auditors Report

Authority for Electricity Regulation, Oman

31 December 2019

Registered address
P.O. Box 954, PC 133
ALKhuwair, Muscat
Sultanet of Oman

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Independent Auditor's Report

To the Members of
Authority for Electricity Regulation, Oman
P.O. Box 954,
Postal Code 133, Al Khuwair, Muscat
Sultanate of Oman

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Authority for Electricity Regulation, Oman (the Authority), which comprise the statement of financial position as at ٣١ December 2019, and the statement of revenue and expenses, statement of changes in surplus fund and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Authority as at 31 December 2019, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs).

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Authority in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) together with the ethical requirements that are relevant to our audit of the financial statements in Oman, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other matter

The financial statements of the Authority for the year ended 31 December 2018 were audited by another auditor who expressed an unmodified opinion on those financial statements on 27 June 2019.

Independent Auditor's Report (continued)

Responsibilities of Management and Those Charged with Governance for the Financial Statements

The Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS and their preparation in compliance with the relevant disclosures requirements for the Regulation and Privatisation of the Electricity and Related Water Sector (the Sector Law), promulgated by the Royal Decree 78/2004, and for such internal control as the management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the management is responsible for assessing the Authority's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Government either intends to liquidate the Authority or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Authority's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the management.
- Conclude on the appropriateness of the managements' use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Authority's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Authority to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Independent Auditor's Report (continued)

Auditor's Responsibilities for the Audit of the Financial Statements (continued)

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on Other Legal and Regulatory Requirements

In our opinion, the financial statements of the Authority as of and for the year ended 31 December 2019, comply, in all material respects, with the relevant financial reporting requirements of the Law for the Regulation and Privatisation of the Electricity and Related Water (the Sector Law), promulgated by the Royal Decree 78/2004.

Nasser Al Mugheiry
Licence No. L1024587
ABU TIMAM
(Chartered Certified Accountants)

30 June 2020

Statement of financial position

as at 31 December 2019

	Notes	31 December 2019 RO	31 December 2018 RO
ASSETS			
Non-current assets			
Property and equipment	5	**2,899,445**	167,954
Current assets			
Receivables and prepayments	6	**190,305**	90,052
Cash and cash equivalents	7	**2,061,268**	2,741,619
Total current assets		**2,251,573**	2,831,671
Total assets		**5,151,018**	2,999,625
RETAINED SURPLUS FUND AND LIABILITIES			
Retained surplus fund	8	**2,644,604**	2,499,678
Liabilities			
Non-current liabilities			
Other liabilities	9	**1,445,338**	-
Employees' end of service benefits	10	**100,889**	129,653
Total non-current liabilities		**1,546,227**	129,653
Current liabilities			
Other liabilities	9	**365,919**	-
Accruals and other payables	11	**594,268**	370,294
Total current liabilities		**960,187**	370,294
Total liabilities		**2,506,414**	499,947
Total retained surplus fund and liabilities		**5,151,018**	2,999,625

The financial statement on pages 4 to 23 were approved by the Members and were signed on the Authority's behalf on 30 June 2020:

Chairman **Member** **Executive Director & Member**

The accompanying notes on pages 8 to 23 form an integral part of these financial statements.

The report of the Auditor is set forth on page 1.

Statement of revenue and expenses

for the year ended 31 December 2019

	Notes	31 December 2019 RO	31 December 2018 RO
Revenue			
Income from operations	12	**4,827,392**	**4,919,199**
Interest income		**21,803**	**19,939**
Other income	13	**216,824**	**216,745**
Total revenue		**5,066,019**	**5,155,883**
Expenses			
Salaries and employee related costs	14	**(2,804,723)**	**(2,734,428)**
General and administrative expenses	15	**(832,836)**	**(547,151)**
Consultancy expenses	16	**(1,085,090)**	**(1,145,891)**
Depreciation	5	**(136,260)**	**(49,594)**
Finance costs		**(62,184)**	**-**
Total expenses		**(4,921,093)**	**(4,477,064)**
Surplus for the year		**144,926**	**678,819**

The accompanying notes on pages 8 to 23 form an integral part of these financial statements.

The report of the Auditor is set forth on page 1.

Statement of changes in surplus fund

for the year ended 31 December 2019

	Retained surplus RO
At 1 January 2018	1,820,859
Surplus for the year	678,819
At 31 December 2018	2,499,678
Surplus for the year	144,926
At 31 December 2019	**2,644,604**

The accompanying notes on pages 8 to 23 form an integral part of these financial statements.

The report of the Auditor is set forth on page 1.

Statement of cash flows

for the year ended 31 December 2019

	Notes	31 December 2019 RO	31 December 2018 RO
Cash flows from operating activities:			
Cash receipts from licensees and application fees for license exemptions and other income		5,030,707	5,157,257
Cash paid to employees and other suppliers		(4,676,367)	(4,194,361)
Net cash from operating activities		354,340	962,896
Cash flows from investing activities:			
Purchase of property and equipment	5	(994,310)	(118,286)
Net cash used in investing activities		(994,310)	(118,286)
Cash flows from financing activities:			
Finance costs		(62,184)	-
Interest income received		21,803	19,939
Net cash (used in)/generated from financing activities		(40,381)	19,939
Net change in cash and cash equivalents during the year		(680,351)	864,549
Cash and cash equivalents at the beginning of the year		2,741,619	1,877,070
Cash and cash equivalents at the end of the year	7	2,061,268	2,741,619

The accompanying notes on pages 8 to 23 form an integral part of these financial statements.

The report of the Auditor is set forth on page 1.

Notes

(forming part of the financial statements)

1 Nature of operations

The Authority for Electricity Regulation, Oman (hereafter referred to as the "Authority") is primarily engaged in the regulation of the electricity and related water sector in the Sultanate of Oman. Under the Sector Law regulating the Authority's activities, the Authority levies fees on licensee companies that will enable the Authority to recover an amount not more than its expenses. Accordingly, surplus of income over expenses are held as explained in Note 8 to the financial statements.

2 General information and statement of compliance with IFRS

The Authority was established under Article 19 of the Law for the Regulation and Privatisation of the Electricity and Related Water Sector (the Sector Law) promulgated by the Royal Decree 78/2004 issued on 1 August 2004.

The registered address of the Authority is P.O. Box 954, Postal Code 133, Al Khuwair, Sultanate of Oman.

The financial statements of the Authority have been prepared in accordance with International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board (IASB) and the requirements of the Sector Law of the Sultanate of Oman.

3 New or revised standards or interpretations

3.1 New standards adopted as at 1 January 2019

IFRS 16 Leases

IFRS 16 will replace IAS 17 and three related Interpretations. It completes the IASB's long-running project to overhaul lease accounting. Leases will be recorded on the statement of financial position in the form of a right-of-use asset and a lease liability.

IFRS 16 is effective from periods beginning on or after 1 January 2019. Management has assessed the impact and the Authority adopted IFRS 16 using the modified retrospective method of adoption with the date of initial application on 1 January 2019. Under this method, the standard is applied retrospectively with the cumulative effect of initially applying the standard recognised at the date of initial application. Accordingly, the comparatives are not restated.

Nature of effect of adoption of IFRS 16:

Before the adoption of IFRS 16, the Authority classified each of its leases (as lessee) at the inception date as operating lease.

Upon adoption of IFRS 16, the Authority applied a single recognition and measurement approach for all leases except for short-term leases and leases of low-value assets. The Authority recognised lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets. For the leases previously classified as operating leases, the lease liabilities were recognised based on the present value of the remaining lease payments, discounted using the incremental borrowing rate at the date of initial application.

Notes

(forming part of the financial statements)

3 New or revised standards or interpretations

3.1 New standards adopted as at 1 January 2019 (continued)

IFRS 16 Leases (continued)

Practical expedients:
The Authority elected to use the transition practical expedient to not reassess whether a contract is or contains a lease at 1 January 2019. Instead, the Authority applied the standard only to contracts that were previously identified as leases applying IAS 17 and IFRIC 4 at the date of initial application.

Impact on transition:
Based on the impact assessment carried out by management of the Authority, application of this standard has no material impact on these financial statements, and therefore, the Authority has not made any adjustments to the statement of financial position.

3.2 Standards, amendments and interpretations to existing standards that are not yet effective and have not been adopted early by the Authority

At the date of authorisation of the financial statements, certain new standards, and amendments to existing standards have been published by the IASB that are not yet effective, and have not been adopted early by the Authority. Information on those expected to be relevant to the financial statements is provided below.

Other
The Authority does not expect any other standards issued by the IASB, but not yet effective, to have a material impact on the Authority. These standards are listed as follows:

- IFRS 17 Insurance Contracts;
- Definition of a Business (Amendments to IFRS 3);
- Definition of Material (Amendments to IAS 1 and IAS 8); and
- Conceptual Framework for Financial Reporting.

4 Summary of accounting policies

4.1 Overall considerations and basis of preparation

The financial statements have been prepared on accrual basis and under the historical cost convention.

The significant accounting policies set out below have been applied consistently by the Authority to all periods presented in these financial statements.

4.2 Presentation of financial statements

The Authority's financial statements are presented in accordance with IAS 1 *Presentation of Financial Statements.*

4.3 Foreign currency translation

Functional and presentation currency
The financial statements have been presented in Rial Omani (RO), which is the functional and presentation currency of the Authority.

Notes

(forming part of the financial statements)

4 Summary of accounting policies (continued)

4.3 Foreign currency translation (continued)

Foreign currency transaction and balances

Foreign currency transactions are translated into the presentation currency of the Authority, using the exchange rates prevailing at the dates of the transactions (spot exchange rate). Foreign exchange gains and losses resulting from the settlement of such transactions and from the re-measurement of monetary items of statement of financial position at year-end exchange rates are recognised in the statement of revenue and expenses under 'other income' or 'other expenses'.

In the Authority's financial statements, all items and transactions of the Authority with a transaction currency other than the Rial Omani (the Authority's presentation currency) were translated into the presentation currency. Assets and liabilities have been translated into the Rial Omani at the closing rate at the reporting date. Income and expenses have been translated into the Authority's presentation currency at the average rates over the reporting period.

Non-monetary items measured at historical cost are translated using the exchange rates at the date of the transaction (not retranslated). Non-monetary items measured at fair value are translated using the exchange rates at the date when fair value was determined.

4.4 Income recognition

Income from operations

Income from operations represents license fee from licensees and is recognised at a point in time when the performance obligation is satisfied and is based on the amount of the transaction price that is allocated to the performance obligation. The transaction price is the amount of consideration to which the Authority expects to be entitled in exchange for transferring promised services to the customer.

The consideration expected by the Authority may include fixed or variable amounts. Income from operations is recognized when control of the asset is transferred to the buyer and only when it is highly probable that a significant reversal of revenue will not occur when uncertainties related to a variable consideration are resolved.

Transfer of control varies depending on the individual terms of the contract of sale. Revenue from transactions that have distinct services are accounted for separately based on their stand-alone selling prices. A variable consideration is recognised to the extent it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

For products for which a right of return exists during a defined period, revenue recognition is determined based on the historical pattern of actual returns, or in cases where such information is not available, revenue recognition is postponed until the return period has lapsed.

4.5 Leases – Policy before 1 January 2019

The determination of whether an arrangement is, or contains a lease is based on the substance of the arrangement at inception date.

Operating lease payments are recognised as an expense in the statement of revenue and expenses on a straight-line basis over the lease term.

Notes

(forming part of the financial statements)

4 Summary of accounting policies (continued)

4.6 Leases – Policy after 1 January 2019

The Authority assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Authority as a lessee

The Authority applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Authority recognises lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

a) Right of use assets

The Authority recognises right of use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right of use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right of use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. The recognised right of use asset are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term. Right of use assets are subject to impairment.

b) Lease liabilities

At the commencement date of the lease, the Authority recognises lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in - substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Authority and payments of penalties for terminating a lease, if the lease term reflects the Authority exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognised as expense in the period on which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Authority uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments (e.g., a change in future payments resulting from a change in index or rate used to determine such lease payments) or a change in the assessment to purchase the underlying asset.

c) Short-term leases and leases of low-value assets

The Authority applies the short-term lease recognition exemption to its short-term leases (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases that are considered to be low value. Lease payments on short-term leases and leases of low-value assets are recognised as expense on a straight-line basis over the lease term.

Notes

(forming part of the financial statements)

4 Summary of accounting policies (continued)

4.7 Operating expenses

Operating expenses are recognised in the Authority's statement of revenue and expenses at the date the expense has occurred based on the accruals concept.

4.8 Cash and cash equivalents

Cash and cash equivalents comprise cash at bank and cash in hand which are subject to an insignificant risk of changes in value.

4.9 Retained surplus fund

The retained surplus represents the cumulative amount of excess or deficit of income over expenses, which will be offset against future funding requirements in accordance with Article 55 of the Sector Law.

4.10 Taxation

The Authority is exempt from income tax as per Article 56 of the Sector Law.

4.11 Financial instruments

Recognition and derecognition

Financial assets and financial liabilities are recognised when the Authority becomes a party to the contractual provisions of the financial instrument.

Financial assets are derecognised when the contractual rights to the cash flows from the financial asset expire, or when the financial asset and all substantial risks and rewards are transferred. A financial liability is derecognised when it is extinguished, discharged, cancelled or expires.

Classification and initial measurement of financial assets

The Authority classifies its financial assets as follows:

Financial assets at amortized cost.

The Authority determines the classification of financial assets based on the business model it uses to manage the financial assets mid the contractual cash flow characteristics of the financial assets.

Business model assessment

The Authority determines its business model at the level that best reflects how it manages Authority of financial assets to achieve its business objective. The Authority's business model is not assessed on an instrument by instrument basis but at a higher level of aggregated portfolios and is based on a number of observable factors. The information considered includes:

- The stated policies and objectives for the portfolio and the operation of those policies in practice;
- The risks that affect the performance of the business model (and die financial assets held within that business model) and how those risks are managed; and
- The frequency, volume and timing of sales in prior periods, the reasons for such sales and its expectations about future sales activity.

Notes

(forming part of the financial statements)

4 Summary of accounting policies (continued)

4.11 Financial instruments (continued)

Classification and initial measurement of financial assets (continued)

Contractual cash flow characteristics test

The Authority assesses whether the financial instruments' cash flows represent Solely Payments of Principal and Interest (the 'SPPI'). The most significant elements of interest within a lending arrangement are typically the consideration for the time value of money and credit risk. The Authority reclassifies a financial asset when and only when its business model for managing those assets changes. The reclassification takes place from the start of the first reporting period following the change. Such changes are expected to be very infrequent.

Financial assets at amortised cost

Financial assets are measured at amortised cost if the assets meet the following conditions (and are not designated as FVTPL):

- they are held within a business model whose objective is to hold the financial assets and collect its contractual cash flows; and
- the contractual terms of the financial assets give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding.

After initial recognition, these are measured at amortised cost using the effective interest method. Discounting is omitted where the effect of discounting is immaterial. The Authority's cash and cash equivalents and receivables fall into this category of financial instruments.

The Authority's financial assets measured at amortized cost are cash and cash equivalent and receivables.

Impairment of financial assets

IFRS 9's impairment requirements use more forward-looking information to recognise expected credit losses – the 'expected credit loss (ECL) model'. This replaces IAS 39's 'incurred loss model'. Instruments within the scope of the new requirements included receivables recognised and measured under IFRS 15.

Recognition of credit losses is no longer dependent on the Authority's first identifying a credit loss event. Instead the Authority considers a broader range of information when assessing credit risk and measuring expected credit losses, including past events, current conditions, reasonable and supportable forecasts that affect the expected collectability of the future cash flows of the instrument.

In applying this forward-looking approach, a distinction is made between:

- financial instruments that have not deteriorated significantly in credit quality since initial recognition or that have low credit risk ('Stage 1') ;
- financial instruments that have deteriorated significantly in credit quality since initial recognition and whose credit risk is not low ('Stage 2'); and
- 'Stage 3' would cover financial assets that have objective evidence of impairment at the reporting date.

'12-month expected credit losses' are recognised for the first category while 'lifetime expected credit losses' are recognised for the second category.

Measurement of the expected credit losses is determined by a probability-weighted estimate of credit losses over the expected life of the financial instrument.

Notes

(forming part of the financial statements)

4 Summary of accounting policies (continued)

4.11 Financial instruments (continued)

Receivables

Receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. The Authority makes use of a simplified approach in accounting for receivables and records the loss allowance as lifetime expected credit losses. These are the expected shortfalls in contractual cash flows, considering the potential for default at any point during the life of the financial instrument. In calculating, the Authority uses its historical experience, external indicators and forward-looking information to calculate the expected credit losses using a provision matrix.

The Authority assess impairment of receivables on a collective basis as they possess shared credit risk characteristics they have been grouped based on the days past due.

Classification and subsequent measurement of financial liabilities

The Authority's financial liabilities include other liabilities, employees' end of service benefits, accruals and other payables, which are measured at amortised cost.

Financial liabilities are initially measured at fair value, and, where applicable, adjusted for transaction costs unless the Authority designated a financial liability at fair value through profit or loss.

Subsequently, financial liabilities are measured at amortised cost using the effective interest method

All interest-related charges and, if applicable, changes in an instrument's fair value that are reported in the statement of revenue and expenses under its line items 'finance costs' or 'finance income'.

4.12 Property and equipment

Property and equipment are initially recognised at acquisition cost, including any costs directly attributable to bringing the assets to the location and condition necessary for it to be capable of operating in the manner intended by the Authority. Property and equipment are subsequently measured using the cost model, cost less accumulated depreciation and impairment losses.

Depreciation is recognised on straight-line to write down the cost less estimated residual value of property and equipment other than land. The following useful lives are applied:

• Building	20 years
• Furniture, fixtures and office equipment	6.67 years
• Motor vehicles	5 years
• Computers	3-4 years

Assets residual value estimates are updated as required, but at least annually, whether or not the asset is revalued.

An asset carrying amount is written down immediately to its recoverable amount if the assets carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount of the assets and are recognised within 'other income' or 'other expenses' in the statement of revenue and expenses.

Land

The Ministry of Housing allotted 5,001 Square meter of land to the Authority in 2015 in Plot No 1816 at Baushar. The land is given free of cost for the purpose of constructing office building for the Authority. The Authority cannot use the land for any other purposes. Management is showing the land at zero value as the land can be used only for the purpose designated by the Ministry.

Notes

(forming part of the financial statements)

4 Summary of accounting policies (continued)

4.12 Property and equipment (continued)

Capital work in progress

Projects in the course of completion, are carried at cost, less any recognised impairment loss. Depreciation of these assets, on the same basis as other assets, commences when the assets are ready for their intended use. Capital work in progress relates to implementation and support of business intelligence system and data warehouse.

4.13 Impairment test on non-financial assets

For the purpose of assessing impairment, assets are compared at the lowest levels for which there are separately identifiable cash flows (cash-generating units). As a result, some assets are tested individually for impairment and some are tested at cash-generating unit level. The management of the Authority has reviewed the assets of the Authority and is of the opinion that no impairment has occurred to any of the Authority's assets.

Individual assets or cash-generating units with an indefinite useful life or those not yet available for use are tested for impairment at least annually. All other individual assets or cash-generating units are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

An impairment loss is recognised for the amount by which the asset's or cash-generating unit's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of fair value, reflecting market conditions less costs to sell and value in use, based on an internal discounted cash flow evaluation. All assets are subsequently reassessed for indications that an impairment loss previously recognised may no longer exist.

4.14 Employees' terminal benefits

The provision for employees' terminal benefits is based upon the liability accrued in accordance with the terms of employment of the Authority's employees at the reporting date, having regard to the requirements of the Oman Labour Law, 2003 and the Social Security Law, 1991.

Government of Oman Social Insurance Scheme (the Scheme)

The Authority contributes to the Scheme for all Omani employees. The Scheme, which is a defined contributions retirement plan, is administered by the Government of Oman. The Authority and Omani employees are required to make monthly contributions to the Scheme at 11.5% and 7% respectively, of gross salaries.

Non-Omani employee terminal benefits

The provision for end of service benefits for non-Omani employees is made in accordance with the requirements of the Oman Labour Law of 2003. Employees are entitled to end of service benefits calculated at the rate of 15 days basic salary for each of the first three years of continuous service and at a rate of 30 days basic salary for each year of continuous service following the first three years. This is an unfunded defined benefits retirement plan. Accrued non-Omani staff terminal benefits are payable on termination of employment.

Notes

(forming part of the financial statements)

4 Summary of accounting policies (continued)

4.15 Provisions, contingent liabilities and contingent assets

Provisions are recognised when present obligations will probably lead to an outflow of economic resources from the Authority and they can be estimated reliably. Timing or amount of the outflow may still be uncertain. A present obligation arises from the presence of a legal or constructive commitment that has resulted from past events. Provisions are not recognised for future operating losses.

Provisions are measured at the estimated expenditure required to settle the present obligation, based on the most reliable evidence available at the reporting date, including the risks and uncertainties associated with the present obligation. Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole.

All provisions are reviewed at each reporting date and adjusted to reflect the current best estimate of the Authority's management.

In those cases where the possible outflow of economic resource as a result of present obligations is considered improbable or remote, no liability is recognised, unless it was assumed in the course of a business combination. These contingent liabilities are recognised in the course of the allocation of purchase price to the assets and liabilities acquired in the business combination. They are subsequently measured at the higher amount of a comparable provision as described above and the amount initially recognised, less any amortisation.

Any reimbursement that the Authority can be virtually certain to collect from a third party with respect to the obligation is recognised as a separate asset. However, this asset may not exceed the amount of the related provision.

Probable inflows of economic benefits to the Authority that do not yet meet the recognition criteria of an asset are considered contingent assets.

4.16 Grants related to assets

Government grants in the form of freehold land are credited to statement of revenue and expenses, where no rational basis exists for allocating the grant to a period other than the one in which it was received. Government grants related to assets are credited to deferred grants and recognized in the statement of revenue and expenses over the useful life of the assets constructed or acquired.

4.17 Significant management judgement in applying accounting policies and estimation uncertainty

When preparing the financial statements, management undertakes a number of judgements, estimates and assumptions about the recognition and measurement of assets, liabilities, income and expenses.

The following are significant management judgements in applying the accounting policies of the Authority that have the most significant effect on the financial statements.

Useful lives of property, plant and equipment

Management reviews its estimate of the useful lives of depreciable assets at each reporting date, based on the expected utility of the assets. At 31 December 2019, management assesses that, the useful lives represent the expected utility of the assets to the Authority. The carrying amounts are analysed in Note 5.

Notes

(forming part of the financial statements)

4 Summary of accounting policies (continued)

4.17 Significant management judgement in applying accounting policies and estimation uncertainty (continued)

Expected Credit loss

Loss allowances for financial assets are based on assumptions about risk of default and expected loss rates. The Authority uses judgement in making these assumptions and selecting the inputs to the impairment calculation, based on the Authority's past history, existing market conditions as well as forward looking estimates at the end of each reporting period. Details of the key assumptions and inputs used are disclosed in the accounting policy above

5 Property and equipment

	Building RO	Furniture, fixtures and office equipment RO	Motor vehicles RO	Computers RO	Capital work in progress RO	Total RO
Cost:						
At 1 January 2019	-	325,477	216,950	234,110	-	776,537
Additions	2,519,492	680	-	61,439	286,140	2,867,751
At 31 December 2019	**2,519,492**	**326,157**	**216,950**	**295,549**	**286,140**	**3,644,288**
Depreciation:						
At 1 January 2019	-	282,167	161,644	164,772	-	608,583
Provided for the year	73,169	8,428	19,144	35,519	-	136,260
At 31 December 2019	**73,169**	**290,595**	**180,788**	**200,291**	**-**	**744,843**
Net book value:						
At 31 December 2019	**2,446,323**	**35,562**	**36,162**	**95,258**	**286,140**	**2,899,445**

The carrying amounts for the comparative year can be shown as follows:

	Building RO	Furniture, fixtures and office equipment RO	Motor vehicles RO	Computers RO	Capital work in progress RO	Total RO
Cost:						
At 1 January 2018	-	315,689	173,500	169,062	-	658,251
Additions	-	9,788	43,450	65,048	-	118,286
At 31 December 2018	-	325,477	216,950	234,110	-	776,537
Depreciation:						
At 1 January 2018	-	274,126	135,578	149,285	-	558,989
Provided in the period	-	8,041	26,066	15,487	-	49,594
At 31 December 2018	-	282,167	161,644	164,772	-	608,583
Net book value:					-	
At 31 December 2018	-	43,310	55,306	69,338	-	167,954

The Ministry of Housing allotted 5,001 square meters of land to the Authority in 2015 in Plot No 1816 at Bausher. The land is given free of cost for constructing office building for the Authority. As designated by the Ministry, the Authority cannot use the land for any other purpose, hence no value is recognised in the books.

In the opinion of the Management, there is no objective evidence that the above assets are impaired as at 31 December 2019 (2018: Nil).

Capital work in progress relates to implementation and support of business intelligence system and data warehouse.

Notes

(forming part of the financial statements)

6 Receivables and prepayments

	31 December 2019 RO	31 December 2018 RO
Financial assets:		
License fee receivable	57,652	19,816
Less: Allowance for expected credit losses (Note 6.1)	(53,152)	-
Total financial assets	4,500	19,816
Non-financial assets:		
Prepayments	61,269	19,448
Advances and others	124,536	50,788
Total non-financial assets	185,805	70,236
Total	190,305	90,052

6.1 Movement in allowance for expected credit losses

	31 December 2019 RO	31 December 2018 RO
At 1 January	-	-
Provided during the year	53,152	-
	53,152	-

At the reporting date, the trade receivables amounting to RO 4,500 (2018: RO 19,816) are neither past due nor impaired and estimated to be fully recoverable.

At the reporting date, the trade receivables amounting to RO 53,152 (2018: RO Nil) are impaired.

7 Cash and cash equivalents

	31 December 2019 RO	31 December 2018 RO
Cash in hand	958	1,499
Cash at bank	2,060,310	2,740,120
	2,061,268	2,741,619

8 Retained surplus fund

The retained surplus represents the cumulative amount of excess or deficit of income over expenses, which will be offset against future funding requirements in accordance with Article 55 of the Sector Law.

9 Other liabilities

The Authority purchased an office in Omni Business Centre, Muscat Hills in Oman, paying 20% down payment and remaining in 60 instalments of RO 39,406 per month payable over the period of 5 years. The management has discounted the instalments using a rate of 6.5% to reach at present value of the other liabilities.

Other liabilities are presented in the statement of financial position as follows:

	31 December 2019 RO	31 December 2018 RO
Current	365,919	-
Non-current	1,445,338	-
	1,811,257	-

Notes

(forming part of the financial statements)

9 Other liabilities (continued)

Movement in other liabilities:

	31 December 2019 RO	31 December 2018 RO
At 1 January 2019	-	
Liability created during the year	2,519,492	-
Interest expense for the year	62,184	-
Payment made during the year	(770,419)	-
At 31 December 2019	1,811,257	-

10 Employees' end of service benefits

	31 December 2019 RO	31 December 2018 RO
At 1 January 2019	129,653	109,947
Provided during the year	15,894	19,706
Paid during the year	(44,658)	-
At 31 December 2019	100,889	129,653

11 Accruals and other payables

	31 December 2019 RO	31 December 2018 RO
Accruals	585,379	370,294
Other payables	8,889	-
	594,268	370,294

12 Income from operations

Disaggregation of revenue from contracts with customers

The Authority's income from operations represents the income from license fee charged at a point in time in the following geographical region and service line.

a) Primary geographical region

	31 December 2019 RO	31 December 2018 RO
Sultanate of Oman	4,827,392	4,919,199

b) Service line

	31 December 2019 RO	31 December 2018 RO
License fee	4,827,392	4,919,199

13 Other income

	31 December 2019 RO	31 December 2018 RO
Fines and application Fees	96,844	216,745
Reimbursement of expenses	99,152	-
Bad debts recovered	20,828	-
	216,824	216,745

Notes

(forming part of the financial statements)

14 Salaries and employee related costs

	31 December 2019 RO	31 December 2018 RO
Salaries and allowances	2,401,185	2,322,442
Contribution to defined contribution plan	231,693	225,953
Other employee related costs	155,951	166,327
End of service benefits for expatriate employees (Note 10)	15,894	19,706
	2,804,723	2,734,428

15 General and administrative expenses

	31 December 2019 RO	31 December 2018 RO
Withholding tax borne by the Authority	147,123	-
Rent	132,840	135,165
Travelling and conveyance	109,585	108,103
Insurance	89,094	79,176
Advertisement and publicity	68,310	26,508
Allowance for expected credit losses	53,152	-
Utilities	25,449	11,366
Registration and renewal	20,545	1,674
Communications	16,634	17,224
Printing and stationery	12,606	10,027
Legal fees	8,623	-
Repairs and maintenance	3,723	2,428
Communication team events	-	49,563
Bad debts	-	20,828
Miscellaneous expenses	145,152	85,089
	832,836	547,151

16 Consultancy expenses

Consultancy expenses amounting to RO 1,085,090 (2018: RO 1,145,891) pertains to advisory services from different external consultants for efficient regulation of electricity and related water sector.

17 Income tax

The Authority is exempt from taxation as per Article 56 of the Sector Law (2018: Nil).

18 Related party transactions

The Authority enters into transactions in the normal course of business with the Chairman and key management personnel. These transactions are entered into at terms and conditions which management believes could be obtained on an arm's length basis from independent third parties.

The Government is not considered as a related party in view of the exemption from disclosure requirements set out in IFRS in relation to related party transactions and outstanding balances with Government that has control or joint control of, or significant influence over the Authority and an entity that is a related party of the same Government. The Authority has applied the exemptions in IAS 24:25 related to government entitities and only disclosed certain information to meet the disclosure requirements of IAS 24.

Key management includes the members of the Authority, which comprises of Chairman and directors.

Such transactions comprise key management personnel compensation as follows:

	31 December 2019 RO	31 December 2018 RO
Short term employment benefits	170,072	217,368
Pension fund contribution	31,860	6,372
	201,932	223,740

Notes

(forming part of the financial statements)

19 Financial instrument risk

Risk management objectives and policies

The Authority's financial assets include license fee receivable and cash and bank balances. Financial liabilities include other liabilities, accruals and other payables. Management believes that the fair values of the financial assets and liabilities approximate their carrying values.

The Authority is exposed to various risks in relation to financial instruments. The main types of risks are market risk, credit risk and liquidity risk. The Authority's risk management is carried out internally in accordance with the policies approved by the Members.

The most significant financial risks to which the Authority is exposed are described below.

19.1 Market risk analysis

The Authority is exposed to market risk through its use of financial instruments and specifically to currency risk, interest rate risk and certain other price risks, which result from both its operating and investing activities.

Foreign currency sensitivity

Currency risk is the risk that the value of a financial instrument will fluctuate due to changes in foreign exchange rates. The majority of the Authority's financial assets and financial liabilities are either denominated in Rial Omani or currency fixed against Rial Omani. Hence, management believes that there would not be a material impact on the surplus if these foreign currencies weaken or strengthen against the Rial Omani, with all other variables held constant.

Interest rate sensitivity

Interest rate risk is the risk that the value of a financial instrument will fluctuate due to changes in market interest rates. The Authority has balances with banks, which are interest bearing and exposed to changes in market interest rates, which is not expected to have a material impact on the financial statements.

19.2 Credit risk analysis

Credit risk is the risk of financial loss to the Authority if a licensee or counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Authority's receivables for licensees.

The Authority's maximum exposure to credit risk is limited to the carrying amount of financial assets recognised at the reporting date, as summarised below:

	31 December 2019 RO	31 December 2018 RO
Financial assets:		
Cash at bank	2,060,310	2,740,120
License fee receivable	4,500	19,816
	2,064,810	2,759,936

Credit risk on bank balances is limited as the cash balances are held with reputable local banks. Credit risk on license fee receivable is limited as the Authority manages credit risk with respect to license fee receivables by monitoring in accordance with defined policies and procedures.

License fee receivable

The Authority's exposure to credit risk is influenced mainly by the individual characteristics of each licensee. All licensees are based in Sultanate of Oman. The potential risk in respect of amounts receivable is limited to their carrying values as management regularly reviews these balances whose recoverability is in doubt.

Notes

(forming part of the financial statements)

19 Financial instrument risk (continued)

Risk management objectives and policies (continued)

19.2 Credit risk analysis (continued)

The table below summarises the maturities of the Authority's undiscounted financial assets at 31 December 2019.

	Less than 3 months RO	3 to 12 months RO	More than 1 year RO	Total RO
Financial assets:				
Gross license fee receivable	57,652	-	-	57,652
Allowance for expected credit loss	(53,152)	-	-	(53,152)
	4,500	-	-	4,500

The table below summarises the maturities of the Authority's undiscounted financial assets at 31 December 2018.

	Less than 3 months RO	3 to 12 months RO	More than 1 year RO	Total RO
Financial assets:				
License fee receivable	-	-	19,816	19,816
	-	-	19,816	19,816

19.3 Liquidity risk analysis

Liquidity risk is the risk that the Authority will not be able to meet its financial obligations as they fall due. The Authority's approach to managing liquidity is to ensure, as far as possible, that it will have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Authority's reputation.

Typically, the Authority ensures that it has sufficient cash on demand to meet expected operational expenses. This excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

The Authority's maximum exposure to liquidity risks is limited to the carrying amount of financial liabilities recognised at the reporting date, as summarised below:

	31 December 2019 RO	31 December 2018 RO
Financial liabilities:		
Other liabilities	1,811,257	-
Accruals and other payables	594,268	370,294
Employees' end of service benefits	100,889	129,653
	2,506,414	499,947

The table below summarises the maturities of the Authority's undiscounted financial liabilities at 31 December 2019, based on contractual payment dates and current market interest rates.

	Less than 3 months RO	3 to 12 months RO	More than 1 year RO	Total RO
Non-interest bearing:				
Other liabilities	179,994	185,925	1,445,338	1,811,257
Accruals and other payables	508,945	85,323	-	594,268
Employees' end of service benefits	-	-	100,889	100,889
	688,939	271,248	1,546,227	2,506,414

Notes

(forming part of the financial statements)

19 Financial instrument risk (continued)

Risk management objectives and policies (continued)

19.3 Liquidity risk analysis (continued)

The table below summarises the maturities of the Authority's undiscounted financial liabilities at 31 December 2018, based on contractual payment dates and current market interest rates.

	Less than 3 months RO	3 to 12 Months RO	More than 1 year RO	Total RO
Non-interest bearing:				
Accruals and other payables	-	370,294	-	370,294
Employees' end of service benefits	-	-	129,653	129,653
	-	370,294	129,653	499,947

20 Fair value measurement and fair value hierarchy

None of the Authority's financial instruments and non-financial assets and non-financial liabilities as at the reporting date are measured at fair value.

Management considers that the carrying amounts of financial assets and financial liabilities, which are stated at amortized cost, approximate their fair values.

21 Commitments and contingent liabilities

21.1 Contingent liabilities

As at 31 December 2019, there were no contingent liabilities (2018: RO Nil).

21.2 Legal commitments

At the reporting date, the Authority does not have any outstanding commitments (2018: RO Nil).

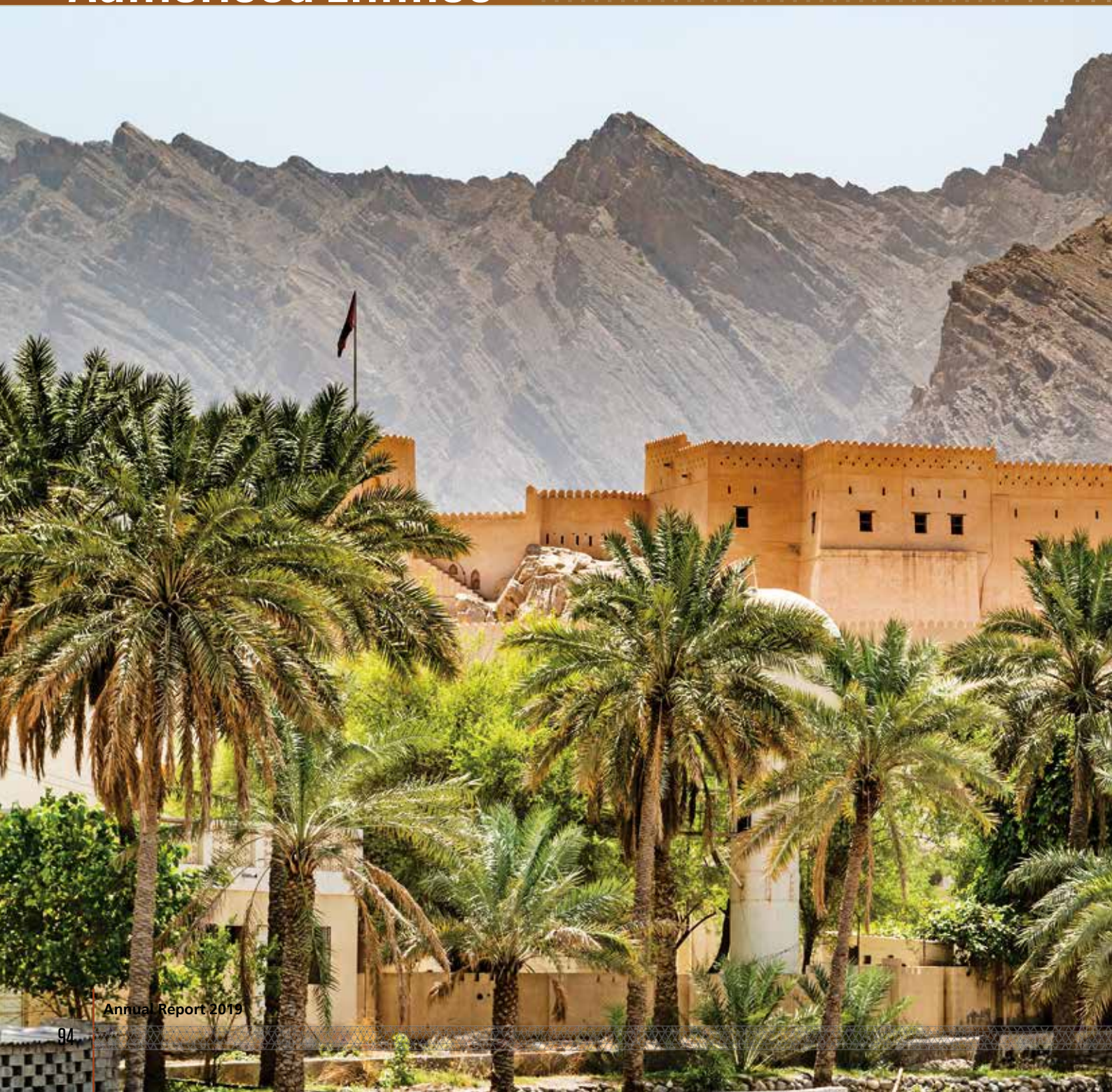
22 Non-adjusting events after the reporting period

The Covid 19 pandemic has resulted in a series of unprecedented measures being enforced by Global and Local Governments, which will significantly impact the business landscape of the Sultanate of Oman. At the time of signing of these financial statements, the rapidly evolving situation of the Covid-19 pandemic is expected to have a significant effect on the global economy and on the Authority itself. The Members are continuing to monitor, plan and act - whereas and as appropriate to this crisis in so far as it impacts the current and future obligations of the Authority.

However, it is the view of the management that the going concern basis of preparation remains appropriate for the Authority and that it has sufficient resources to meet its ongoing obligations and commitments.

Annex B

Authorised Entities



Licensees Holders:

Majan Electricity Company SAOC
Regulated Activities: Distribution and Supply of electricity to Premises

Mazoon Electricity Company SAOC
Regulated Activities: Distribution and Supply of electricity to Premises

Muscat Electricity Distribution Company SAOC
Regulated Activities: Distribution and Supply of electricity to Premises

Oman Electricity Transmission Company SAOC
Regulated Activity: Transmission and Dispatch of electricity

Rural Areas Electricity Company SAOC
Regulated Activities: Generation of electricity and Desalination of water, Transmission, Dispatch, Distribution and Supply of electricity, and Bulk Supply of Desalinated water to the Water Department.

Shinas Generating Company SAOC
Regulated Activity: Generation of electricity from its Production Facilities.

Al Rusail Power Company SAOC
Regulated Activity: Generation of electricity

United Power Company SAOC
Regulated Activity: Generation of electricity

Al Kamil Power Company SAOC
Regulated Activity: Generation of electricity

SMN Barka Power Company SAOC
Regulated Activities: Generation of electricity and Desalination of water

ACWA Power Barka SAOC
Regulated Activities: Generation of electricity and Desalination of Water

Sembcorp Salalah Power & Water Company SAOC
Regulated Activities: Generation of electricity and Desalination of water

Sohar Power Company SAOC
Regulated Activities: Generation of electricity and Desalination of water

Oman Power and Water Procurement company SAOC
Regulated Activities: Demand Forecasting; Capacity Procurement; Bulk Supply of electricity & water and Procurement of electricity and Desalinated water

Licensees Holders:

Ad Dhahirah Generating Company SAOC
Regulated Activity: Generation of electricity

Al Batinah Power Company SAOC
Regulated Activity: Generation of electricity

Al Suwadi Power Company SAOC
Regulated Activity: Generation of electricity

Phoenix Power Company SAOC
Regulated Activity : the Generation of electricity

Dhofar Power Company SAOC
Regulated Activity: Distribution and Supply of electricity to Premises

Dhofar Generating Company SAOC
Regulated Activity: Generation of electricity

Bahwan Astonfield Solar Power LLC
Regulated Activity: Generation of electricity (Renewable Energy)

Sharqiyah Desalination Company SAOG
Regulated Activity: Desalination of water from a Desalination Facility of a special Nature

Muscat City Desalination Company SAOC
Regulated Activity: Desalination of water from a Desalination Facility of a Special Nature.

Qurayyat Desalination SAOC
Regulated Activity: Desalination of water from a Desalination Facility of a Special Nature.

Musandam Power Company
Regulated Activity: Generation of electricity

Dhofar Desalination Company S.A.O.C
Regulated Activity : Desalination of Water from a Desalination Facility of a Special Nature located in Salalah

Qurayyat Desalination SAOC
Regulated Activity: Desalination of water from a Desalination Facility of a Special Nature.

Exemption Holders:

Sohar International Urea Chemical Industries SAOC Regulated Activities: Generation of electricity co-located with the Desalination of water in the same site.

Oman India Fertiliser Company SAOG
Regulated Activities: Generation of electricity related with Desalination of water.

Oman Cement Company SAOG
Regulated Activities: Generation, Distribution and Supply of electricity.

Barr Al Jissah Resort Company SAOC
Regulated Activity: Distribution of electricity.

Orpic Refineries LLC
Regulated Activities: Generation of electricity co-located with Desalination of water at the same site, and Distribution and Supply of electricity (at Mina Al Fahal site).Generation of electricity related with Desalination of water, and Transmission, Distribution and Supply of electricity (at Sohar site).

Oman LNG LLC
Regulated Activities: Generation of electricity related with Desalination of water and, Distribution and Supply of electricity.

Petroleum Development Oman LLC
Regulated Activities: Generation, Transmission, Distribution and Supply of electricity.

Occidental of Oman INC
Regulated Activities: Generation and Distribution of electricity.

Sohar Aluminium Company LLC
Regulated Activities: Generation of electricity co-located with Desalination of water, Transmission and Distribution of electricity.

Occidental Mukhaizna
Regulated Activities: Generation of electricity related with Desalination of water and Distribution of electricity.

Ministry of Defence
Regulated Activity: Generation of electricity for Sale to OPWPa

Oman Oil Company Exploration & Production
Regulated Activities: Generation of electricity co-located with the Desalination of water in the same site.

BP Exploration (Epsilon) Limited
Regulated Activities: Generation of electricity co-located with Desalination of water, and the Distribution and Transmission of electricity.

Daleel Petroleum LLC
Regulated Activity: Generation of electricity from its Production Facilities.

Annex c

Electricity Sector Statistics

Table 1: lectricity Customer Accounts by System, Company and Tariff Category : 2018 & 2019

2018 MWh	Main Interconnected System (MIS)								Rural System		Dhofar System		Total Oman	
	Muscat	% Total	Majan	% Total	Mazoon	% Total	Total MIS	% Total	RAEC	% Total	DPC	% Total		% Total
Residential	292,660	75.3%	169,543	70.9%	324,169	74.2%	786,372	73.9%	27,266	68.6%	88,362	77.0%	902,000	74.0%
(Non-CRT)Industrial	10	0.0%	375	0.2%	9	0.0%	394	0.0%	33	0.1%	12	0.0%	439	0.0%
(Non-CRT)Commercial	82,885	21.3%	54,933	23.0%	91,954	21.1%	229,772	21.6%	7,921	19.9%	20,203	17.6%	257,896	21.2%
Agriculture & Fisheries	209	0.1%	4,197	1.8%	3,997	0.9%	8,403	0.8%	564	1.4%	116	0.1%	9,083	0.7%
Hotels / Tourism	330	0.1%	391	0.2%	115	0.0%	836	0.1%	68	0.2%	155	0.1%	1,059	0.1%
(Non-CRT)Government	7,459	1.9%	8,088	3.4%	13,755	3.1%	29,302	2.8%	3,420	8.6%	4,923	4.3%	37,645	3.1%
Ministry of Defence	79	0.0%	76	0.0%	52	0.0%	207	0.0%	126	0.3%	108	0.1%	441	0.0%
(CRT)Commercial	3,890	1.0%	845	0.4%	1,491	0.3%	6,226	0.6%	114	0.3%	573	0.5%	6,913	0.6%
(CRT)Commercial	858	0.2%	567	0.2%	1,158	0.3%	2,583	0.2%	237	0.6%	315	0.3%	3,135	0.3%
(CRT)Industrial	168	0.0%	224	0.1%	74	0.0%	466	0.0%	24	0.1%	55	0.0%	545	0.0%
2018 Total	388,548	100.0%	239,239	100.0%	436,774	100.0%	1,064,561	100.0%	39,773	100.0%	114,822	100.0%	1,219,156	100.0%
% of Oman		34.4%		28.3%		25.6%		88.3%		3.2%		8.5%		100.0%

2019 MWh	Main Interconnected System (MIS)								Rural System		Dhofar System		Total Oman	
	Muscat	% Total	Majan	% Total	Mazoon	% Total	Total MIS	% Total	RAEC	% Total	DPC	% Total		% Total
Residential	304,710	75.0%	177,421	70.7%	336,650	73.6%	818,781	73.5%	28,465	68.4%	93,100	76.8%	940,346	73.6%
(Non-CRT)Industrial	6	0.0%	390	0.2%	10	0.0%	406	0.0%	37	0.1%	10	0.0%	453	0.0%
(Non-CRT)Commercial	88,252	21.7%	58,101	23.2%	99,360	21.7%	245,713	22.0%	8,443	20.3%	21,512	17.8%	275,668	21.6%
Agriculture & Fisheries	227	0.1%	4,317	1.7%	4,184	0.9%	8,728	0.8%	595	1.4%	121	0.1%	9,444	0.7%
Hotels / Tourism	506	0.1%	403	0.2%	134	0.0%	1,043	0.1%	68	0.2%	386	0.3%	1,497	0.1%
(Non-CRT)Government	7,358	1.8%	8,400	3.3%	14,029	3.1%	29,787	2.7%	3,555	8.5%	4,959	4.1%	38,301	3.0%
Ministry of Defence	77	0.0%	78	0.0%	125	0.0%	280	0.0%	81	0.2%	130	0.1%	491	0.0%
(CRT)Commercial	3,630	0.9%	873	0.3%	1,705	0.4%	6,208	0.6%	111	0.3%	607	0.5%	6,926	0.5%
CRT/Government	1,333	0.3%	593	0.2%	1,155	0.3%	3,081	0.3%	207	0.5%	309	0.3%	3,597	0.3%
(CRT)Industrial	175	0.0%	224	0.1%	76	0.0%	475	0.0%	24	0.1%	56	0.0%	555	0.0%
2019 Total	406,274	100.0%	250,800	100.0%	457,428	100.0%	1,114,502	100.0%	41,586	100.0%	121,190	100.0%	1,277,278	100.0%
% of Oman		31.8%		19.6%		35.8%		87.3%		3.3%		9.5%		100.0%
Net Change in MWh	17,726		11,561		20,654		49,941		1,813		6,368		58,122	
Annual % Change	4.6%		4.8%		4.7%		4.7%			4.6%		5.5%		4.8%

Table 2: Electricity Supplied to Customers by System, Company and Tariff Category : 2018 & 2019

2018 Accounts	Main Interconnected System (MIS)								Rural System		Dhofar System		Total Oman	
	Muscat	% Total	Majan	% Total	Mazoon	% Total	Total MIS	% Total	RAEC	% Total	DPC	% Total		% Total
Residential	5,265,627	45.6%	3,201,073	33.7%	5,261,044	61.3%	13,727,744	46.3%	450,942	42.0%	1,147,154	40.2%	15,325,840	45.7%
(Non-CRT)Industrial	887	0.0%	11,581	0.1%	216	0.0%	12,684	0.0%	599	0.1%	828	0.0%	14,111	0.0%
(Non-CRT)Commercial	1,219,549	10.6%	616,505	6.5%	676,422	7.9%	2,512,476	8.5%	96,370	9.0%	310,298	10.9%	2,919,143	8.7%
Agriculture & Fisheries	9,381	0.1%	170,730	1.8%	224,374	2.6%	404,485	1.4%	90,169	8.4%	25,783	0.9%	520,437	1.6%
Hotels / Tourism	220,722	1.9%	28,615	0.3%	34,767	0.4%	284,104	1.0%	29,080	2.7%	25,390	0.9%	338,574	1.0%
(Non-CRT)Government	398,062	3.4%	312,842	3.3%	403,900	4.7%	1,114,804	3.8%	121,014	11.3%	187,480	6.6%	1,423,298	4.2%
Ministry of Defence	84,495	0.7%	18,100	0.2%	222,419	2.6%	325,014	1.1%	41,195	3.8%	109,498	3.8%	475,708	1.4%
(CRT)Commercial	2,728,301	23.6%	806,299	8.5%	994,475	11.6%	4,529,075	15.3%	52,413	4.9%	357,640	12.5%	4,939,128	14.7%
(CRT)Commercial	1,198,361	10.4%	299,110	3.1%	639,229	7.5%	2,136,701	7.2%	97,516	9.1%	224,287	7.9%	2,458,504	7.3%
(CRT)Industrial	412,651	3.6%	4,042,327	42.5%	121,916	1.4%	4,576,894	15.4%	93,651	8.7%	462,200	16.2%	5,132,745	15.3%
2018 Total	11,538,036	100.0%	9,507,183	100.0%	8,578,761	100.0%	29,623,980	100.0%	1,072,950	100.0%	2,850,557	100.0%	33,547,488	100.0%
% of Oman		34.4%		28.3%		25.6%		88.3%		3.2%		8.5%		100.0%

2019 Accounts	Main Interconnected System (MIS)								Rural System		Dhofar System		Total Oman	
	Muscat	% Total	Majan	% Total	Mazoon	% Total	Total MIS	% Total	RAEC	% Total	DPC	% Total		% Total
Residential	5,100,804	44.3%	3,034,427	32.6%	5,180,952	58.9%	13,316,183	45.0%	451,612	41.0%	1,291,628	42.0%	15,059,422	44.6%
(Non-CRT)Industrial	1,132	0.0%	26,714	0.3%	127	0.0%	27,973	0.1%	(185)	0.0%	480	0.0%	28,268	0.1%
(Non-CRT)Commercial	1,173,358	10.2%	562,682	6.0%	811,102	9.2%	2,547,142	8.6%	94,689	8.6%	307,159	10.0%	2,948,990	8.7%
Agriculture & Fisheries	12,101	0.1%	169,777	1.8%	256,458	2.9%	438,335	1.5%	91,261	8.3%	25,722	0.8%	555,319	1.6%
Hotels / Tourism	248,772	2.2%	29,367	0.3%	41,945	0.5%	320,085	1.1%	29,528	2.7%	47,160	1.5%	396,772	1.2%
(Non-CRT)Government	383,434	3.3%	284,751	3.1%	362,853	4.1%	1,031,039	3.5%	102,501	9.3%	284,043	9.2%	1,417,583	4.2%
Ministry of Defence	92,140	0.8%	18,752	0.2%	220,075	2.5%	330,967	1.1%	41,329	3.8%	107,019	3.5%	479,315	1.4%
(CRT)Commercial	2,601,931	22.6%	955,031	10.3%	1,139,389	13.0%	4,696,350	15.9%	54,688	5.0%	372,081	12.1%	5,123,119	15.2%
CRT/Government	1,482,676	12.9%	302,367	3.2%	666,245	7.6%	2,451,287	8.3%	119,711	10.9%	152,649	5.0%	2,723,647	8.1%
(CRT)Industrial	410,845	3.6%	3,929,760	42.2%	118,802	1.4%	4,459,407	15.1%	116,455	10.6%	487,746	15.9%	5,063,609	15.0%
2019 Total	11,507,193	100.0%	9,313,628	100.0%	8,797,948	100.0%	29,618,769	100.0%	1,101,589	100.0%	3,075,685	100.0%	33,796,043	100.0%
% of Oman		34.0%		27.6%		26.0%		87.6%		3.3%		9.1%		100.0%
Net Change in Accounts	(30,843)		(193,555)		219,187		(5,212)		28,639		225,128		248,555	
Annual % Change		-0.3%		-2.0%		2.6%		0.0%		2.7%		7.9%		0.7%

Table 3: Customer Accounts, MWh Supplied and MWh per Account by System,Company and Tariff Category 2019

Main Interconnected System (MIS)		Main Interconnected System (MIS)				Rural System	Dhofar System	Total Oman
Tariff Category	Item	Muscat	Majan	Mazoon	Total MIS	RAEC	DPC	
Residential	Accounts	304,710	177,421	336,650	818,781	28,465	93,100	940,346
	MWh Supplied	5,100,804	3,034,427	5,180,952	13,316,183	451,612	1,291,628	15,059,422
	MWh Supplied per Accounts	17	17	15	16	16	14	16
Industrial	Accounts	6	390	10	406	37	10	453
	MWh Supplied	1,132	26,714	127	27,973	185-	480	28,268
	MWh Supplied per Accounts	189	68	13	69	5-	48	62
Commercial	Accounts	88,252	58,101	99,360	245,713	8,443	21,512	275,668
	MWh Supplied	1,173,358	562,682	811,102	2,547,142	94,689	307,159	2,948,990
	MWh Supplied per Accounts	13	10	8	10	11	14	11
Agriculture & Fisheries	Accounts	227	4,317	4,184	8,728	595	121	9,444
	MWh Supplied	12,101	169,777	256,458	438,335	91,261	25,722	555,319
	MWh Supplied per Accounts	53	39	61	50	153	213	59
Hotels / Tourism	Accounts	506	403	134	1,043	68	386	1,497
	MWh Supplied	248,772	29,367	41,945	320,085	29,528	47,160	396,772
	MWh Supplied per Accounts	492	73	313	307	434	122	265
Government	Accounts	7,358	8,400	14,029	29,787	3,555	4,959	38,301
	MWh Supplied	383,434	284,751	362,853	1,031,039	102,501	284,043	1,417,583
	MWh Supplied per Accounts	52	34	26	35	29	57	37
Ministry of Defence	Accounts	77	78	125	280	81	130	491
	MWh Supplied	92,140	18,752	220,075	330,967	41,329	107,019	479,315
	MWh Supplied per Accounts	1,197	240	1,761	1,182	510	823	976
CRT/Commercial	Accounts	3,630	873	1,705	6,208	111	607	6,926
	MWh Supplied	2,601,931	955,031	1,139,389	4,696,350	54,688	372,081	5,123,119
	MWh Supplied per Accounts	717	1,094	668	756	493	613	740
CRT/Government	Accounts	1,333	593	1,155	3,081	207	309	3,597
	MWh Supplied	1,482,676	302,367	666,245	2,451,287	119,711	152,649	2,723,647
	MWh Supplied per Accounts	1,112	510	577	796	578	494	757
(CRT)Industrial	Accounts	175	224	76	475	24	56	555
	MWh Supplied	410,845	3,929,760	118,802	4,459,407	116,455	487,746	5,063,609
	MWh Supplied per Accounts	2,348	17,544	1,563	9,388	4,852	8,710	9,124
Total Customer Accounts in 2019		406,274	250,800	457,428	1,114,502	41,586	121,190	1,277,278
Total MWh Supplied in 2019		11,507,193	9,313,628	8,797,948	29,618,769	1,101,589	3,075,685	33,796,043
MWh Supplied per Account in 2019		28.3	37.1	19.2	26.6	26.5	25.4	26.5
% Change MWh per Account from 2018		-4.6%	-6.6%	-2.1%	-4.9%	-4.5%	2.2%	-3.8%

Table 4: Electriciy Supply & Registered Accounts by Region & Company : 2018 and 2019

2018

Region	Company	MWh Supplied	% Oman	Accounts	% Oman	MWh Supply per Account
Al Dahirah	Majan	1,122,392	3.3%	56,477	4.6%	19.9
Al Sharquia North	Mazoon	1,104,740	3.3%	78,036	6.4%	14.2
Al Sharquia South	Mazoon	1,365,723	4.1%	74,475	6.1%	18.3
Al Wusta	RAEC	429,462	1.3%	16,893	1.4%	25.4
Burami	Majan	743,703	2.2%	38,531	3.2%	19.3
Dakhliyah	Mazoon	2,492,771	7.4%	125,443	10.3%	19.9
Dhofar	DPC	2,850,557	8.5%	114,822	9.4%	24.8
Dhofar	RAEC	246,958	0.7%	7,554	0.6%	32.7
Musandam	RAEC	396,531	1.2%	15,326	1.3%	25.9
Muscat	Muscat	11,538,036	34.4%	388,548	31.9%	29.7
North Batinah	Majan	7,641,087	22.8%	144,231	11.8%	53.0
South Batinah	Mazoon	3,615,528	10.8%	158,820	13.0%	22.8
Sultanate totals 2018		33,547,488		1,219,156		27.5

2019

Region	Company	MWh Supplied	% Oman	Accounts	% Oman	MWh Supply per Account
Al Dahirah	Majan	1,103,327	3.3%	58,949	4.6%	18.7
Al Sharquia North	Mazoon	1,137,593	3.4%	80,519	6.3%	14.1
Al Sharquia South	Mazoon	1,387,352	4.1%	76,941	6.0%	18.0
Al Wusta	RAEC	434,650	1.3%	15,515	1.2%	28.0
Burami	Majan	708,031	2.1%	39,310	3.1%	18.0
Dakhliyah	Mazoon	2,512,871	7.4%	131,224	10.3%	19.1
Dhofar	DPC	3,075,685	9.1%	121,190	9.5%	25.4
Dhofar	RAEC	239,806	0.7%	7,904	0.6%	30.3
Musandam	RAEC	387,169	1.1%	15,711	1.2%	24.6
Muscat	Muscat	11,507,193	34.0%	406,274	31.8%	28.3
North Batinah	Majan	7,502,271	22.2%	152,541	11.9%	49.2
South Batinah	Mazoon	3,760,132	11.1%	168,744	13.2%	22.3
SEZAD	RAEC	39,964	0.1%	2,456	0.2%	16.3
Change from 2018		33,796,043		1,277,278		26.5
Change from 2019		0.7%		4.8%		-3.8%

Table 5: Electricity Production by System: 2016 to 2019

2016 **Electricity Production**

System	Gross MWh	% Year	Net MWh	% Year
Main Interconnected System	30,039,357	87.8%	29,548,736	87.9%
Rural Systems	940,008	2.7%	994,557	3.0%
Dhofar Power System	3,248,297	9.5%	3,057,168	9.1%
Total for 2016	34,227,662		33,600,461	

2017 **Electricity Production**

System	Gross MWh	% Year	Net MWh	% Year
Main Interconnected System	31,783,535	88.0%	31,351,002	87.9%
Rural Systems	1,038,319	2.9%	1,091,702	3.1%
Dhofar Power System	3,304,103	9.1%	3,223,947	9.0%
Total for 2017	36,125,957		35,666,650	

2018 **Electricity Production**

System	Gross MWh	% Year	Net MWh	% Year
Main Interconnected System	33,216,219	88.1%	32,857,805	88.3%
Rural Systems	1,129,624	3.0%	1,215,535	3.3%
Dhofar Power System	3,368,464	8.9%	3,143,319	8.4%
Total for 2018	37,714,307		37,216,658	

2019 **Electricity Production**

System	Gross MWh	% Year	Net MWh	% Year
Main Interconnected System	33,462,713	87.3%	32,791,342	87.4%
Rural Systems	1,204,572	3.1%	1,305,345	3.5%
Dhofar Power System	3,664,782	9.6%	3,416,649	9.1%
Total for 2019	38,332,067		37,513,337	

Table 6: Electricity Production by System and Company: 2018 & 2011

A

2018	Electricity Production			
	Gross MWh	Oman %	Net MWh	Oman %
Main Interconnected System				
ACWA Power Barka SAOG	2,643,764	7.0%	2,454,934	6.6%
AD'Dhahira Generating Company SAOC	141,275	0.4%	137,841	0.4%
Al Batinah Power Company SAOC	4,958,490	13.1%	4,803,603	12.9%
Al Ghubrah Power & Desalination Company SAOC	1,346,105	3.6%	1,235,819	3.3%
Al Kamil Power Company SAOC	387,903	1.0%	383,741	1.0%
Al Rusail Power Company SAOC	2,181,114	5.8%	2,164,054	5.8%
Al Suwadi Power Company SAOC	4,940,972	13.1%	4,821,049	13.0%
Phoenix Power Company SAOC	8,453,959	22.4%	8,453,804	22.7%
PWP Othe Purchases	-	0.0%	671,397	1.8%
Shinas Generating Company	121,147	0.3%	102,241	0.3%
SMN Barka Power Company SAOC	2,917,906	7.7%	2,762,225	7.4%
Sohar Power Company SAOG	3,790,294	10.1%	3,543,035	9.5%
United Power Company SAOC	1,192,466	3.2%	1,184,555	3.2%
Wadi Al Jizzi Power Company SAOC	140,825	0.4%	139,508	0.4%
MIS sub-total	33,216,219	88.1%	32,857,805	88.3%

B

2018	Electricity Production			
	Gross MWh	Oman %	Net MWh	Oman %
Rural Systems				
Bahwan Astonfield Solar Power LLC	558	0.0%	551	0.0%
'Musandam Power Company SAOC	354,022	0.9%	343,718	0.9%
RAEC Pruchases from PDO	-	0.0%	140,679	0.4%
RAEC SAOC	775,044	2.1%	730,586	2.0%
Rural Systems sub-total	1,129,624	3.0%	1,215,535	3.3%

C

2018	Electricity Production			
	Gross MWh	Oman %	Net MWh	Oman %
Dhofar Power System				
Dhofar Generating Company SAOC	1,723,108	4.6%	1,674,273	4.5%
PWP Other Purchases	-	0.0%	-2,645	0.0%
SembCorp Salalah Power & Water Company SAOC	1,645,356	4.4%	1,471,691	4.0%
Dhofar System sub-total	3,368,464	8.9%	3,143,319	8.4%
Totals for 2018	37,714,307	%100	37,216,658	%100

Table 6: Electricity Production by System and Company: 2018 & 2019

A

2019	Electricity Production			
	Gross MWh	Oman %	Net MWh	Oman %
Main Interconnected System				
ACWA Power Barka SAOG	2,022,523	5.3%	1,909,228	5.1%
AD'Dhahira Generating Company SAOC	5,619,844	14.9%	5,447,405	14.6%
Al Batinah Power Company SAOC	1,471,930	3.9%	1,389,327	3.7%
Al Kamil Power Company SAOC	54,617	0.1%	54,120	0.1%
Al Rusail Power Company SAOC	1,535,994	4.1%	1,524,001	4.1%
Al Suwadi Power Company SAOC	4,498,112	11.9%	4,399,391	11.8%
Phoenix Power Company SAOC	8,125,612	21.5%	7,939,129	21.3%
PWP Othe Purchases	-	0.0%	588,450	1.6%
Shinas Generating Company	5,406,892	14.3%	5,109,617	13.7%
SMN Barka Power Company SAOC	1,782,575	4.7%	1,648,254	4.4%
Sohar Power Company SAOG	2,160,846	5.7%	2,006,007	5.4%
United Power Company SAOC	783,768	2.1%	776,414	2.1%
MIS sub-total	33,462,713	87.3%	32,791,342	87.4%
% change from 2018	0.7%		-0.2%	

B

2019	Electricity Production			
	Gross MWh	Oman %	Net MWh	Oman %
Rural Systems				
Bahwan Astonfield Solar Power LLC	553	0.0%	549	0.0%
Masdar company	8,690	0.0%	8,531	0.0%
'Musandam Power Company SAOC	405,775	1.1%	396,089	1.1%
RAEC Pruchases from PDO	-	0.0%	153,501	0.4%
RAEC SAOC	789,553	%2.1	746,676	%2.0
Rural Systems sub-total	1,204,572	%3.2	1,305,345	%3.5
% change from 2018	%6.6		%7.4	

C

2019	Electricity Production			
	Gross MWh	Oman %	Net MWh	Oman %
Dhofar Power System				
Dhofar Generating Company SAOC	1,674,023	4.4%	1,625,659	4.3%
PWP Other Purchases	-	0.0%	24,551	-0.1%
SembCorp Salalah Power & Water Company SAOC	1,990,758	5.2%	1,815,541	4.8%
Dhofar System sub-total	3,664,782	9.6%	3,416,649	9.1%
% change from 2018	%8.8		%8.7	
Totals for 2019	38,332,067	100%	37,513,337	100%
Actual change from 2018	617,759		296,678	
% change from 2018	1.6%		0.8%	

Table 7: Electricity Production by Region: 2019 & 2018

2018

Region	MWh Gross	% Oman	MWh Net	% Oman
Al Dahirah	141,441	0.4%	138,004	0.4%
Al Sharqiya	8,925,656	23.7%	8,916,962	24.0%
Al Wusta	321,416	0.9%	448,160	1.2%
Dakhliyah	1,192,466	3.2%	1,184,555	3.2%
Dhofar	3,653,281	9.7%	3,447,711	9.3%
Musandam	439,430	1.2%	426,565	1.1%
Muscat	3,527,219	9.4%	3,414,199	9.2%
North Batinah	9,010,756	23.9%	9,202,294	24.7%
South Batinah	10,502,642	27.8%	10,038,208	27.0%
Total for 2018	37,714,307		37,216,658	

2019

Region	MWh Gross	% Oman	MWh Net	% Oman
Al Dahirah	5,619,844	14.7%	5,447,405	14.5%
Al Sharqiya	8,262,602	21.6%	8,071,463	21.5%
Al Wusta	530,887	1.4%	549,710	1.5%
Dakhliyah	783,768	2.0%	776,414	2.1%
Dhofar	3,819,564	10.0%	3,632,329	9.7%
Musandam	436,530	1.1%	424,719	1.1%
Muscat	1,535,994	4.0%	1,526,530	4.1%
North Batinah	9,039,668	23.6%	9,127,895	24.3%
South Batinah	8,303,210	21.7%	7,956,873	21.2%
Sultanate Totals 2019	38,332,067		37,513,337	
Change from 2018 (%)	1.6%		0.8%	

Note: Net electricity production includes PWP and RAEC purchases from entities in each Region

Table 8: Electricity Production by System and Company: 2018 & 2019

2018 **Electricity Production**

Region	Company	Gross MWh	Oman %	Net MWh	Oman %
Al Dahirah	RAEC SAOC	166	0.0%	163	0.0%
	AD'Dhahira Generating Company SAOC	141,275	0.4%	137,841	0.4%
Al Sharqiya	Al Kamil SAOG	387,903	1.0%	383,741	1.0%
	Phoenix Power Company SAOC	8,453,959	22.4%	8,453,804	22.7%
	PWP other purchases	-	0.0%	180	0.0%
	RAEC SAOC	83,794	0.2%	79,238	0.2%
Al Wusta	PWP other purchases	-	0.0%	42,983	0.1%
	RAEC purchases from PDO	-	0.0%	111,155	0.3%
	RAEC SAOC	321,416	0.9%	294,021	0.8%
Dakhliyah	UPC Manah SAOG	1,192,466	3.2%	1,184,555	3.2%
Dhofar	Bahwan Astonfield Solar Power LLC	558	0.0%	551	0.0%
	DGC SAOC	1,723,108	4.6%	1,674,273	4.5%
	PWP other purchases	-	0.0%	2,645	0.0%
	RAEC purchases from PDO	-	0.0%	29,523	0.1%
	RAEC SAOC	284,259	0.8%	274,318	0.7%
	SembcorpSalalah SAOC	1,645,356	4.4%	1,471,691	4.0%
Musandam	Musandam Power Company SAOC	354,022	0.9%	343,718	0.9%
	RAEC SAOC	85,409	0.2%	82,847	0.2%
Muscat	Al Ghubrah SAOC	1,346,105	3.6%	1,235,819	3.3%
	Al Rusail SAOG	2,181,114	5.8%	2,164,054	5.8%
	PWP other purchases	-	0.0%	14,326	0.0%
North Batinah	Al Batinah PC SAOC	4,958,490	13.1%	4,803,603	12.9%
	PWP other purchases	-	0.0%	613,907	1.6%
	Shinas Generating Company	121,147	0.3%	102,241	0.3%
	Sohar Power Company SAOG	3,790,294	10.1%	3,543,035	9.5%
	Wadi Jizzi SAOC	140,825	0.4%	139,508	0.4%
South Batinah	ACWA Power Barka SAOG	2,643,764	7.0%	2,454,934	6.6%
	Al Suwadi PC SAOC	4,940,972	13.1%	4,821,049	13.0%
	SMN Barka SAOG	2,917,906	7.7%	2,762,225	7.4%
Sultanate Totals 2018		37,714,307		37,216,658	

Table 8: Electricity Production by System and Company: 2018 & 2019

2019		Electricity Production			
Region	**Company**	**Gross MWh**	**Oman %**	**Net MWh**	**Oman %**
Al Dahirah	AD'Dhahira Generating Company SAOC	5,619,844	14.7%	5,447,405	14.5%
Al Sharqiya	Al Kamil SAOG	54,617	0.1%	54,120	0.1%
	Phoenix Power Company SAOC	8,125,612	21.2%	7,939,129	21.2%
	PWP other purchases	-	0.0%	123	0.0%
	RAEC SAOC	82,373	0.2%	78,091	0.2%
Al Wusta	PWP other purchases		0.0%	37,145	-0.1%
	RAEC purchases from PDO		0.0%	121,330	0.3%
	RAEC SAOC	530,887	1.4%	499,360	1.3%
Dakhliyah	UPC Manah SAOG	783,768	2.0%	776,414	2.1%
Dhofar	Bahwan Astonfield Solar Power LLC	553	0.0%	549	0.0%
	DGC SAOC	1,674,023	4.4%	1,625,659	4.3%
	PWP other purchases	8,690	0.0%	8,531	0.0%
	RAEC purchases from PDO	-	0.0%	24,551	-0.1%
	RAEC SAOC		0.0%	32,171	0.1%
	SembcorpSalalah SAOC	145,539	0.4%	140,595	0.4%
Musandam	Musandam Power Company SAOC	1,990,758	5.2%	1,815,541	4.8%
	RAEC purchases from PDO	405,775	1.1%	396,089	1.1%
	RAEC SAOC	30,755	0.1%	28,630	0.1%
Muscat	Al Ghubrah SAOC	1,535,994	4.0%	1,524,001	4.1%
	Al Rusail SAOG	-	0.0%	2,529	0.0%
	PWP other purchases	1,471,930	3.8%	1,389,327	3.7%
North Batinah	Al Batinah PC SAOC	-	0.0%	622,944	1.7%
	PWP other purchases	5,406,892	14.1%	5,109,617	13.6%
	Shinas Generating Company	2,160,846	5.6%	2,006,007	5.3%
	Sohar Power Company SAOG	2,022,523	5.3%	1,909,228	5.1%
	Wadi Jizzi SAOC	4,498,112	11.7%	4,399,391	11.7%
South Batinah	ACWA Power Barka SAOG	1,782,575	4.7%	1,648,254	4.4%
	Al Suwadi PC SAOC	4,940,972	13.7%	4,821,049	13.5%
	SMN Barka SAOG	2,917,906	8.1%	2,762,225	7.7%
Sultanate Totals 2019		38,332,067		37,513,337	
Change from 2018 (%)		1.6%		0.8%	

Table 9-1: Monthly Electricity Production by System: MIS 2016 to 2019

2016 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
MIS	Jan-16	1,697	5.6%	1,614	5.5%
MIS	Feb-16	1,642	5.5%	1,561	5.3%
MIS	Mar-16	2,016	6.7%	1,928	6.5%
MIS	Apr-16	2,257	7.5%	2,165	7.3%
MIS	May-16	2,981	9.9%	3,113	10.5%
MIS	Jun-16	3,115	10.4%	3,275	11.1%
MIS	Jul-16	3,464	11.5%	3,329	11.3%
MIS	Aug-16	3,379	11.2%	3,227	10.9%
MIS	Sep-16	2,870	9.6%	2,856	9.7%
MIS	Oct-16	2,635	8.8%	2,666	9.0%
MIS	Nov-16	2,070	6.9%	1,996	6.8%
MIS	Dec-16	1,913	6.4%	1,826	6.2%
2016 Totals		30,039.4		29,555.7	

2017 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
MIS	Jan-17	1,854	5.8%	1,772	5.7%
MIS	Feb-17	1,642	5.2%	1,568	5.0%
MIS	Mar-17	2,172	6.8%	2,088	6.7%
MIS	Apr-17	2,704	8.5%	2,591	8.3%
MIS	May-17	3,324	10.5%	3,310	10.6%
MIS	Jun-17	3,482	11.0%	3,500	11.2%
MIS	Jul-17	3,563	11.2%	3,588	11.4%
MIS	Aug-17	3,309	10.4%	3,353	10.7%
MIS	Sep-17	3,061	9.6%	3,094	9.9%
MIS	Oct-17	2,856	9.0%	2,831	9.0%
MIS	Nov-17	2,144	6.7%	2,055	6.6%
MIS	Dec-17	1,672	5.3%	1,600	5.1%
2017 Totals		31,783.5		31,351.0	

Table 9-2: Monthly Electricity Production by System: MIS 2016 to 2019

2018 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
MIS	Jan-18	1,739	5.2%	1,666	5.1%
MIS	Feb-18	1,736	5.2%	1,650	5.0%
MIS	Mar-18	2,252	6.8%	2,174	6.6%
MIS	Apr-18	2,773	8.3%	2,705	8.2%
MIS	May-18	3,275	9.9%	3,390	10.3%
MIS	Jun-18	3,500	10.5%	3,679	11.2%
MIS	Jul-18	3,765	11.3%	3,713	11.3%
MIS	Aug-18	3,589	10.8%	3,509	10.7%
MIS	Sep-18	3,117	9.4%	3,147	9.6%
MIS	Oct-18	3,039	9.1%	2,963	9.0%
MIS	Nov-18	2,399	7.2%	2,327	7.1%
MIS	Dec-18	2,031	6.1%	1,935	5.9%
2018 Totals		33,216.2		32,857.8	

2019 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
MIS	Jan-19	1,994.1	6.0%	1,909.1	5.8%
MIS	Feb-19	1,770.9	5.3%	1,685.0	5.1%
MIS	Mar-19	2,101.7	6.3%	2,008.2	6.1%
MIS	Apr-19	2,636.9	7.9%	2,532.3	7.7%
MIS	May-19	3,296.9	9.9%	3,310.5	10.1%
MIS	Jun-19	3,784.7	11.3%	3,751.4	11.4%
MIS	Jul-19	3,786.1	11.3%	3,749.4	11.4%
MIS	Aug-19	3,554.3	10.6%	3,545.0	10.8%
MIS	Sep-19	3,367.6	10.1%	3,334.8	10.2%
MIS	Oct-19	3,185.2	9.5%	3,084.0	9.4%
MIS	Nov-19	2,158.9	6.5%	2,085.2	6.4%
MIS	Dec-19	1,825.3	5.5%	1,796.4	5.5%
2019 Totals		33,462.7		32,791.3	

Table 9-3: Monthly Electricity Production by System: MIS 2016 to 2019

2016 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Rural Systems	Jan-16	48.6	5.2%	50.3	5.1%
Rural Systems	Feb-16	48.0	5.1%	49.9	5.0%
Rural Systems	Mar-16	69.1	7.3%	72.9	7.3%
Rural Systems	Apr-16	76.3	8.1%	79.6	8.0%
Rural Systems	May-16	101.1	10.8%	107.7	10.8%
Rural Systems	Jun-16	99.6	10.6%	105.4	10.6%
Rural Systems	Jul-16	96.6	10.3%	102.3	10.3%
Rural Systems	Aug-16	94.6	10.1%	98.8	9.9%
Rural Systems	Sep-16	94.7	10.1%	99.0	10.0%
Rural Systems	Oct-16	86.2	9.2%	94.7	9.5%
Rural Systems	Nov-16	66.5	7.1%	70.0	7.0%
Rural Systems	Dec-16	58.9	6.3%	64.0	6.4%
2016 Totals		940.0		994.6	

2017 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Rural Systems	Jan-17	62.6	6.0%	58.1	5.3%
Rural Systems	Feb-17	56.3	5.4%	51.0	4.7%
Rural Systems	Mar-17	74.9	7.2%	83.7	7.7%
Rural Systems	Apr-17	92.6	8.9%	96.0	8.8%
Rural Systems	May-17	108.7	10.5%	114.3	10.5%
Rural Systems	Jun-17	112.6	10.8%	122.6	11.2%
Rural Systems	Jul-17	104.8	10.1%	107.8	9.9%
Rural Systems	Aug-17	103.1	9.9%	99.5	9.1%
Rural Systems	Sep-17	102.3	9.9%	113.9	10.4%
Rural Systems	Oct-17	97.9	9.4%	112.7	10.3%
Rural Systems	Nov-17	68.7	6.6%	73.4	6.7%
Rural Systems	Dec-17	53.8	5.2%	58.8	5.4%
2017 Totals		1,038.3		1,091.7	

Table 9-4: Monthly Electricity Production by System: MIS 2016 to 2019

2018 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Rural Systems	Jan-18	54.7	4.8%	55.6	4.6%
Rural Systems	Feb-18	55.2	4.9%	56.9	4.7%
Rural Systems	Mar-18	82.0	7.3%	85.9	7.1%
Rural Systems	Apr-18	102.6	9.1%	107.4	8.8%
Rural Systems	May-18	118.7	10.5%	126.8	10.4%
Rural Systems	Jun-18	116.0	10.3%	127.8	10.5%
Rural Systems	Jul-18	112.5	10.0%	124.2	10.2%
Rural Systems	Aug-18	113.2	10.0%	123.6	10.2%
Rural Systems	Sep-18	109.0	9.7%	118.9	9.8%
Rural Systems	Oct-18	105.2	9.3%	116.4	9.6%
Rural Systems	Nov-18	87.5	7.7%	95.2	7.8%
Rural Systems	Dec-18	73.0	6.5%	76.9	6.3%
2018 Totals		1,129.6		1,215.5	

2019 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Rural Systems	Jan-19	68.2	5.7%	72.8	5.6%
Rural Systems	Feb-19	63.9	5.3%	65.8	5.0%
Rural Systems	Mar-19	77.6	6.4%	80.1	6.1%
Rural Systems	Apr-19	97.8	8.1%	107.6	8.2%
Rural Systems	May-19	125.1	10.4%	131.6	10.1%
Rural Systems	Jun-19	124.1	10.3%	127.4	9.8%
Rural Systems	Jul-19	121.5	10.1%	145.6	11.2%
Rural Systems	Aug-19	119.9	10.0%	130.8	10.0%
Rural Systems	Sep-19	122.2	10.1%	130.7	10.0%
Rural Systems	Oct-19	114.5	9.5%	126.6	9.7%
Rural Systems	Nov-19	89.6	7.4%	98.2	7.5%
Rural Systems	Dec-19	80.2	6.7%	88.2	6.8%
2019 Totals		1,204.6		1,305.3	

Table 9-5: Monthly Electricity Production by System: DPS 2016 to 2019

2016 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Dhofar Power System	Jan-16	211.1	6.5%	196.1	6.4%
Dhofar Power System	Feb-16	197.8	6.1%	183.6	6.0%
Dhofar Power System	Mar-16	271.8	8.4%	256.8	8.4%
Dhofar Power System	Apr-16	308.7	9.5%	283.9	9.3%
Dhofar Power System	May-16	351.1	10.8%	332.7	10.9%
Dhofar Power System	Jun-16	311.1	9.6%	304.5	10.0%
Dhofar Power System	Jul-16	261.1	8.0%	243.2	8.0%
Dhofar Power System	Aug-16	277.7	8.5%	262.7	8.6%
Dhofar Power System	Sep-16	278.7	8.6%	263.8	8.6%
Dhofar Power System	Oct-16	279.5	8.6%	264.6	8.7%
Dhofar Power System	Nov-16	258.0	7.9%	237.3	7.8%
Dhofar Power System	Dec-16	241.7	7.4%	228.1	7.5%
2016 Totals		3,248.3		3,057.2	

2017 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Dhofar Power System	Jan-17	223.9	6.8%	208.9	6.5%
Dhofar Power System	Feb-17	206.2	6.2%	192.9	6.0%
Dhofar Power System	Mar-17	278.0	8.4%	262.3	8.1%
Dhofar Power System	Apr-17	319.9	9.7%	294.8	9.1%
Dhofar Power System	May-17	356.8	10.8%	337.2	10.5%
Dhofar Power System	Jun-17	364.5	11.0%	338.7	10.5%
Dhofar Power System	Jul-17	297.5	9.0%	285.1	8.8%
Dhofar Power System	Aug-17	297.2	9.0%	283.8	8.8%
Dhofar Power System	Sep-17	298.9	9.0%	281.8	8.7%
Dhofar Power System	Oct-17	272.1	8.2%	284.6	8.8%
Dhofar Power System	Nov-17	235.6	7.1%	253.6	7.9%
Dhofar Power System	Dec-17	153.4	4.6%	200.2	6.2%
2017 Totals		3,304.1		3,223.9	

Table 9-6: Monthly Electricity Production by System: DPS 2016 to 2019

2018 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Dhofar Power System	Jan-18	207.0	6.1%	193.5	6.2%
Dhofar Power System	Feb-18	227.8	6.8%	191.7	6.1%
Dhofar Power System	Mar-18	274.9	8.2%	256.9	8.2%
Dhofar Power System	Apr-18	324.1	9.6%	315.1	10.0%
Dhofar Power System	May-18	326.9	9.7%	312.4	9.9%
Dhofar Power System	Jun-18	321.3	9.5%	303.1	9.6%
Dhofar Power System	Jul-18	314.8	9.3%	296.7	9.4%
Dhofar Power System	Aug-18	278.5	8.3%	262.3	8.3%
Dhofar Power System	Sep-18	269.3	8.0%	252.7	8.0%
Dhofar Power System	Oct-18	287.5	8.5%	269.7	8.6%
Dhofar Power System	Nov-18	283.0	8.4%	265.2	8.4%
Dhofar Power System	Dec-18	253.4	7.5%	224.0	7.1%
2018 Totals		3,368.5		3,143.3	

2019 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Dhofar Power System	Jan-19	237.7	6.5%	219.1	6.4%
Dhofar Power System	Feb-19	230.8	6.3%	214.2	6.3%
Dhofar Power System	Mar-19	285.5	7.8%	265.0	7.8%
Dhofar Power System	Apr-19	319.6	8.7%	298.6	8.7%
Dhofar Power System	May-19	378.0	10.3%	355.8	10.4%
Dhofar Power System	Jun-19	374.7	10.2%	353.8	10.4%
Dhofar Power System	Jul-19	336.6	9.2%	316.5	9.3%
Dhofar Power System	Aug-19	311.4	8.5%	289.9	8.5%
Dhofar Power System	Sep-19	308.8	8.4%	287.5	8.4%
Dhofar Power System	Oct-19	321.9	8.8%	302.4	8.9%
Dhofar Power System	Nov-19	294.2	8.0%	271.2	7.9%
Dhofar Power System	Dec-19	265.7	7.2%	242.7	7.1%
2019 Totals		3,664.8		3,416.6	

Table 10-1: Quarterly electricity production by System : 2016 to 2019

2016 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
MIS	Qtr1-2016	5,354.8	17.8%	5,103.5	17.3%
MIS	Qtr2-2016	8,354.0	27.8%	8,552.9	28.9%
MIS	Qtr3-2016	9,712.7	32.3%	9,411.6	31.8%
MIS	Qtr4-2016	6,617.8	22.0%	6,487.6	22.0%
2016 total		30,039.4		29,555.7	

2017 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
MIS	Qtr1-2017	5,668.0	17.8%	5,428.3	17.3%
MIS	Qtr2-2017	9,509.7	29.9%	9,401.8	30.0%
MIS	Qtr3-2017	9,933.9	31.3%	10,034.2	32.0%
MIS	Qtr4-2017	6,671.9	21.0%	6,486.6	20.7%
2017 total		31,783.5		31,351.0	

2018 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
MIS	Qtr1-2018	5,726.9	17.2%	5,489.5	16.7%
MIS	Qtr2-2018	9,548.4	28.7%	9,774.1	29.7%
MIS	Qtr3-2018	10,472.0	31.5%	10,368.6	31.6%
MIS	Qtr4-2018	7,469.0	22.5%	7,225.6	22.0%
2018 total		33,216.2		32,857.8	

2019 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
MIS	Qtr1-2019	5,866.8	17.5%	5,602.3	17.1%
MIS	Qtr2-2019	9,718.6	29.0%	9,594.2	29.3%
MIS	Qtr3-2019	10,707.9	32.0%	10,629.3	32.4%
MIS	Qtr4-2019	7,169.4	21.4%	6,965.6	21.2%
2019 total		33,462.7		32,791.3	

Table 10-2: Quarterly electricity production by System : 2016 to 2019

2016 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Rural Systems	Qtr1-2015	165.58	17.6%	173.03	17.4%
Rural Systems	Qtr2-2015	276.98	29.5%	292.71	29.4%
Rural Systems	Qtr3-2015	285.85	30.4%	300.09	30.2%
Rural Systems	Qtr4-2015	211.59	22.5%	228.73	23.0%
2016 total		940.0		994.6	

2017 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Rural Systems	Qtr1-2017	193.8	18.7%	192.8	17.7%
Rural Systems	Qtr2-2017	313.9	30.2%	332.9	30.5%
Rural Systems	Qtr3-2017	310.2	29.9%	321.1	29.4%
Rural Systems	Qtr4-2017	220.4	21.2%	244.9	22.4%
2017 total		1,038.3		1,091.7	

2018 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Rural Systems	Qtr1-2018	191.9	17.0%	198.4	16.3%
Rural Systems	Qtr2-2018	337.3	29.9%	362.0	29.8%
Rural Systems	Qtr3-2018	334.7	29.6%	366.6	30.2%
Rural Systems	Qtr4-2018	265.7	23.5%	288.5	23.7%
2018 total		1,129.6		1,215.5	

2019 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Rural Systems	Qtr1-2019	209.8	17.4%	218.7	16.8%
Rural Systems	Qtr2-2019	347.0	28.8%	366.6	28.1%
Rural Systems	Qtr3-2019	363.6	30.2%	407.0	31.2%
Rural Systems	Qtr4-2019	284.2	23.6%	313.0	24.0%
2019 total		1,204.6		1,305.3	

Table 10-3: Quarterly electricity production by System : 2016 to 2019

2016 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Dhofar Power System	Qtr1-2016	680.6	21.0%	636.4	20.8%
Dhofar Power System	Qtr2-2016	970.9	29.9%	921.1	30.1%
Dhofar Power System	Qtr3-2016	817.6	25.2%	769.7	25.2%
Dhofar Power System	Qtr4-2016	779.2	24.0%	729.9	23.9%
2016 total		3,248.3		3,057.2	

2017 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Dhofar Power System	Qtr1-2017	708.1	21.4%	664.1	20.6%
Dhofar Power System	Qtr2-2017	1,041.2	31.5%	970.7	30.1%
Dhofar Power System	Qtr3-2017	893.6	27.0%	850.7	26.4%
Dhofar Power System	Qtr4-2017	661.1	20.0%	738.5	22.9%
2017 total		3,304.1		3,223.9	

2018 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Dhofar Power System	Qtr1-2018	709.7	21.1%	642.0	20.4%
Dhofar Power System	Qtr2-2018	972.2	28.9%	930.6	29.6%
Dhofar Power System	Qtr3-2018	862.6	25.6%	811.7	25.8%
Dhofar Power System	Qtr4-2018	823.9	24.5%	758.9	24.1%
2018 total		3,368.5		3,143.3	

2019 **Electricity Production**

System	Month	Gross GWh	% Year	Net GWh	% Year
Dhofar Power System	Qtr1-2019	753.9	20.6%	698.3	20.4%
Dhofar Power System	Qtr2-2019	1,072.3	29.3%	1,008.2	29.5%
Dhofar Power System	Qtr3-2019	956.8	26.1%	893.9	26.2%
Dhofar Power System	Qtr4-2019	881.8	24.1%	816.3	23.9%
2019 total		3,664.8		3,416.6	

Table 11-1:RAEC Capacity, System Peak demands, Electricity and Water Production, and Fuel consumption by Region

2019				Generating Capacity			Water Capacity			System Peak Demands, Production & Fuel Consumption						
RSNum	Facility	Type	Start Year	Installed kW	Derated kW	Num units	Installed m3/day	Num units	@ Ref SC	System Peak kW	Demand margin 1	Gross MWh	Net MWh	Gross 000'm3	Net 000'm3	Diesel 000'Ltrs
Al Dahirah																
02/020	Masrooq	Electricity	1994	1,900	1,500	4			50oC	700	53.3%	2,435	2,381			778
Totals for 1 Systems in Al Dahirah				1,900	1,500	4						2,435	2,381			778
Al Sharqiya																
02/019	Masirah	Cogen	1976				6,100	10	50oC					1,580	1,452	0
02/059	Masirah (New)	Electricity	2017	56,800	45,455	7			50oC	17,460	61.6%	81,830	77,553			21,015
Totals for 2 Systems in Al Sharqiya				56,800	45,455	7	6,100	10				81,830	77,553	1,580	1,452	21,015
Al Wusta																
02/001	AbuMudabi	Cogen	1985				200	3	50oC					50	49	0
02/027	Sawgrah	Cogen	1998				250	2	50oC					42	42	0
02/037	Al Duqm (new)	Cogen	2010	67,000	60,500	9	8,000	4	50oC	44,700	26.1%	236,275	215,805	1,813	1,698	67,216
02/005	Al Khaluf	Electricity	2007	2,508	2,000	3			50oC	1,104	44.8%	4,680	4,544			1,462
02/006	Al Khuiaima	Electricity	2004	8,016	6,400	10			50oC	4,170	34.8%	17,629	17,311			5,003
02/010	AlNajdah	Electricity	2007	2,700	2,300	3			50oC	1,795	22.0%	5,158	5,075			1,576
02/016	Hij	Electricity	1999	30,100	28,400	18			50oC	14,600	48.6%	56,374	54,319			15,987
02/017	Hitam	Electricity	2007	2,932	2,400	6			50oC	1,340	44.2%	5,756	5,442			1,808
02/030	Surab	Electricity	2006	4,000	3,600	5			50oC	1,922	46.6%	7,645	7,477			2,362
02/045	Dhafrat	Electricity	2009	3,500	3,500	4			50oC	1,260	64.0%	3,740	3,638			1,241
02/046	Al Khadra	Electricity	2011	12,700	10,600	5			50oC	5,650	46.7%	26,715	24,774			7,628
Totals for 11 Systems in Al Wusta				133,456	119,700	63	8,450	9				363,973	338,385	1,905	1,788	104,284

Table 11-2 :RAEC Capacity, System Peak demands, Electricity and Water Production, and Fuel consumption by Region

2019				Generating Capacity			Water Capacity			System Peak Demands, Production & Fuel Consumption						
RSNum	Facility	Type	Start Year	Installed kW	Derated kW	Num units	Installed m3/day	Num units	@ Ref SC	System Peak kW	Demand margin 1	Gross MWh	Net MWh	Gross 000'm3	Net 000'm3	Diesel 000'Ltrs
Dhofar																
01/001	Al Halaniyat	Cogen	1987	1,565	1,200	4	190	2	50oC	525	56.3%	2,298	1,667	58	57	738
01/004	Andat	Electricity	2011	2,012	1,600	5			50oC	1,100	31.3%	4,002	3,955			1,149
01/007	Ayun	Electricity	2000	1,200	1,000	4			50oC	218	78.2%	1,044	1,035			435
01/008	Barbazum	Electricity	2000	1,680	1,400	5			50oC	613	56.2%	2,732	2,721			799
01/012	Dhahabun	Electricity	2000	4,379	3,500	7			50oC	2,273	35.1%	10,733	10,717			3,320
01/014	Fatkhat	Electricity	2002	900	700	5			50oC	340	51.4%	1,415	1,408			511
01/016	Hirweeb	Electricity	2001	2,900	2,300	6			50oC	1,230	46.5%	4,290	4,263			1,321
01/019	Mahwice	Electricity	2002	400	300	4			50oC	230	23.3%	417	410			150
01/020	Maqshan	Electricity	2001	2,780	2,200	7			50oC	780	64.5%	1,553	1,542			525
01/021	Mazyunah	Electricity	2000	10,000	9,400	7			50oC	9,410	-0.1%	40,517	39,000			11,061
01/023	Mitan	Electricity	2001	3,400	3,000	6			50oC	1,070	64.3%	4,048	4,023			1,218
01/024	Mothorah	Electricity	2006	1,100	900	4			50oC	470	47.8%	2,160	2,153			770
01/035	Shahb Asayb	Electricity	2000	23,000	22,400	9			50oC	8,790	60.8%	42,666	41,442			10,607
01/037	Sharbatat	Electricity	1998	4,700	3,800	7			50oC	1,190	68.7%	6,062	6,007			2,020
01/040	Tushnat	Electricity	2001	1,170	900	4			50oC	380	57.8%	543	538			171
01/046	Mudhai (new)	Electricity	2011	3,872	3,100	6			50oC	2,270	26.8%	9,668	9,204			2,747
01/047	Hasik (new)	Electricity	2012	5,000	4,000	6			50oC	2,770	30.8%	13,281	13,102			4,291
01/052	Saih Al Khirat (N	Electricity	2016	48,702	48,702	6			50oC	25,600	47.4%	158,829	153,240			38,055
01/053	Fershat Qatbeet	Electricity	2017	10,000	8,000	6			50oC	1,458	81.8%	4,302	3,301			1,281
	Totals for 19 Systems in Dhofar			128,760	118,402	108	190	2				310,561	299,727	58	57	81,170

Table 11-3 :RAEC Capacity, System Peak demands, Electricity and Water Production, and Fuel consumption by Region

RSNum	Facility	Type	Start Year	Generating Capacity Installed kW	Generating Capacity Derated kW	Generating Capacity Num units	Water Capacity Installed m3/day	Water Capacity Num units	@ Ref SC	System Peak Demands, Production & Fuel Consumption: System Peak kW	Demand margin 1	Gross MWh	Net MWh	Gross 000'm3	Net 000'm3	Diesel 000'Ltrs
Musandam																
03/006	Kumzar	Cogen	1984	465	375	1	450	3	50oC			0	0	100	99	0
03/002	Dibba	Electricity	1978	5,935	4,800	4			50oC	1,600	66.7%	1,636	1,563			502
03/007	Madha	Electricity	1982	11,300	9,000	6			50oC	6,570	27.0%	28,220	26,935			7,956
03/011	Khasab (New)	Electricity	1982	79,590	79,590	6			50oC	44,860	43.6%	899	133			204
	Totals for 4 Systems in Musandam			97,290	93,765	17	450	3				30,755	28,630	100	99	8,661
	Totals for 37 RAEC Production Systems			418,206	378,822	199	15,190	24				789,553	746,676	3,644	3,397	215,909

note 1 Tibat Power Station was commissioned on summer 2017, and replaced old Khasab power s

note 2 Rental generation supported systems with negative demand margins.

note 3 additional rental engines was included in Wadi Aswad (058/02), with total Production of 1,933 MWh

2019 Regional Summary	Generating Capacity Installed kW	Generating Capacity Derated kW	Generating Capacity Num units	Water Capacity Installed m3/day	Water Capacity Num units	Production & Fuel Consumption: Gross MWh	Net MWh	Gross 000'm3	Net 000'm3	Diesel 000'Ltrs
Totals for 1 RAEC System in Al Dahirah	1,900	1,500	4			2,435	2,381			778
Totals for 2 RAEC Systems in Al Sharqiya	56,800	45,455	7	6,100	10	81,830	77,553	1,580	1,452	21,015
Totals for 11 RAEC Systems in Al Wusta	133,456	119,700	63	8,450	9	363,973	338,385	1,905	1,788	104,284
Totals for 19 RAEC Systems in Dhofar	128,760	118,402	108	190	2	310,561	299,727	58	57	81,170
Totals for 4 RAEC Systems in Musandam	97,290	93,765	17	450	3	30,755	28,630	100	99	8,661
Totals for 37 RAEC Production System	418,206	378,822	199	15,190	24	789,553	746,676	3,644	3,397	215,909

Annex c

Water Sector Statistics

Table 1: water production by Zone : 2016 to 2019

2016 **Water production**

Zone	Gross m^3	% Year	Net m^3	% Year
Interconnected & Sharqiyah Zones	268,443,881	90.9%	263,343,474	90.8%
Rural Zones	3,424,350	1.2%	3,221,419	1.1%
Dhofar Zone	23,331,493	7.9%	23,331,493	8.0%
Total for 2016	295,199,724		289,896,386	

2017 **Water production**

Zone	Gross m^3	% Year	Net m^3	% Year
Interconnected & Sharqiyah Zones	280,270,041	91.0%	277,322,613	91.0%
Rural Zones	3,549,383	1.2%	3,381,030	1.1%
Dhofar Zone	24,212,130	7.9%	24,212,130	7.9%
Total for 2017	308,031,553		304,915,773	

2018 **Water production**

Zone	Gross m^3	% Year	Net m^3	% Year
Interconnected & Sharqiyah Zones	308,913,027	92.4%	303,588,256	92.4%
Rural Zones	3,663,004	1.1%	3,453,787	1.1%
Dhofar Zone	21,653,631	6.5%	21,653,631	6.6%
Total for 2018	334,229,661		328,695,673	

2019 **Water production**

Zone	Gross m^3	% Year	Net m^3	% Year
Interconnected & Sharqiyah Zones	322,039,756	91.9%	318,697,392	91.9%
Rural Zones	3,643,626	1.0%	3,396,734	1.0%
Dhofar Zone	24,739,362	7.1%	24,739,362	7.1%
Total for 2019	350,422,744		346,833,488	

Table 2: water production by Zone and Company : 2016 to 2019

2018	Water production			
Zone	**Gross m^3**	**% Oman**	**Net m^3**	**% Oman**
A : Interconnected & Sharqiyah Zones				
ACWA Power Barka SAOG	32,935,978	9.9%	32,839,858	10.0%
Al Ghubrah SAOC	26,048,553	7.8%	25,575,525	7.8%
Barka Desalination Company SAOC	38,114,065	11.4%	36,503,886	11.1%
Muscat City Desalination Company SAOC	59,929,864	17.9%	59,929,864	18.2%
Qurayyat Desalination SAOC	35,111,907	10.5%	35,061,907	10.7%
Qurayyat Temporary	11,775,167	3.5%	11,775,167	3.6%
Sharqiyah Desalination Company SAOG	35,752,070	10.7%	35,046,874	10.7%
SMN Barka SAOG	22,040,116	6.6%	21,822,378	6.6%
Sohar Power Company SAOG	47,205,306	14.1%	45,032,797	13.7%
ISZ sub-total	308,913,027	88.2%	303,588,256	87.5%
B : Rural Zones				
RAEC SAOC	3,663,004	1.1%	3,453,787	1.1%
Rural Zones sub-total	3,663,004	1.1%	3,453,787	1.1%
C : Dhofar Zone				
SembcorpSalalah SAOC	21,653,631	6.5%	21,653,631	6.6%
Dhofar Zone sub-total	21,653,631	6.5%	21,653,631	6.6%
Total for 2018	334,229,661		328,695,673	

2019	Water production			
Zone	**Gross m^3**	**% Oman**	**Net m^3**	**% Oman**
A : Interconnected & Sharqiyah Zones				
ACWA Power Barka SAOG	18,232,124	5.2%	18,065,976	5.2%
Barka Desalination Company	66,137,684	18.9%	65,464,788	18.9%
Muscat City Desalination Company SAOC	65,032,354	18.6%	65,032,354	18.8%
Myah Gulf Oman Desalination Compnay	16,525,313	4.7%	16,525,313	4.8%
Qurayyat Desalination SAOC	62,314,944	17.8%	62,314,944	18.0%
Sharqiyah Desalination Company SAOG	37,247,291	10.6%	36,562,763	10.5%
SMN Barka SAOG	28,948,138	8.3%	28,672,515	8.3%
Sohar Power Company SAOG	27,601,908	7.9%	26,058,739	7.5%
ISZ sub-total	322,039,756	91.9%	318,697,392	91.9%
% change from 2018	4.2%		5.0%	
B : Rural Zones				
RAEC SAOC	3,643,626	1.0%	3,396,734	1.0%
Rural Zones sub-total	3,643,626	1.0%	3,396,734	1.0%
% change from 2018	-0.5%		-1.7%	
C : Dhofar Zone				
SembcorpSalalah SAOC	24,739,362	7.1%	24,739,362	7.1%
Dhofar Zone sub-total	24,739,362	7.1%	24,739,362	7.1%
% change from 2018	14.3%		14.3%	
Total for 2019	350,422,744		346,833,488	
Actual change from 2018	16,193,083		18,137,815	
% change from 2018	%4.8		%5.5	

Table 3: water production by Region : 2018 & 2019

2018	Water production			
Zone	**Gross m^3**	**% Oman**	**Net m^3**	**% Oman**
Al Sharqiya	37,407,540	11.2%	36,535,061	11.1%
Al Wusta	1,878,977	0.6%	1,838,994	0.6%
Dhofar	21,706,618	6.5%	21,705,861	6.6%
Musandam	75,570	0.0%	74,376	0.0%
Muscat	132,865,491	39.8%	132,342,463	40.3%
North Batinah	47,205,306	14.1%	45,032,797	13.7%
South Batinah	93,090,159	27.9%	91,166,122	27.7%
Total for 2018	334,229,661		328,695,673	

2019	Water production			
Zone	**Gross m^3**	**% Oman**	**Net m^3**	**% Oman**
Al Sharqiya	38,827,642	11.1%	38,014,848	11.0%
Al Wusta	1,862,841	0.5%	1,746,484	0.5%
Dhofar	24,839,725	7.1%	24,838,414	7.2%
Musandam	100,071	0.0%	99,113	0.0%
Muscat	127,347,298	36.3%	127,347,298	36.7%
North Batinah	44,127,221	12.6%	42,584,052	12.3%
South Batinah	113,317,946	32.3%	112,203,279	32.4%
Total for 2019	350,422,744		346,833,488	
% change from 2018	4.8%		5.5%	

Table 4: water production by Region and Company : 2018 & 2019

2018 **Water production**

Region	Company	Gross m^3	% Oman	Net m^3	% Oman
Al Sharqiya	RAEC SAOC	1,655,470	0.5%	1,488,187	0.5%
	Sharqiyah Desalination Company SAOG	35,752,070	10.7%	35,046,874	10.7%
Al Wusta	RAEC SAOC	1,878,977	0.6%	1,838,994	0.6%
Dhofar	RAEC SAOC	52,987	0.0%	52,230	0.0%
	SembcorpSalalah SAOC	21,653,631	6.5%	21,653,631	6.6%
Musandam	RAEC SAOC	75,570	0.0%	74,376	0.0%
Muscat	Al Ghubrah SAOC	26,048,553	7.8%	25,575,525	7.8%
	Muscat City Desalination Company SAOC	59,929,864	17.9%	59,929,864	18.2%
	Qurayyat Desalination SAOC	35,111,907	%10.5	35,061,907	%10.7
	Qurayyat Temporary	11,775,167	%3.5	11,775,167	%3.6
North Batinah	Sohar Power Company SAOG	47,205,306	14.1%	45,032,797	13.7%
North Batinah	ACWA Power Barka SAOG	32,935,978	9.9%	32,839,858	10.0%
	Barka Desalination Company SAOC	38,114,065	11.4%	36,503,886	11.1%
	SMN Barka SAOG	22,040,116	%6.6	21,822,378	%6.6
Total for 2018		334,229,661		328,695,673	

2019 **Water production**

Region	Company	Gross m^3	% Oman	Net m^3	% Oman
Al Sharqiya	RAEC SAOC	1,580,351	0.5%	1,452,085	0.4%
	Sharqiyah Desalination Company SAOG	37,247,291	10.6%	36,562,763	10.5%
Al Wusta	RAEC SAOC	1,862,841	0.5%	1,746,484	0.5%
Dhofar	RAEC SAOC	100,363	0.0%	99,052	0.0%
	SembcorpSalalah SAOC	24,739,362	7.1%	24,739,362	7.1%
Musandam	RAEC SAOC	100,071	0.0%	99,113	0.0%
Muscat	Muscat City Desalination Company SAOC	65,032,354	18.6%	65,032,354	18.8%
	Qurayyat Desalination SAOC	62,314,944	17.8%	62,314,944	18.0%
North Batinah	Sohar Power Company SAOG	27,601,908	7.9%	26,058,739	7.5%
	Myah Gulf Oman Desalination Compnay	16,525,313	%4.7	16,525,313	%4.8
North Batinah	ACWA Power Barka SAOG	18,232,124	5.2%	18,065,976	5.2%
	Barka Desalination Company SAOC	66,137,684	18.9%	65,464,788	18.9%
	SMN Barka SAOG	28,948,138	8.3%	28,672,515	8.3%
Total for 2019		350,422,744		346,833,488	
Change from 2018 (%)		4.8%		5.5%	

Table 5-1: Monthly Water production by Zone : Interconnected & Sharqiyah Zones 2016 to 2019

2016 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Interconnected & Sharqiyah Zones	Jan-16	22,117	8.2%	21,588	8.2%
Interconnected & Sharqiyah Zones	Feb-16	19,896	7.4%	19,334	7.3%
Interconnected & Sharqiyah Zones	Mar-16	21,515	8.0%	20,929	7.9%
Interconnected & Sharqiyah Zones	Apr-16	22,350	8.3%	21,948	8.3%
Interconnected & Sharqiyah Zones	May-16	23,384	8.7%	23,150	8.8%
Interconnected & Sharqiyah Zones	Jun-16	22,766	8.5%	22,441	8.5%
Interconnected & Sharqiyah Zones	Jul-16	22,688	8.5%	22,482	8.5%
Interconnected & Sharqiyah Zones	Aug-16	23,583	8.8%	23,298	8.8%
Interconnected & Sharqiyah Zones	Sep-16	22,988	8.6%	21,995	8.4%
Interconnected & Sharqiyah Zones	Oct-16	23,088	8.6%	22,688	8.6%
Interconnected & Sharqiyah Zones	Nov-16	22,140	8.2%	21,838	8.3%
Interconnected & Sharqiyah Zones	Dec-16	21,928	8.2%	21,654	8.2%
Total for 2016		268,444		263,343	

2017 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Interconnected & Sharqiyah Zones	Jan-16	21,830	7.8%	21,513	7.8%
Interconnected & Sharqiyah Zones	Feb-16	19,448	6.9%	19,152	6.9%
Interconnected & Sharqiyah Zones	Mar-16	21,988	7.8%	21,652	7.8%
Interconnected & Sharqiyah Zones	Apr-16	22,477	8.0%	22,211	8.0%
Interconnected & Sharqiyah Zones	May-16	24,442	8.7%	24,199	8.7%
Interconnected & Sharqiyah Zones	Jun-16	24,108	8.6%	23,858	8.6%
Interconnected & Sharqiyah Zones	Jul-16	25,177	9.0%	24,905	9.0%
Interconnected & Sharqiyah Zones	Aug-16	24,928	8.9%	24,752	8.9%
Interconnected & Sharqiyah Zones	Sep-16	23,832	8.5%	23,652	8.5%
Interconnected & Sharqiyah Zones	Oct-16	25,309	9.0%	25,093	9.0%
Interconnected & Sharqiyah Zones	Nov-16	23,658	8.4%	23,495	8.5%
Interconnected & Sharqiyah Zones	Dec-16	23,072	8.2%	22,841	8.2%
Total for 2017		280,270		277,323	

Table 5-2: Monthly Water production by Zone : Interconnected & Sharqiyah Zones 2016 to 2019

2018 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Interconnected & Sharqiyah Zones	Jan-18	23,020	7.5%	22,604	7.4%
Interconnected & Sharqiyah Zones	Feb-18	20,732	6.7%	20,449	6.7%
Interconnected & Sharqiyah Zones	Mar-18	23,353	7.6%	23,083	7.6%
Interconnected & Sharqiyah Zones	Apr-18	24,913	8.1%	24,513	8.1%
Interconnected & Sharqiyah Zones	May-18	23,617	7.6%	23,250	7.7%
Interconnected & Sharqiyah Zones	Jun-18	28,726	9.3%	27,846	9.2%
Interconnected & Sharqiyah Zones	Jul-18	32,701	10.6%	31,453	10.4%
Interconnected & Sharqiyah Zones	Aug-18	27,295	8.8%	26,980	8.9%
Interconnected & Sharqiyah Zones	Sep-18	26,435	8.6%	26,100	8.6%
Interconnected & Sharqiyah Zones	Oct-18	26,860	8.7%	26,559	8.7%
Interconnected & Sharqiyah Zones	Nov-18	25,614	8.3%	25,362	8.4%
Interconnected & Sharqiyah Zones	Dec-18	25,647	8.3%	25,388	8.4%
Total for 2018		308,913		303,588	

2019 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Interconnected & Sharqiyah Zones	Jan-19	25,423	7.9%	25,019	7.9%
Interconnected & Sharqiyah Zones	Feb-19	22,868	7.1%	22,571	7.1%
Interconnected & Sharqiyah Zones	Mar-19	26,149	8.1%	25,765	8.1%
Interconnected & Sharqiyah Zones	Apr-19	26,610	8.3%	26,246	8.2%
Interconnected & Sharqiyah Zones	May-19	27,677	8.6%	27,373	8.6%
Interconnected & Sharqiyah Zones	Jun-19	27,272	8.5%	26,949	8.5%
Interconnected & Sharqiyah Zones	Jul-19	28,210	8.8%	27,868	8.7%
Interconnected & Sharqiyah Zones	Aug-19	25,771	8.0%	25,523	8.0%
Interconnected & Sharqiyah Zones	Sep-19	28,434	8.8%	28,274	8.9%
Interconnected & Sharqiyah Zones	Oct-19	28,928	9.0%	28,759	9.0%
Interconnected & Sharqiyah Zones	Nov-19	27,633	8.6%	27,472	8.6%
Interconnected & Sharqiyah Zones	Dec-19	27,065	8.4%	26,879	8.4%
Total for 2019		322,040		318,697	

Table 5-3: Monthly Water production by Zone : Rural Zones 2016 to 2019

2016 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Rural Zones	Jan-16	271.0	7.9%	254.4	7.9%
Rural Zones	Feb-16	276.7	8.1%	258.0	8.0%
Rural Zones	Mar-16	300.8	8.8%	287.0	8.9%
Rural Zones	Apr-16	277.3	8.1%	264.1	8.2%
Rural Zones	May-16	312.0	9.1%	295.1	9.2%
Rural Zones	Jun-16	295.8	8.6%	275.7	8.6%
Rural Zones	Jul-16	286.5	8.4%	266.5	8.3%
Rural Zones	Aug-16	273.4	8.0%	256.4	8.0%
Rural Zones	Sep-16	277.7	8.1%	261.3	8.1%
Rural Zones	Oct-16	288.3	8.4%	271.2	8.4%
Rural Zones	Nov-16	274.7	8.0%	258.6	8.0%
Rural Zones	Dec-16	290.2	8.5%	273.4	8.5%
Total for 2016		3,424.4		3,221.4	

2017 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Rural Zones	Jan-17	286.7	8.1%	273.4	8.1%
Rural Zones	Feb-17	262.3	7.4%	248.6	7.4%
Rural Zones	Mar-17	308.8	8.7%	291.5	8.6%
Rural Zones	Apr-17	308.4	8.7%	293.8	8.7%
Rural Zones	May-17	322.6	9.1%	306.7	9.1%
Rural Zones	Jun-17	295.5	8.3%	281.3	8.3%
Rural Zones	Jul-17	294.4	8.3%	277.0	8.2%
Rural Zones	Aug-17	298.4	8.4%	280.2	8.3%
Rural Zones	Sep-17	284.7	8.0%	263.0	7.8%
Rural Zones	Oct-17	296.4	8.4%	273.2	8.1%
Rural Zones	Nov-17	300.0	8.5%	283.6	8.4%
Rural Zones	Dec-17	291.2	8.2%	308.8	9.1%
Total for 2017		3,549.4		3,381.0	

Table 5-4: Monthly Water production by Zone : Rural Zones 2016 to 2019

2018		Water production			
Zone	**Month**	**Gross '000 m^3**	**% Year**	**Net '000m^3**	**% Year**
Rural Zones	Jan-18	302.8	8.3%	286.2	8.3%
Rural Zones	Feb-18	289.5	7.9%	272.3	7.9%
Rural Zones	Mar-18	324.5	8.9%	311.1	9.0%
Rural Zones	Apr-18	301.6	8.2%	284.5	8.2%
Rural Zones	May-18	316.1	8.6%	301.2	8.7%
Rural Zones	Jun-18	318.0	8.7%	299.2	8.7%
Rural Zones	Jul-18	315.7	8.6%	299.6	8.7%
Rural Zones	Aug-18	292.4	8.0%	270.1	7.8%
Rural Zones	Sep-18	288.7	7.9%	266.3	7.7%
Rural Zones	Oct-18	313.1	8.5%	289.3	8.4%
Rural Zones	Nov-18	299.7	8.2%	284.4	8.2%
Rural Zones	Dec-18	300.8	8.2%	289.7	8.4%
Total for 2018		3,663.0		3,453.8	

2019		Water production			
Zone	**Month**	**Gross '000 m^3**	**% Year**	**Net '000m^3**	**% Year**
Rural Zones	Jan-19	304.2	8.3%	294.0	8.7%
Rural Zones	Feb-19	275.8	7.6%	262.2	7.7%
Rural Zones	Mar-19	328.2	9.0%	309.9	9.1%
Rural Zones	Apr-19	303.8	8.3%	284.2	8.4%
Rural Zones	May-19	316.0	8.7%	294.9	8.7%
Rural Zones	Jun-19	314.6	8.6%	290.9	8.6%
Rural Zones	Jul-19	299.1	8.2%	279.0	8.2%
Rural Zones	Aug-19	313.3	8.6%	293.1	8.6%
Rural Zones	Sep-19	294.5	8.1%	269.2	7.9%
Rural Zones	Oct-19	314.0	8.6%	286.7	8.4%
Rural Zones	Nov-19	294.2	8.1%	271.3	8.0%
Rural Zones	Dec-19	285.9	7.8%	261.3	7.7%
Total for 2019		3,643.6		3,396.7	

Table 5-5: Monthly Water production by Zone : Dhofar Zone 2016 to 2019

2016 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Dhofar Zone	Jan-16	1,847.2	7.9%	1,847.2	7.9%
Dhofar Zone	Feb-16	1,806.1	7.7%	1,806.1	7.7%
Dhofar Zone	Mar-16	1,956.4	8.4%	1,956.4	8.4%
Dhofar Zone	Apr-16	1,917.7	8.2%	1,917.7	8.2%
Dhofar Zone	May-16	2,037.2	8.7%	2,037.2	8.7%
Dhofar Zone	Jun-16	1,968.0	8.4%	1,968.0	8.4%
Dhofar Zone	Jul-16	1,929.7	8.3%	1,929.7	8.3%
Dhofar Zone	Aug-16	2,023.1	8.7%	2,023.1	8.7%
Dhofar Zone	Sep-16	1,914.8	8.2%	1,914.8	8.2%
Dhofar Zone	Oct-16	2,092.4	9.0%	2,092.4	9.0%
Dhofar Zone	Nov-16	1,850.7	7.9%	1,850.7	7.9%
Dhofar Zone	Dec-16	1,988.2	8.5%	1,988.2	8.5%
Total for 2016		23,331		23,331	

2017 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Dhofar Zone	Jan-17	2,019.8	8.3%	2,019.8	8.3%
Dhofar Zone	Feb-17	1,800.8	7.4%	1,800.8	7.4%
Dhofar Zone	Mar-17	1,951.1	8.1%	1,951.1	8.1%
Dhofar Zone	Apr-17	2,037.1	8.4%	2,037.1	8.4%
Dhofar Zone	May-17	2,113.9	8.7%	2,113.9	8.7%
Dhofar Zone	Jun-17	2,038.5	8.4%	2,038.5	8.4%
Dhofar Zone	Jul-17	2,102.2	8.7%	2,102.2	8.7%
Dhofar Zone	Aug-17	1,934.6	8.0%	1,934.6	8.0%
Dhofar Zone	Sep-17	2,038.9	8.4%	2,038.9	8.4%
Dhofar Zone	Oct-17	2,097.4	8.7%	2,097.4	8.7%
Dhofar Zone	Nov-17	2,008.5	8.3%	2,008.5	8.3%
Dhofar Zone	Dec-17	2,069.4	8.5%	2,069.4	8.5%
Total for 2017		24,212		24,212	

Table 5-6: Monthly Water production by Zone : Dhofar Zone 2016 to 2019

2018 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Dhofar Zone	Jan-18	1,991.2	9.2%	1,991.2	9.2%
Dhofar Zone	Feb-18	1,804.7	8.3%	1,804.7	8.3%
Dhofar Zone	Mar-18	2,061.3	9.5%	2,061.3	9.5%
Dhofar Zone	Apr-18	1,977.5	9.1%	1,977.5	9.1%
Dhofar Zone	May-18	1,766.0	8.2%	1,766.0	8.2%
Dhofar Zone	Jun-18	1,329.3	6.1%	1,329.3	6.1%
Dhofar Zone	Jul-18	1,409.9	6.5%	1,409.9	6.5%
Dhofar Zone	Aug-18	1,369.3	6.3%	1,369.3	6.3%
Dhofar Zone	Sep-18	1,855.3	8.6%	1,855.3	8.6%
Dhofar Zone	Oct-18	1,994.8	9.2%	1,994.8	9.2%
Dhofar Zone	Nov-18	2,010.6	9.3%	2,010.6	9.3%
Dhofar Zone	Dec-18	2,083.8	9.6%	2,083.8	9.6%
Total for 2018		21,654		21,654	

2019 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Dhofar Zone	Jan-19	2,095.4	8.5%	2,095.4	8.5%
Dhofar Zone	Feb-19	1,871.1	7.6%	1,871.1	7.6%
Dhofar Zone	Mar-19	2,094.2	8.5%	2,094.2	8.5%
Dhofar Zone	Apr-19	2,109.8	8.5%	2,109.8	8.5%
Dhofar Zone	May-19	2,203.2	8.9%	2,203.2	8.9%
Dhofar Zone	Jun-19	2,059.4	8.3%	2,059.4	8.3%
Dhofar Zone	Jul-19	1,983.9	8.0%	1,983.9	8.0%
Dhofar Zone	Aug-19	2,042.3	8.3%	2,042.3	8.3%
Dhofar Zone	Sep-19	2,031.7	8.2%	2,031.7	8.2%
Dhofar Zone	Oct-19	2,124.4	8.6%	2,124.4	8.6%
Dhofar Zone	Nov-19	1,999.3	8.1%	1,999.3	8.1%
Dhofar Zone	Dec-19	2,124.6	8.6%	2,124.6	8.6%
Total for 2019		24,739		24,739	

Table 6-1: Quarterly Water production by Zone : 2016 to 2019

2016 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Interconnected & Sharqiyah Zones	Qtr1-2016	63,528	23.7%	61,850	23.5%
Interconnected & Sharqiyah Zones	Qtr2-2016	68,500	25.5%	67,538	25.6%
Interconnected & Sharqiyah Zones	Qtr3-2016	69,259	25.8%	67,774	25.7%
Interconnected & Sharqiyah Zones	Qtr4-2016	67,156	25.0%	66,180	25.1%
2016 total		268,444		263,343	

2017 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Interconnected & Sharqiyah Zones	Qtr1-2017	63,266	22.6%	62,317	22.5%
Interconnected & Sharqiyah Zones	Qtr2-2017	71,027	25.3%	70,269	25.3%
Interconnected & Sharqiyah Zones	Qtr3-2017	73,938	26.4%	73,308	26.4%
Interconnected & Sharqiyah Zones	Qtr4-2017	72,039	25.7%	71,429	25.8%
2017 total		280,270		277,323	

2018 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Interconnected & Sharqiyah Zones	Qtr1-2018	67,105	21.7%	66,136	21.8%
Interconnected & Sharqiyah Zones	Qtr2-2018	77,256	25.0%	75,609	24.9%
Interconnected & Sharqiyah Zones	Qtr3-2018	86,431	28.0%	84,533	27.8%
Interconnected & Sharqiyah Zones	Qtr4-2018	78,122	25.3%	77,310	25.5%
2018 total		308,913		303,588	

2019 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Interconnected & Sharqiyah Zones	Qtr1-2019	74,440	23.1%	73,355	23.0%
Interconnected & Sharqiyah Zones	Qtr2-2019	81,559	25.3%	80,567	25.3%
Interconnected & Sharqiyah Zones	Qtr3-2019	82,415	25.6%	81,665	25.6%
Interconnected & Sharqiyah Zones	Qtr4-2019	83,626	26.0%	83,110	26.1%
2019 total		322,040		318,697	

Table 6-2: Quarterly Water production by Zone : 2016 to 2019

2016 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Rural Zones	Qtr1-2016	848	24.8%	799	24.8%
Rural Zones	Qtr2-2016	885	25.8%	835	25.9%
Rural Zones	Qtr3-2016	838	24.5%	784	24.3%
Rural Zones	Qtr4-2016	853	24.9%	803	24.9%
2016 total		3,424		3,221	

2017 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Rural Zones	Qtr1-2017	858	24.2%	813	24.1%
Rural Zones	Qtr2-2017	927	26.1%	882	26.1%
Rural Zones	Qtr3-2017	877	24.7%	820	24.3%
Rural Zones	Qtr4-2017	888	25.0%	866	25.6%
2017 total		3,549		3,381	

2018 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Rural Zones	Qtr1-2018	917	25.0%	870	25.2%
Rural Zones	Qtr2-2018	936	25.5%	885	25.6%
Rural Zones	Qtr3-2018	897	24.5%	836	24.2%
Rural Zones	Qtr4-2018	914	24.9%	863	25.0%
2018 total		3,663		3,454	

2019 **Water production**

Zone	Month	Gross '000 m^3	% Year	Net '000m^3	% Year
Rural Zones	Qtr1-2019	908	24.9%	866	25.5%
Rural Zones	Qtr2-2019	934	25.6%	870	25.6%
Rural Zones	Qtr3-2019	907	24.9%	841	24.8%
Rural Zones	Qtr4-2019	894	24.5%	819	24.1%
2019 total		3,644		3,397	

Table 6-3: Quarterly Water production by Zone : 2016 to 2019

2016 **Water production**

Zone	Month	Gross '000 m³	% Year	Net '000m³	% Year
Dhofar Zone	Qtr1-2016	5,610	24.0%	5,610	24.0%
Dhofar Zone	Qtr2-2016	5,923	25.4%	5,923	25.4%
Dhofar Zone	Qtr3-2016	5,868	25.1%	5,868	25.1%
Dhofar Zone	Qtr4-2016	5,931	25.4%	5,931	25.4%
2016 total		23,331		23,331	

2017 **Water production**

Zone	Month	Gross '000 m³	% Year	Net '000m³	% Year
Dhofar Zone	Qtr1-2017	5,610	23.8%	5,772	23.8%
Dhofar Zone	Qtr2-2017	5,923	25.6%	6,189	25.6%
Dhofar Zone	Qtr3-2017	5,868	25.1%	6,076	25.1%
Dhofar Zone	Qtr4-2017	5,931	25.5%	6,175	25.5%
2017 total		23,331		24,212	

2018 **Water production**

Zone	Month	Gross '000 m³	% Year	Net '000m³	% Year
Dhofar Zone	Qtr1-2018	5,857	27.0%	5,857	27.0%
Dhofar Zone	Qtr2-2018	5,073	23.4%	5,073	23.4%
Dhofar Zone	Qtr3-2018	4,634	21.4%	4,634	21.4%
Dhofar Zone	Qtr4-2018	6,089	28.1%	6,089	28.1%
2018 total		21,654		21,654	

2019 **Water production**

Zone	Month	Gross '000 m³	% Year	Net '000m³	% Year
Dhofar Zone	Qtr1-2019	6,061	24.5%	6,061	24.5%
Dhofar Zone	Qtr2-2019	6,372	25.8%	6,372	25.8%
Dhofar Zone	Qtr3-2019	6,058	24.5%	6,058	24.5%
Dhofar Zone	Qtr4-2019	6,248	25.3%	6,248	25.3%
2019 total		24,739		24,739	

Annex D

Electricity Subsidy Calculations

Table 1: 2019 MIS Outturn Subsidy

Maximum Allowed Supply Revenue — 2019 Outturn — 2018 Outturn

Rial Omani	MEDC	MJEC	MZEC	Total	Total	% Change
PC (Energy cost)	227,273,332	175,958,990	189,659,553	592,891,875	584,483,748	1%
TUoS (Transmission cost)	39,129,896	22,730,145	34,288,957	96,148,998	68,419,277	41%
DUoS (Distribution cost)	66,904,237	51,306,786	96,254,483	214,465,506	185,469,869	16%
SB (Supply cost)	13,484,523	10,489,141	12,679,746	36,653,410	34,686,616	6%
LF (Licence fee)	98,227	98,227	98,227	294,681	298,842	-1%
KS (Correction factor)	1,119,504	-1,497,904	-1,226,607	-1,605,007	-33,205,111	-95%
Maximum Allowed Supply Revenue	345,770,711	262,081,194	334,207,573	942,059,477	906,563,463	4%

Actual Regulated Supply Revenue — 2019 Outturn — 2018 Outturn

Rial Omani	MEDC	MJEC	MZEC	Total	Total	Variance
Approved Subsidy	130,823,474	133,878,083	193,204,053	457,905,610	416,373,965	10%
Permitted Tariff (& other) Revenue	210,920,137	152,584,786	137,505,923	501,010,846	488,594,652	3%
Actual Regulated Supply Revenue	341,743,611	286,462,869	330,709,976	958,916,456	904,968,617	6%
Outturn Subsidy Requirement	134,850,574	109,496,408	196,701,649	441,048,631	417,968,811	6%

Subsidy per kWh — 2018 Outturn — 2017 Outturn

(bz/kWh)	MEDC	MJEC	MZEC	Total	Total	Variance
Economic Cost	30.0	28.1	38.0	31.8	30.6	4%
Subsidy (Outturn)	11.7	11.8	22.4	14.9	14.1	6%
Customer Revenue	18.3	16.4	15.6	16.9	16.5	3%

Source: Company SCRCs, Authority calculations

PC	means the cost of bulk supply purchaces from PWP
TUoS	means Transmission Use of System costs
DUoS	means Distribution Use of System costs
SB	means Supply Business costs
LF	means the Supply Business Licence Fees
KS	means the Supply Business Correction Factor
	All in relevant year t

2019 MIS Revenue and Subsidy Outturn

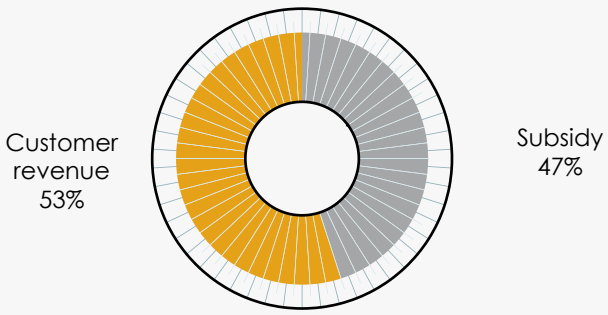


Table 2:2020 MIS Subsidy Forecast

Maximum Allowed Supply Revenue — 2020 Forecast / 2019 Outturn

Rial Omani	MEDC	MJEC	MZEC	Total	Total	% Change
PC (Energy cost)	227,815,309	187,661,484	180,177,243	595,654,035	592,891,875	0%
TUoS (Transmission cost)	38,836,577	22,559,620	34,031,088	95,427,284	96,148,998	-1%
DUoS (Distribution cost)	66,412,715	66,558,890	111,211,133	244,182,738	214,465,506	14%
SB (Supply cost)	15,036,518	11,195,389	14,356,271	40,588,178	36,653,410	11%
LF (Licence fee)	120,092	120,092	120,092	360,276	294,681	22%
KS (Correction factor)	-4,104,807	25,587,604	-3,565,672	17,917,125	-1,605,007	-1216%
Maximum Allowed Supply Revenue	352,326,018	262,507,871	343,461,497	958,295,387	942,059,477	2%

Actual Regulated Supply Revenue — 2020 Forecast / 2019 Outturn

Rial Omani	MEDC	MJEC	MZEC	Total	Total	Variance
Approved Subsidy	140,109,882	108,716,159	202,211,333	451,037,373	457,905,610	-1%
Permitted Tariff (& other) Revenue	212,216,136	153,791,713	141,250,164	507,258,013	501,010,846	1%
Actual Regulated Supply Revenue	352,326,018	262,507,871	343,461,497	958,295,387	958,916,456	0%

Subsidy per kWh — 2020 Forecast / 2019 Outturn

(bz/kWh)	MEDC	MJEC	MZEC	Total	Total	Variance
Economic Cost	31.2	28.2	39.5	32.7	31.8	3%
Subsidy (Outturn)	12.4	11.7	23.2	15.4	14.9	3%
Customer Revenue	18.8	16.5	16.2	17.3	16.9	2%

Source: Company SCRCs, Authority calculations

PC	means the cost of bulk supply purchaces from PWP
TUoS	means Transmission Use of System costs
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2020 MIS Revenue & Subsidy Forecast

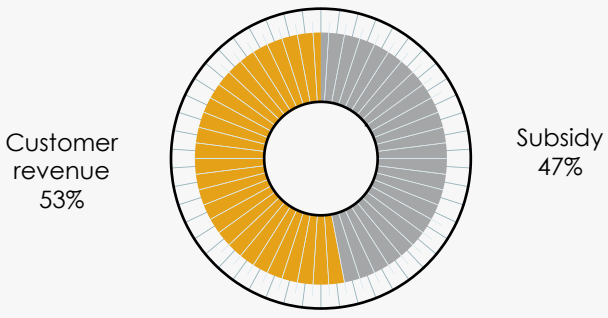

Table 3:2019 DPS Outturn Subsidy

Maximum Allowed Supply Revenue	2019 Outturn	2018 Outturn	
Rial Omani	Total	Total	% Change
PC (Energy cost)	61,320,435	55,825,213	10%
TUoS (Transmission cost)	8,547,384	6,084,649	40%
DUoS (Distribution cost)	26,711,848	24,815,902	8%
SB (Supply cost)	4,453,350	4,097,974	9%
LF (Licence fee)	98,227	99,614	-1%
KS (Correction factor)	1,393,025	321,668	333%
Maximum Allowed Supply Revenue	99,738,219	90,601,684	10%

Actual Regulated Supply Revenue	2019 Outturn	2018 Outturn	
Rial Omani	Total	Total	Variance
Approved Subsidy	48,114,983	44,411,294	8%
Permitted Tariff (& other) Revenue	55,951,345	47,559,591	18%
Actual Regulated Supply Revenue	104,066,328	91,970,885	13%
Outturn Subsidy Requirement	43,786,874	43,042,093	2%

Subsidy per kWh	2019 Outturn	2018 Outturn	
(bz/kWh)	Total	Total	Variance
Economic Cost	32.4	31.8	2%
Subsidy (Outturn)	14.2	15.1	-6%
Customer Revenue	18.2	16.7	9%

Source: Company SCRCs, Authority calculations

PC	means the cost of bulk supply purchaces from PWP
TUoS	means Transmission Use of System costs
DUoS	means Distribution Use of System costs
SB	means Supply Business costs
LF	means the Supply Business Licence Fees
KS	means the Supply Business Correction Factor
	All in relevant year t

2019 MIS Revenue and Subsidy Outturn

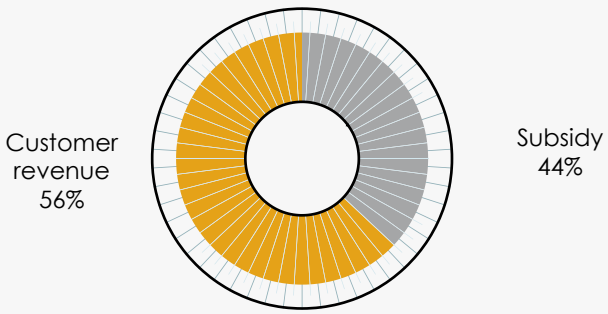

Table 4:2019 Outturn & 2020 Forecast DPS Subsidy

Maximum Allowed Supply Revenue	2020 Forecast	2019 Outturn	
Rial Omani	Total	Total	% Change
PC (Energy cost)	60,474,231	61,320,435	-1.4%
TUoS (Transmission cost)	8,737,326	8,547,384	2.2%
DUoS (Distribution cost)	33,433,012	26,711,848	25.2%
SB (Supply cost)	4,744,767	4,453,350	6.5%
LF (Licence fee)	120,092	98,227	22.3%
KS (Correction factor)	4,542,451	1,393,025	226.1%
Maximum Allowed Supply Revenue	102,966,976	99,738,219	3.2%

Actual Regulated Supply Revenue	2020 Forecast	2019 Outturn	
Rial Omani	Total	Total	Variance
Approved Subsidy	50,005,924	48,114,983	4%
Permitted Tariff (& other) Revenue	52,961,052	55,951,345	-5%
Actual Regulated Supply Revenue	102,966,976	104,066,328	-1%

Subsidy per kWh	2020 Forecast	2019 Outturn	
(bz/kWh)	Total	Total	Variance
Economic Cost	35.1	32.4	8%
Subsidy (Outturn)	17.1	14.2	20%
Customer Revenue	18.1	18.2	-1%

Source: Company SCRCs, Authority calculations

PC	means the cost of bulk supply purchaces from PWP
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	All in relevant year t

2020 DPS Revenue & Subsidy Forecast

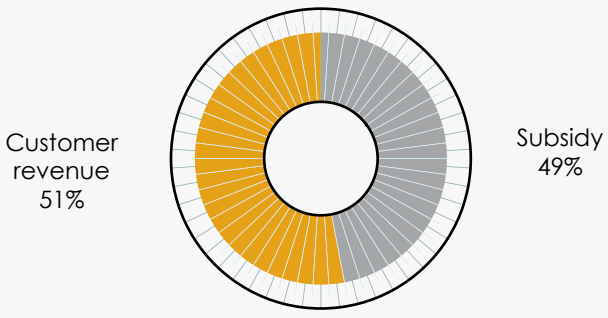

Table 5: 2019 RAEC Subsidy Outturn

Maximum Allowed Supply Revenue	2019 Outturn	2018 Outturn	
Rial Omani	Total	Total	% Change
MAGR (Generation cost)	102,700,948	90,695,567	13%
MANR (Networks cost)	28,369,285	27,070,326	5%
MASR (Supply cost)	5,664,150	5,227,552	8%
LF (Licence fee)	673,560	591,992	14%
K (Correction factor)	-1,934,808	-1,027,869	88%
Maximum Allowed Electricity Revenue	139,342,751	124,613,305	12%

Actual Regulated Supply Revenue	2019 Outturn	2018 Outturn	
Rial Omani	Total	Total	Variance
Approved Subsidy	118,667,119	102,507,104	16%
Permitted Tariff (& other) Revenue	22,320,648	20,204,520	10%
Actual Regulated Supply Revenue	140,987,767	122,711,624	15%
Outturn Subsidy Requirement	117,022,102	104,408,786	12%

Subsidy per kWh	2019 Outturn	2018 Outturn	
Rial Omani	Total	Total	Variance
Economic Cost	126.5	116.1	9%
Subsidy (Outturn)	106.2	97.3	9%
Customer Revenue	20.3	18.8	8%

Source: Company SCRCs, Authority calculations

PC	means the cost of bulk supply purchaces from PWP
TUoS	means Transmission Use of System costs
DUoS	means Distribution Use of System costs
SB	means Supply Business costs
LF	means the Supply Business Licence Fees
KS	means the Supply Business Correction Factor
	All in relevant year t

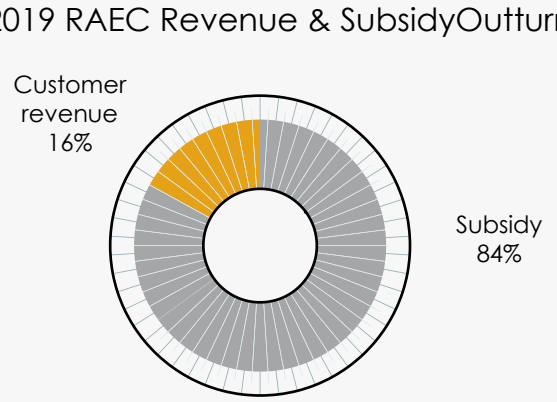

Table 6:2020 RAEC Subsidy Forecast

Maximum Allowed Supply Revenue	2020 Forecast	2019 Outturn	
Rial Omani	Total	Total	% Change
MAGR (Generation cost)	90,331,789	102,700,948	-12%
MANR (Networks cost)	29,101,333	28,369,285	3%
MASR (Supply cost)	5,826,258	5,664,150	3%
LF (Licence fee)	903,614	673,560	34%
K (Correction factor)	1,678,814	-1,934,808	-187%
Maximum Allowed Electricity Revenue	124,484,180	139,342,751	-11%

Actual Regulated Supply Revenue	2020 Forecast	2019 Outturn	
Rial Omani	Total	Total	Variance
Approved Subsidy	104,192,142	118,667,119	-12%
Permitted Tariff (& other) Revenue	20,292,038	22,320,648	-9%
Actual Regulated Supply Revenue	124,484,180	140,987,767	-12%

Subsidy per kWh	2020 Forecast	2019 Outturn	
Rial Omani	Total	Total	Variance
Economic Cost	119.3	126.5	-6%
Subsidy (Outturn)	99.8	106.2	-6%
Customer Revenue	19.4	20.3	-4%

Source: Company SCRCs, Authority calculations

PC	means the cost of bulk supply purchaces from PWP
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DUoS	means Distribution Use of System costs
SB	means Supply Business costs
LF	means the Supply Business Licence Fees
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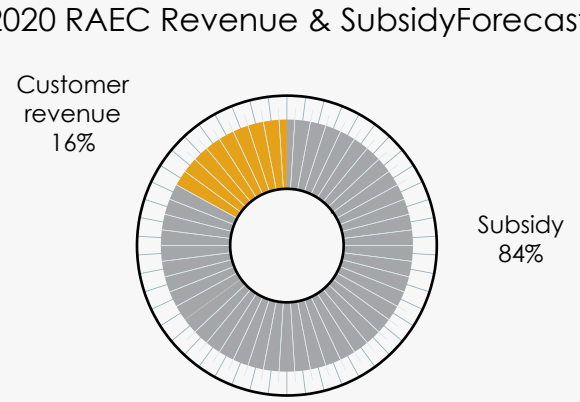
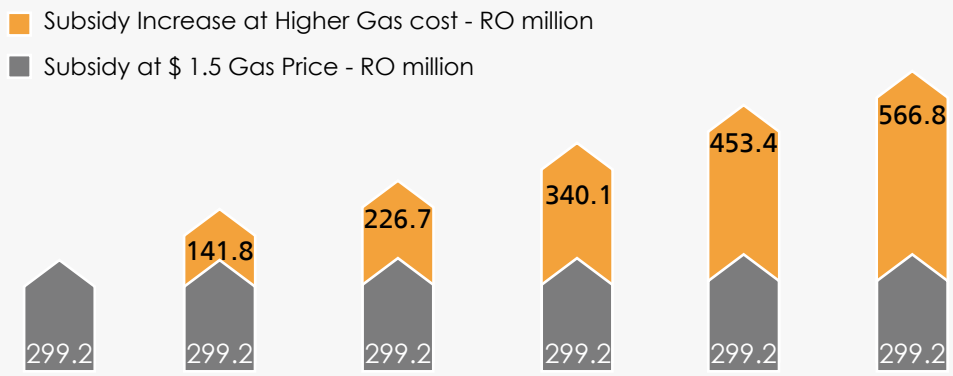
	All in relevant year t

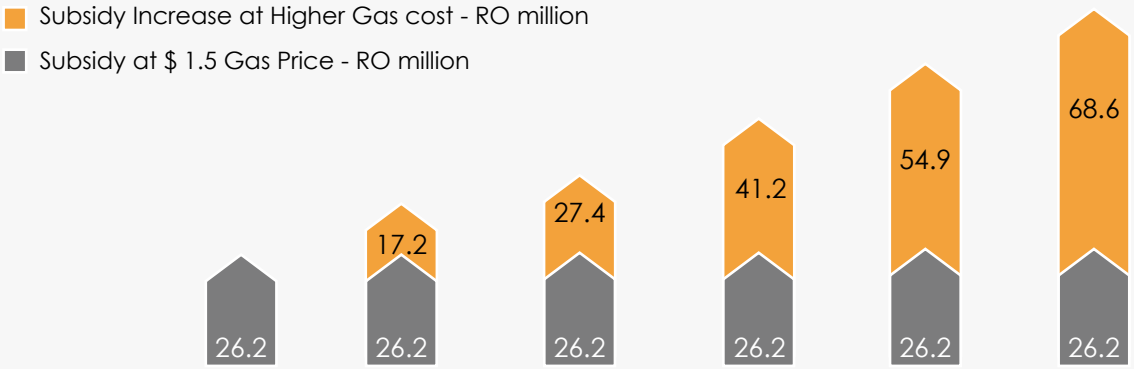


2019 MIS Electricity Subsidy (Gas Cost Sensitivities)



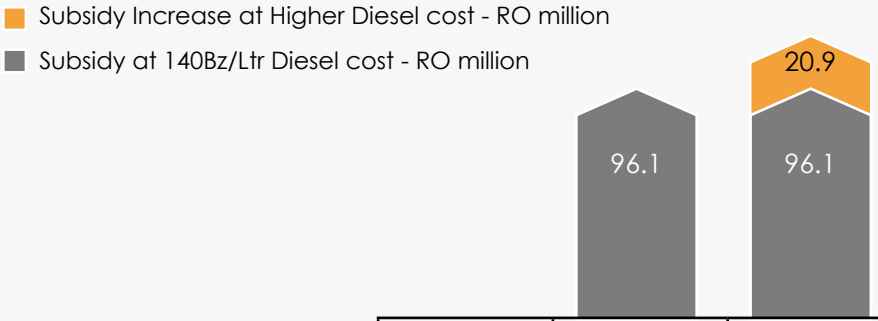
Subsidy per KWh	Bz/kWh 10.1	Bz/kWh 14.9	Bz/kWh 17.8	Bz/kWh 21.6	Bz/kWh 25.4	Bz/kWh 29.2
Subsidy	mRO 299.2	mRO 441	mRO 526	mRO 639.3	mRO 752.7	mRO 866
Gas Cost	mmBTu $1.5	mmBTu $3.28	mmBTu $4.5	mmBTu $6	mmBTu $7.5	mmBTu $9

2019 DPC Electricity Subsidy (Gas Cost Sensitivities)



Subsidy per KWh	Bz/kWh 8.7	Bz/kWh 14.2	Bz/kWh 17.6	Bz/kWh 22	Bz/kWh 26.5	Bz/kWh 31
Subsidy	mRO 26.6	mRO 43.8	mRO 54.1	mRO 67.8	mRO 81.5	mRO 95.2
Gas Cost	mmBTu $1.5	mmBTu $3.28	mmBTu $4.5	mmBTu $6	mmBTu $7.5	mmBTu $9

2019 RAEC Electricity Subsidy (Diesel Cost Sensitivities



Diesel Cost	140Bz/Ltr	237Bz/Ltr
Subsidy	40Bz/kWh	68Bz/kWh
Subsidy	118.4mRO	139.3mRO

Annex F

2020 Forward Work Programme

Table of Contents

1. Foreword
2. Statutory Functions and Duties
3. Consultation
4. Purpose of Forward Work Programme
5. Context & Content of 2020 Forward Work Programme
6. 2020 Work Priorities
7. Glossary of Terms

Foreword

The Authority for Electricity Regulation, Oman (hereafter referred to as the Authority) is responsible for regulating the electricity and related water sector in the Sultanate of Oman. The Authority was established pursuant to Article 19 of the law for the regulation and privatization of the electricity and related water sector (the 'Sector Law') promulgated by Royal Decree 78/2004.
Article 34 of the Sector Law requires the Authority to publish a Forward Work Programme prior to the commencement of each financial year, 1st January to 31st December, setting out the principal areas of work for the coming year.
Further information about the Authority and the structure and regulation of the electricity and related water sector in Oman is available for review on the Authority's website: www.aer.om

Statutory Functions and Duties:

The Authority has a range of statutory functions and duties that are set out in various sections of the Sector Law (see Article 22 of the Sector Law) that requires it to:

- secure the provision of electricity and related water services in Oman.
- promote competition in the electricity and related water sector.
- secure the safe, effective and economical operation of the electricity and related water sector in the public interest.
- protect the interests of customers, in particular those with limited income, the elderly and sick, to prepare criteria relating to the welfare of customers and to act in accordance with such criteria.
- secure compliance with government policy relating to the protection of the environment, Omanisation and Omani content.
- ensure the financial and technical capabilities of licensees and ensure companies operating efficiently can finance their activities.
- secure the conduct of fair and transparent competition for new capacity by the Oman Power and Water Procurement Company SAOC.
- facilitate the privatisation of the electricity and related water sector.
- Undertake an annual review on the scope for further liberalisation of the electricity and related water sector.
- prepare and maintain a public register of all matters relating to licenses and exemptions.

The Authority is also subject to important governance duties, including:

- not discriminating against, or showing undue preference to any person.
- acting consistently in treating similar cases and ensuring, so far as it is appropriate, that all licenses and exemptions for the same regulated activities are granted in substantially the same form.
- minimising, insofar as it is able to do so, the regulatory burden on licence holders and exemption holders.
- giving written reasons for its decisions.

All of the Authority's work, including that envisaged in the 2020 Forward Work Programme, must be conducted in accordance with these statutory duties.

Consultation

The Authority consulted on the draft 2020 Forward Work Programme and invited interested persons to submit comments and objections. The Authority responded to all comments and objections received in response to this consultation within thirty days of receipt as described above.

Purpose of Forward Work Programme:

The Authority's Forward Work Programme serves a number of purposes:

I. Publication of each Forward Work Programme provides notice to persons who may be affected by the programme, thereby affording them the opportunity to comment on proposals.
II. The Forward Work Programme is an important determinant of the Authority's costs (and licensees' fees) and, as such, is an important input in the development of the Authority's budget.
III. Publication of a Forward Work Programme reinforces transparency and accountability by allowing interested persons, such as licensees and the government, to ensure work planned for each subsequent year is consistent with government objectives and is aligned to the Authority's statutory functions and duties.

Each Forward Work Programme sets out a plan of work the Authority proposes to undertake in the coming year. During the course of the year, the Authority may need to reprioritise work in response to events and changing circumstances. As a result, it may therefore undertake work that was not included in a Forward Work Programme and be unable to undertake or complete items in the published programme.

Context and Content of 2020 Forward Work Programme:

The 2020 Forward Work Programme is the 15th programme published by the Authority since its establishment. All of the work items in the 2020 Forward Work Programme are additional to work undertaken by the Authority in the normal course of business. The 2020 Forward Work Programme anticipates the appointment of members by 1st May 2020. The programme therefore focuses on committed work streams, with no new initiatives as the present members consider it appropriate for any new initiatives to be approved by incoming members. The Programme also envisages expanding the regulatory scope of the Authority to include the regulation of the gas transmission network, water and wastewater sectors.

2020 Work Priorities:

The 2020 Forward Work Programme includes a number of general policy areas of work:

GP1 Integration of Gas Transmission Regulation:

The Authority expects the issuance of the legal framework to regulate the gas transmission network.

GP2 Integration of the Water and Wastewater Sector:

Following the decision issued by the Council of Ministers that the Authority assumes responsibility for regulating the Water and Wastewater Sector, the Authority will continue to coordinate with relevant entities on the restructuring of the sector. The restructuring is expected to be implemented in 2020, in advance of which the Authority will be required to:

a. Grant new licences to relevant companies to undertake the regulated activities.
b. Implement and approve new price controls and Bulk Supply Tariff arrangements for relevant companies.
c. Modify the licence of PWP to reflect the new market structure and regulatory arrangements.
d. Implement arrangements, pursuant to Article 18 of the Sector Law to calculate and secure the provision of electricity subsidies to licensed suppliers.

Other Areas of Work Planned for 2020

In addition to the areas of work outlined above, the Authority expects to progress other areas of work during 2020, including:

1. Environmental Audit of RAEC:

In 2019, the Authority undertook environmental audits of all network licensees except RAEC due to the special nature of their activities which requires expertise in diesel generation and desalination activities. The Authority is planning to conduct an environmental audit for RAEC in 2020 to ensure all companies in the network are covered.

2. Compliance Monitoring, Frameworks and Codes:

The Authority is planning to undertake an audit of licensee's reported performance in relation to the customer service incentive scheme.

The Authority is also planning to perform quarterly audits on the customer service key performance indicators of distribution companies.

3. Review of Smart Meter Cybersecurity Requirement:

The Authority intends to engage experts to develop the smart meter cybersecurity requirement to ensure that these requirements are captured in all digital smart meters.

4. Guaranteed Standards:

The Authority commenced preparation and implementation of the Guaranteed Standards scheme in 2019 with further enforcement measures being implemented throughout 2020.

5. Quality of Supply Indicators:

The Authority will start publishing and using the Quality of Supply indicators for the sector such as SAIDI, SAIFI, CAIDI and more. In order to have confidence in the accuracy and consistency pertaining to international standards requirements of the figures published by the licensees, the Authority plans to undertake an audit of the systems implemented by the Licensees. The Authority also will ensure there is an appropriate reporting framework of these figures from the licensees to them.

6. Wholesale Market Development:

The Authority intends to assess the potential for the liberalization of Oman Power and Water Procurement Company SAOC's purchasing monopoly and to develop an understanding of costs for new generation technologies and self-supply/ spill options. As a result of the decrease in prices of alternative power such as solar, and the implementation of CRTs, large users are actively investigating the potential for own generation capacity. This will give them the potential to spill-over into established distribution networks or the transmission system, or wheeling to other customers. The Authority needs to assess the scale of the issue and the potential impacts upon central dispatch, ancillary services and efficient economic purchasing.

7. Network Price Controls:

The Authority expects to commence a review of gas transmission price controls during early 2020 and to undertake a price control technical audit of the distribution companies and Rural Areas Electricity Company (RAEC) towards the end of 2020. The Authority will also continue to monitor the performance of licensees against price controls.

8. Sahim Project:

The Authority commenced the customer recruitment process for Sahim 2 throughout 2019 whilst finalizing the transaction documents required to execute Sahim 2. In addition to progressing the Sahim 2 tendering process in 2020, the Authority intends to launch a similar scheme to integrate solar PV systems within government buildings. This will expand the scope of Sahim and establish a transactional framework, including a funding mechanism, to install PV solar systems in government buildings.

9. Energy Efficiency:

In 2019, the Authority commenced the tendering process for the first tranche of the audit and retrofitting initiative for government buildings. This initiative will continue during 2020 with the tendering for the second and third tranches. The Authority also worked closely with the Ministry of Commerce and Industry (MoCI) to publish the first Omani standards for air-conditioners and intends to assist with the publication of the standards for four additional electrical appliances including refrigerators, water heaters, LED lights and washing machines during 2020. The Authority will also work closely with the Supreme Council of Planning to establish energy efficiency and green building codes.

Glossary of Terms

Licence	An authorization granted by the Authority to undertake one or more of the Regulated Activities stipulated in Article (3) of the Sector Law
OES	Oman Electrical Standards
Discos	The Distribution & Supply Licensees; Muscat Electricity Distribution Company SAOC, Majan Electricity Company SAOC, Mazoon Electricity Company SAOC and Dhofar Power Company SA
PAW	The Public Authority for Water established by Royal Decree 92/2007
Price control	A mechanism for determining the maximum allowed revenue a licensee can recover in each year from users of its services, as stipulated in a schedule charge restriction condition of a Licence
RAEC	The Rural Areas Electricity Company SAOC
Regulated Activities	The activities stipulated in Article (3) of the Sector Law
Sector Law	The law for the regulation and privatization of the electricity and related water sector promulgated by Royal Decree 78/2004 and amended by Royal Decree 59/2009 and Royal Decree 47/2013
Cyber Security	The tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance and technologies used to protect and safeguard SCADA and DCS systems from threats to the availability and integrity of those systems, and the confidentiality of data held by those systems and/or exchanged with other systems
The Authority	The Authority for Electricity Regulation, Oman, being the authority established pursuant to Article (19) of the Sector Law
System Average Interruption Frequency Index (SAIFI)	This index indicates how often the average customer experiences a sustained interruption over a predefined period of time.
System Average Interruption Duration Index (SAIDI)	This index indicates the total duration of interruption for the average customer during a predefined period of time.
Customer Average Interruption Duration Index (CAIDI)	CAIDI represents the average time required to restore service.