# annual report







PO Box 954, PC 133 Al Khuwair, Sultanate of Oman Tel: +968 24609700 Fax: +968 24609701 enquiries@aer-oman.org





His Majesty Sultan Qaboos bin Said



Members, Directors and staff of the Authority offer their sincere congratulations to His Majesty Sultan Qaboos bin Said and to the citizens of the Sultanate of Oman on the occassion of the 40th anniversary National Day celebrations.



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# **GLOSSARY OF TERMS**

COST-REFLECTIVE Tariff	Amounts charged by a Licensed Supplier for Supply where no Permitted Tariff exists, and where such tariffs are calculated each year on the basis and rules prescribed by the Authority;					
CCGT	Combined Cycle Gas Turbines					
CSP	Concentrated Solar Power					
DPC	The Dhofar Power Company SAOG					
EHC	The Electricity Holding Company SAOC					
ERWS	Electricity and Related Water Sector					
GCCIA	Gulf Cooperation Council Interconnection Authority					
IPO	Initial Public Offering					
Main Interconnected System or MIS	The interconnected systems of OETC, and the Muscat, Majan and Mazoon Discos					
Majan	The Majan Electricity Company SAOC					
Mazoon	The Mazoon Electricity Company SAOC					
MAR	Maximum Allowed Revenue					
MHEW	The Ministry of Housing, Electricity and Water					
Muscat	The Muscat Electricity Distribution Company SAOC					
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					
PAEW	The Public Authority for Electricity and Water					
PWP	The Oman Power and Water Procurement Company SAOC					
RAEC	The Rural Areas Electricity Company SAOC					
RO	Rial Omani					
ROP	Royal Oman Police					
SCRC	Schedule Charge Restriction Condition					
Salalah IWPP	The Salalah Independent Power and Water Project					
Sector Law	The law for the regulation and privatization of the electricity and related water sector promulgated by Royal Decree 78/2004 as amended by Royal Decree 59/2009					
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					





# CHAIRMAN'S FOREWORD

Oman's electricity and related water sector has experienced significant and sustained growth since the new market structure was implemented on 1 May 2005. In presenting our 2009 Annual Report, it is appropriate to acknowledge and highlight some of the main sector developments and achievements of the last five years:

- 1. Since 1 May 2005 the number of registered electricity customers has increased by over 100,000, reaching 630,767 in 2009;
- 2. Over the same period electricity Supply to customers increased by over 50% or 5 TWh to 14.5 TWh in 2009. To place this in context, 5 TWh is more than Muscat Electricity Distribution Company SAOC supplied in 2005;
- 3. Between 2005 and 2009 average electricity consumption per customer increased by 28% or 5,000 KWh. The annual rate of growth of electricity intensity is higher than the annual growth in customer connections. The Authority does not consider increases in electricity intensity of this magnitude to be sustainable and believes more needs to be done to promote energy efficiency;
- MIS electricity and related water sector production capacity has increased by 1,055 MW (42%) and 254,622 m<sup>3</sup>/day (92%) respectively since 1 May 2005 following the commissioning of the Sohar IWPP (590 MW and 134,622 m<sup>3</sup>/day) in April 2007 and the SMN Barka IWPP (680 MW and 120,000 m<sup>3</sup>/day) in November 2009;
- 5. Total electricity and related water sector employment (Direct and Contractor employees) increased by 35% from 4,796 to 6,494. Direct employment of electricity companies increased by 82% (from 1,080 in 2005 to 1,965 in 2009) with Omani nationals accounting for 74% of the increase;
- 6. There are welcome indications of improved efficiency: MIS losses declined from 25% in 2004 to just over 19% in 2009; gas required to generate 1 MWh at MIS production facilities declined from 378 Sm3 in 2005 to 329 Sm3 in 2009; and RAEC has increased the average kWh generated by a liter of diesel fuel from just over 3.36 kWh in 2005 to 3.48 kWh in 2009, a 3.6% increase;
- 7. Since 1 May 2005 the electricity sector has benefited from around 580 million Rial Omani of direct electricity subsidy and financial support: 425 million Rial Omani of MIS subsidy, 103 million Rial Omani of RAEC subsidy and 54 million Rial Omani of financial support for the Salalah System. Whilst the level of electricity subsidy has increased, on a per kWh basis MIS subsidy in 2009 (9.1 baisa per kWh) was lower than in 2006 (9.4 baisa per kWh) both in nominal and real terms. There is, however, strong upward pressure on subsidy due to the investment needed to accommodate demand growth and comply with policies such as undergrounding electricity cables and planning and security standards;
- 8. Electricity transmission and distribution systems benefited from 445 million Rial Omani of capital investment between 2005 and 2009, all of this investment was funded by government. Investment in new production facilities is funded by the private sector. Since 2005 private sector investment has funded a new Sohar IWPP and the SMN Barka IWPP. Further capacity funded by private sector investment will be provided by the Salalah IWPP when it commences operations in 2011, and two further IPP in Sohar (750 MW) and Barka (750 MW) that will commence early power operations in 2012;



9. Oman's electricity privatisation programme is widely regarded as the most successful in the region. In addition to fully funding new production facilities, the policy allows Omani citizens to share the benefits of privatisation through Initial Public Offerings (IPO) of shares sold through the Muscat Securities Market. Citizens have secured shares in the Dhofar Power Company SAOG (in May 2005) and the Sohar Power Company SAOC (in July 2008). Further IPO's are expected from the SMN Barka IWPP and Al Rusail. The government was itself a beneficiary of privatisation following the successful privatisation of the Al Rusail facility in December 2006.

Further details of electricity and related water sector activity in 2009 are presented in this the Authority's fifth Annual Report.

At the time of going to print the Sultanate was recovering from its second Tropical Cyclone (Phet) in 3 years (following Gonu in 2007). Cyclone Phet hit the east coast of Oman in early June causing considerable damage and disruption and some loss of life in the Muscat and Al Sharqia regions. The Authority extends its sincere condolences to all who suffered injury or loss as a result of the cyclone. The Authority wishes to acknowledge its appreciation for the way electricity sector companies worked to restore electricity supply in extremely adverse circumstances. A full assessment of damage caused by Cyclone Phet will be included in our 2010 report.

On behalf of Members and staff of the Authority I would like to express our gratitude to His Majesty Sultan Qaboos bin Said for his vision, guidance and leadership and to His Majesty's government for their continuing support.

**Dr. Saleh Al Alawi** Chairman Authority for Electricity Regulation, Oman



### **ELECTRICITY & RELATED WATER SECTOR ACTIVITY AND STATISTICS**

#### **Customer Accounts**

Registered electricity customer accounts in the Sultanate increased from 597,323 in 2008 to 630,767 in 2009, an increase of 5.6% (following a 4.7% increase in 2008). MIS customer accounts increased by 5.5% in 2009 (4.7% in 2008), RAEC customer accounts by 7.4% (6.2% in 2008) and Salalah system accounts by 6.2% (3.9% in 2008). Figure 1 and Table 1 of Annex C provide further details.

33,444 28,826 13,303 9,097 Net change in 6,426 3,231 1,387 Registered Customer Accounts: DPC Muscat Majan Mazoon MIS RAEC Oman 2008 to 2009 Main Interconnected System Rural Salalah Systems System Muscat Majan Mazoon MIS RAEC DPC Oman 2008 Accounts 184,073 124,572 218,069 526,714 18,851 597,323 51,758 2009 Accounts 130,998 231,372 630,767 193,170 555,540 20,238 54,989 13,303 1,387 3,231 33,444 net change in Accounts 9,097 6,426 28,826 % change in Accounts 4.9% 5.2% 6.1% 5.5% 7.4% 6.2% 5.6%

Figure 1: Registered Customer Accounts by Company – 2008 & 2009

Source: Company returns

The MIS contributed to 86% of the increase in total accounts (89% in 2008), RAEC 4% (unchanged from 2008) and DPC 10% (7% in 2008). Muscat, Majan and Mazoon accounted for 32%, 22% and 46%, respectively, of the increase in 2009 MIS accounts.

Residential accounts contributed to 78% of the 33,444 increase in total accounts, and Commercial accounts 16% of the increase. Government customers accounted for just 4% of new accounts.



#### **Electricity Supply**

Total electricity Supply to customers in the Sultanate in 2009 reached 14.5 TWh, a 12.7% increase on the 12.9 TWh supplied in 2008.

MIS Supply increased by 12.3% in 2009 reflecting growth in Supply by Muscat, Majan and Mazoon of 8.2%, 13.4% and 18.5%, respectively. RAEC Supply increased by 18.1% in 2009 and Supply from the Salalah Power System by 14.8%. Figure 2 and Table 2 of Annex C provide further details.



#### Figure 2: Electricity Supply by Company – 2008 & 2009

Source: Company returns

Figure 3 presents electricity Supply by tariff category for each of the three market segments in 2008 and 2009. Residential customers accounted for 54.7% of total 2009 Supply: 57% of MIS Supply, 52% of RAEC Supply and 40% of Supply from the Salalah Power System.

Commercial customers accounted for 19.8% of total Supply in 2009 and Industrial customers 8.1%. Supply to public sector accounts (Government and Ministry of Defence facilities) accounted for 15.9% of total Supply in 2009, continuing the downward trend noted in previous reports (19.1% in 2006, 17.3% in 2007, and 16.4% in 2008).



Figure 3: Electricity Supply by Tarff Category & System - 2008 & 2009

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Regions2008 WWh2009 WWh $2008$ WH $2008$ WH $2008$ WWh $2008$ WWh $2008$ WWh $2008$ WH $2008$ WWh $2008$ WWh $2008$ WH $2008$ WWh $2008$ WH		Main Inter	connected Syst	em	RAECF	tural Systems		Salalah F	Power System	
Residential $6,386,904$ $7,168,072$ $12\%$ $165,400$ $192,226$ $16\%$ $477,275$ $477,275$ Industrial $733,970$ $878,701$ $20\%$ $978,701$ $20\%$ $9246,153$ $246,153$ Industrial $2,281,355$ $2,581,121$ $13\%$ $3.3,072$ $48,239$ $30\%$ $246,153$ Commercial $2,281,355$ $2,581,121$ $13\%$ $14\%$ $10,053$ $148,239$ $30\%$ $246,153$ Agriculture & Fisheries $145,093$ $165,719$ $14\%$ $10,053$ $12,840$ $28\%$ $13,058$ Agriculture & Fisheries $11,735$ $21,736$ $2\%$ $10,643$ $10,672$ $0\%$ Hotels / Tourism $1,673,690$ $1,776$ $2\%$ $10,643$ $10,672$ $0\%$ Government $1,673,690$ $1,776$ $7\%$ $8,849$ $9,450$ $18\%$ Ministry of Defence $79,003$ $106,871$ $35\%$ $9,450$ $7\%$ $109,999$ Ministry of Defence $11,317,373$ $12,713,619$ $12\%$ $28,021$ $18\%$ $1,221,190$	Regions	2008 MWh	2009 MWh	% Change	2008 MWh	2009 MWh	% Change	2008 MWh	2009 MWh	% Change
Industrial $733,970$ $878,701$ $20\%$ $20\%$ $4,994$ $51\%$ $246,153$ Industrial $2,281,355$ $2,581,121$ $13\%$ $20\%$ $48,239$ $30\%$ $246,153$ Commercial $2,281,355$ $2,581,121$ $13\%$ $37,072$ $48,239$ $30\%$ $266,957$ Agriculture & Fisheries $145,093$ $165,719$ $14\%$ $14\%$ $12,063$ $213,058$ $213,058$ Agriculture & Fisheries $11,736$ $21\%$ $10,643$ $10,672$ $0\%$ $11,306$ Hotels / Tourism $1,673,690$ $1,736$ $2\%$ $10,643$ $10,672$ $0\%$ Government $1,673,690$ $1,736$ $7\%$ $89,600$ $18\%$ $1,731$ Ministry of Defence $79,003$ $106,871$ $35\%$ $8,849$ $9,450$ $7\%$ $85,017$ Motels / Toular $11,317,373$ $12,713,619$ $12\%$ $12\%$ $38,021$ $18\%$ $1,221,190$	Residential	6,386,904	7,168,072	12%	165,400	192,226	16%	477,275	558,074	17%
<b>Commercial</b> $2,281,355$ $2,581,121$ $13\%$ $13\%$ $37,072$ $48,239$ $30\%$ $206,957$ <b>Agriculture &amp; Fisheries</b> $145,093$ $165,719$ $14\%$ $14\%$ $14\%$ $21\%$ $21\%$ $21\%$ $21\%$ <b>Agriculture &amp; Fisheries</b> $145,093$ $165,719$ $14\%$ $14\%$ $10,053$ $12,840$ $28\%$ $21\%$ <b>Hotels / Tourism</b> $17,359$ $17,759$ $2\%$ $2\%$ $10,643$ $10,672$ $0\%$ $13,058$ <b>Government</b> $1,673,690$ $1,775,374$ $7\%$ $7\%$ $7\%$ $88,499$ $89,600$ $18\%$ $10,999$ <b>Ministry of Defence</b> $79,003$ $106,871$ $35\%$ $12\%$ $8,849$ $9,450$ $7\%$ $85,017$ $85,017$ <b>totals</b> $11,317,373$ $12,713,619$ $12\%$ </th <th>Industrial</th> <td>733,970</td> <td>878,701</td> <td>20%</td> <td>3,306</td> <td>4,994</td> <td>51%</td> <td>246,153</td> <td>291,655</td> <td>18%</td>	Industrial	733,970	878,701	20%	3,306	4,994	51%	246,153	291,655	18%
Agriculture & Fisheries 145,093 165,719 14% 10,053 12,840 28% 13,058 13,058   Hotels / Tourism 17,359 17,759 2% 10,643 10,672 0% 13,058   Government 1,673,690 1,775 7% 7% 76,219 89,600 18% 190,999   Ministry of Defence 79,003 106,871 35% 8,849 9,450 7% 85,017   Totals 11,317,373 12,713,619 12% 12% 368,021 18% 1,221,190	Commercial	2,281,355	2,581,121	13%	37,072	48,239	30%	206,957	240,725	16%
Hotels / Tourism 17,359 2% 10,643 10,672 0% 1,731   Government 1,673,690 1,795,374 7% 7% 76,219 89,600 18% 190,999   Ministry of Defence 79,003 106,871 35% 88,49 9,450 7% 85,017   totals 11,317,373 12,713,619 12% 136,021 18% 130,199	Agriculture & Fisheries	145,093	165,719	14%	10,053	12,840	28%	13,058	8,025	-39%
Government 1,673,690 1,795,374 7% 76,219 89,600 18% 190,999   Ministry of Defence 79,003 106,871 35% 8,849 9,450 7% 85,017   Totals 11,317,373 12,713,619 12% 12% 311,542 368,021 18% 1,221,190	Hotels / Tourism	17,359	17,759	2%	10,643	10,672	%0	1,731	1,579	%6 <del>-</del>
Ministry of Defence 79,003 106,871 35% 8,849 9,450 7% 85,017   Totals 11,317,373 12,713,619 12% 311,542 368,021 18% 1,221,190	Government	1,673,690	1,795,374	7%	76,219	89,600	18%	190,999	210,348	10%
Totals 11,317,373 12,713,619 12% 311,542 368,021 18% 1,221,190	<b>Ministry of Defence</b>	79,003	106,871	35%	8,849	9,450	7%	85,017	91,104	7%
	Totals	11,317,373	12,713,619	12%	311,542	368,021	18%	1,221,190	1,401,510	15%





#### **Electricity Supply per Account**

For the Sultanate as a whole, electricity intensity (MWh per account) increased by 6.7% from 21.5 in 2008 to 23 in 2009, please refer to Figure 4 and Table 3 of Annex C for details. MWh per account increased in most tariff categories, market segments and regions, confirming a general increase in electricity intensity throughout the Sultanate.



#### Figure 4: MWh Supplied per Registered Account – 2008 & 2009

	Muscat	Majan	Mazoon	MIS	RAEC	DPC	Oman
2008 MWh Supply/per Acct	29.5	21.3	14.9	21.5	16.5	23.6	21.5
2009 MWh Supply/per Acct	30.4	22.9	16.6	22.9	18.2	25.5	23.0
net change MWh S/per Acct	0.9	1.7	1.7	1.4	1.7	1.9	1.4
% change in MWh S/per Acct	3.1%	7.8%	11.6%	6.5%	10.0%	8.0%	6.7%

Source: Company returns

#### Electricity and Related Water Production – 2008 & 2009

Total gross electricity generation in 2009 reached 18.4TWh, 14.9% higher than in 2008, net generation (including PWP purchases) was 12.6% higher. Total related water gross production in 2009 declined by 0.6% to 113.3 million m<sup>3</sup> whereas related water net production increased by 16.4% to 116 million m<sup>3</sup>.

Gross MIS generation increased by 14.6% in 2009, RAEC generation for rural systems by 13.4% and generation for the Salalah Power System by 18%. 2009 MIS net related water production was 16.3% higher than in 2008 and RAEC net related water production 22% higher.

Figure 5 and Table 6 of Annex C present further details of gross and net electricity and related water production in 2009.







#### Figure 5: Electricity & Related Water Production by System – 2008 & 2009

Source: Company returns

#### **Gas Consumption**

Major electricity and related water production facilities consumed 5,931 million Sm3 of natural gas in 2009, 11.1% more than in 2008. Increased gas use reflects increases in gross electricity production and net related water production of 14.7% and 16.3%, respectively.

The efficiency of gas used for electricity and related water production continues to improve: the specific gas consumption of MIS connected facilities declined from 439 Sm3/MWh in 1995 to 356 Sm3/MWh in 2008, a 19% reduction, and in 2009 declined further to 329 Sm3/MWh. Figure 6 presents details of gas consumption at major production facilities in 2008 and 2009.





#### Figure 6: Gas Consumption at Major Production Facilities: 2008 and 2009

Source: PWP & Company returns

\* Wadi Jizzi Power Plant only, excludes OMCO units

#### Electricity & Related Water Sector Activity by Region - 2009

Figure 7 presents details of the regional distribution of electricity and related water sector activity in 2009.

Muscat Governorate continues to account for a significant share of the Sultanate's electricity and related water sector activity: 33% and 45% of gross electricity and related water production, respectively, 41% of total electricity Supply and 31% of registered accounts. However, Muscat Governorate's shares of sector activities are lower than in 2008 reflecting increased activity in other regions. For example, gross electricity production in South Batinah was 42.7% higher than in 2008, electricity generation in Al Wusta and Dhofar regions was 22.4% and 18.4% higher, respectively.

Increased electricity and related water sector activity across regions reflects the government's policy commitment to promote economic development in all regions of the Sultanate. The electricity and related water sector has a responsibility to ensure electricity is available to sustain and support this policy.

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Figure 7: Activity by Region (Production, Supply, Accounts and MWh per Account) - 2009

	Electricity P	roduction	Related Water	Production	Electricity Suppl	ly & Accounts	
Regions	MWh Gross	MWh Net	m3 Gross	m3 Net	MWh Supplied	Accounts	MWh per Account
Al Dahirah	516	470			499,291	30,922	16.1
Al Sharquia	1,336,465	1,314,631	763,000	751,250	1,134,625	82,899	13.7
AI Wusta	53,080	62,291	60,924	58,530	106,887	7,158	14.9
Al Burami					462,102	24,175	19.1
Dakhliyah	1,056,024	1,045,115			1,147,347	69,248	16.6
Dhofar	1,842,577	1,818,862	33,852	33,612	1,488,569	58,475	25.5
Musandam	217,547	203,731	54,529	51,037	174,075	9,594	18.1
Muscat	6,094,587	5,860,263	51,398,766	50,463,598	5,866,087	193,170	30.4
North Batinah	4,091,527	4,029,253	32,380,178	30,319,312	2,043,473	75,901	26.9
South Batinah	3,752,974	3,488,464	28,571,394	32,146,085	1,560,695	79,225	19.7
Totals	18,445,297	17,823,080	113,262,643	113,823,424	14,483,151	630,767	23.0



**Electricity Accounts 2009** 

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#### **System Losses**

Technical and non-technical losses accounted for 18.9% of total units entering electricity systems in the Sultanate in 2009, a marginal improvement on the 19% losses in 2008. 2009 MIS losses reduced to 19.1% from a corrected 19.4% in 2008, RAEC losses declined to around 10% whereas losses from the Salalah Power System increased from 16.9% in 2008 to 19.2% in 2009 as a result of operating the system in stressful conditions.

The Authority views system losses as a performance indicator of efficiency. Figure 8 confirms annual reductions in MIS losses since 2005: while these reductions are welcome the rate of reduction is slower than expected.





Source: Pre restructuring data from MHEW reports, post restructuring data from the Authority

Between 1997 and 2004 (pre-restructuring) MIS equivalent losses increased steadily from 17.4% to 24.6%. Over the same period, electricity purchases (net MWh entering systems) increased by 70% and Supply to customers by 55%. Had the trend increase in MIS losses between 1997 and 2004 continued through to 2009, MIS losses in 2009 would have reached 30%, over ten percentage points higher than actual MIS losses in 2009. Between 2004 and 2009 MIS losses fell from 24.6% to 19.1%, a 16% reduction in the losses rate whereas electricity purchases increased by 52% and Supply to customers by 63% over the same period. Figure 9 summarises these performance measures pre and post electricity sector restructuring.





#### Figure 9: Change in MIS Purchases, Supply and Losses rate pre and post restructuring

Source: Pre restructuring data from MHEW reports, post restructuring data from the Authority

The Authority considers the losses reductions to be a direct result of the electricity sector restructuring, an indication of improved efficiency and a source of significant cost savings.

The Authority has set an intermediate 2011 MIS losses target of 14%, this is shown in Figure 8. From 2009 the new price controls of Muscat, Majan and Mazoon do not provide subsidy for actual losses above agreed benchmarks. Licensees have a clear and strong incentive to reduce losses as they retain the financial benefits of reducing actual losses by more than the benchmark amounts but are penalised if they fail to meet the benchmarks.

The Authority has a long term target for MIS technical losses of 7% to 9%.



#### System Peak Demands: MIS and Salalah Power System

Figure 10 presents monthly MIS peak demands in 2008 and 2009.

#### 2009 Peak: 3614 MW (June) 2008 Peak: 3139 MW (May) 2008 Peak: 3139 MW (May) 48°C 40°C 36°C 36°C 30°C 40°C 48°C 40°C 38°C 45°C 38°C 38°C 36°C 32°C 30°C 30°C 30°

	2008 Peak MW	2009 Peak MW	% change	Temp <sup>o</sup> C at times of 2009 Peak MW
Jan	1,198	1,330	11%	27
Feb	1,199	1,623	35%	36
Mar	1,755	2,146	22%	30
Apr	2,316	2,554	10%	40
May	3,139	3,546	13%	48
Jun	3,122	3,614	16%	40
Jul	2,989	3,429	15%	38
Aug	2,855	3,476	22%	45
Sep	2,958	3,217	9%	38
Oct	2,592	2,811	8%	36
Nov	1,991	2,089	5%	32
Dec	1,421	1,656	17%	32
Max MW	3,139	3,614	15%	

Source: OETC

Figure 11 presents Salalah Power System monthly peak demands in 2008 and 2009.



#### Figure 11: Salalah Power System Peak Demand - 2008 & 2009

Figure 10: Main Interconnected System Peak Demand - 2008 & 2009

	2008 Peak MW	2009 Peak MW	% change	Temp <sup>°</sup> C at times of 2009 Peak MW
Jan	160	167	4%	25
Feb	162	192	19%	23
Mar	191	229	20%	26
Apr	236	265	12%	31
May	255	297	17%	34
Jun	260	294	13%	31
Jul	221	291	32%	28
Aug	203	269	32%	26
Sep	229	254	11%	27
Oct	237	262	11%	28
Nov	192	242	26%	26
Dec	186	219	18%	26
Max MW	260	297	14%	

Source: DPC SAOG



#### New Capacity in 2009

MIS net electricity generating contracted capacity increased to 3,700MW in 2009 following full commercial operation of the SMN Barka facility that provides 680MW of net power capacity and 120,000 m3 per day of desalination capacity.

RAEC continues to expand its operations in rural areas and in 2009 commissioned a new 1.9 MW production facility in Dhafrat in Al Wusta.

#### **Electricity & Water Sector Ownership**

In 2009 the Electricity Holding Company SAOC acquired a 54% shareholding (10.6 million shares) in the Dhofar Power Company SAOG leaving private shareholders with 11% of DPC shares and 35% traded on the Muscat Securities Market. The Authority hopes EHC's shareholding will facilitate the anticipated restructuring of the Salalah Concession Agreement to align the electricity market in Salalah with the market structure elsewhere in Oman.



#### Figure 12: Electricity & Related Water Sector Ownership - 2009

The ownership structure of the electricity and related water sector at the end of 2009 is as shown in Figure 12.



#### **Approved Projects and Capital expenditure**

Licensed system operators (OETC, Muscat, Majan, Mazoon and RAEC) approved 381 new projects in 2009, with a total value of 177 million RO. Figure 13 presents details of approved projects by Licensee, region and value.

				Company				
Region		OETC*	Muscat	Majan	Mazoon	RAEC	Totals	% Tota
Al Dahirah	RO	27,277,094		1,695,866		461,936	29,434,896	16.6%
Al Sharqiya	RO	1,388,961			4,362,010	1,605,688	7,356,659	4.1%
Al Wusta	RO					38,584,205	38,584,205	21.7%
Dakhiliya	RO				5,805,624	404,220	6,209,844	3.5%
Dhofar	RO					8,913,449	8,913,449	5.0%
Musandam	RO					1,748,027	1,748,027	1.0%
Muscat	RO	30,058,492	14,152,139			377,436	44,588,067	25.1%
North Batinah	RO	159,100		4,487,836			4,646,936	2.6%
South Batinah	RO	26,323,032			5,001,655		31,324,687	17.7%
Other**	RO			146,631	4,446,622		4,593,253	2.6%
Total Value:		85,206,680	14,152,139	6,330,332	19,615,911	52,094,961	177,400,023	
% of Total		48.0%	8.0%	3.6%	11.1%	29.4%		
Number of Proje	cts	23	77	49	160	72	381	

#### Figure 13: Project Approvals by Licensees in 2009

Source: Company returns

\* Projects are categorised in the region where the project will commence

\*\* Other: includes material costs and any other costs that are not specific to one region

OETC accounts for 48% of approved projects by value, the highest share of all Licensees, followed by RAEC (29%), Mazoon (11%), Muscat (8%) and Majan (4%).

In terms of regional investment, the 44.6 million RO of investment in the Muscat region accounts for 25% of total approved projects by value.

All regions will benefit from the electricity sector investments approved in 2009 confirming the widespread scope of electricity related activities throughout the Sultanate.



#### **Employment & Omanisation**

The Authority undertakes an annual survey of electricity and related water sector employment and Omanisation. This section presents information from the 2009 survey on Direct and Indirect (contractor) employment by entity, by grade, by regulated activity and region, and nationality (Omani nationals and expatriates).

Total sector employment (Direct and Indirect) in the electricity and related water sector is increasing in line with demand and output. Total employment has risen from 5,101 in 2005 to 6,494 in 2009, a 27% increase. Total sector employment was 4.1% higher in 2009 than in 2008, see Figure 14.

			2008			2009		
Туре	Function	Omani	Expatriate	Total	Omani	Expatriate	Total	
Direct	Admin & Supervisory	419	44	463	597	58	655	
	Managerial	120	46	166	113	44	157	
	Operations	310	117	427	142	44	186	
	Technical	626	178	804	643	190	833	
	Others	91	4	95	130	4	134	
Direct Total		1,566	389	1,955	1,625	340	1,965	
Contractor	Admin & Supervisory	494	175	669	554	214	768	
	Managerial	39	85	124	41	72	113	
	Operations	905	214	1,119	903	363	1,266	
	Technical	466	1,100	1,566	501	1,173	1,674	
	Others	693	113	806	547	161	708	
Contractor	Total	2,597	1,687	4,284	2,546	1,983	4,529	
Total Emplo	oyment	4,163	2,076	6,239	4,171	2,323	6,494	
% Change	on 2007				-2.0%	17.5%	4.1%	

#### Figure 14: Total ERWS Employment by Type and Function – 2008 & 2009

Source: Authority 2009 employment survey

Figure 15 shows the Omanisation share of Direct and Indirect employment in 2009.

#### Figure 15: ERWS Employment & Omanisation – 2009

	Omani	Expatriate	Total	% Omani
Direct Employees	1,625	340	1,965	83%
Indirect Employees	2,546	1,983	4,529	56%
Total Employees	4,171	2,323	6,494	64%



Source: Authority 2009 employment survey



Omani nationals accounted for 83% of total Direct employment in 2009 (80% in 2008), and 56% of Indirect employment (61% in 2008) equating to a sector Omanisation rate of 64%, 3 percentage points lower than the 67% rate of sector Omanisation in 2008.

The Authority's annual employment survey highlights changes in the underlying composition of electricity and related water sector employment, see Figure 16:

- Direct employment accounted for 30% of total sector employment In 2009, and Indirect employment 70%;
- There was a net increase in total employment of 255 in 2009;
- The reduction in OETC employment reflects lower Indirect employment (69 fte) and higher Direct employment (25 fte), with 75% of the increase in Direct employment attributable to Omani nationals;
- The 262 net increase in Distribution and Supply employment reflects a 12% increase in Indirect employment (from 1812 to 2032) due to the increased number of projects being implemented by these licensees; and
- Distribution and Supply licensees accounted for 74% of the increase in 2009 total employment, RAEC accounted for 21% of the increase.

#### Figure 16: Employment & Omanisation by Activity – 2009

Employment by Activity	Omani	Expatriate	Total	% Omani
Production (Gen/Desal)	489	430	919	53%
PWP SAOC	38	11	49	78%
Transmission & Dispatch	410	142	552	74%
Distribution & Supply	2,379	1,142	3,521	68%
Dhofar Power Company	215	115	330	65%
RAEC SAOC	640	483	1,123	57%
Totals	4,171	2,323	6,494	64%

#### Change in Total Employment by Activity: 2008 to 2009

2009 Omanisation By Activity



Source: Authority 2009 employment survey

The Authority extended the 2009 employment survey to collect information on Direct employment issues such as female participation, employee turnover, retention rates, spending on training and recruitment challenges. Survey findings are summarised in Regulatory Focus #1of this report and a full tabular presentation of 2009 ERWS employment is presented in Annex F.



#### **Electricity & Related Water Sector Issues - 2009**

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**Audits** 

The Authority participated in a number of overseas visits in 2009:

- 1. In June 2009 the Authority's Executive Director travelled to Seoul as a guest of the Korean overseas trade association (KOTRA) to meet Korean companies seeking renewable energy related investment opportunities in Oman;
- 2. Between the 18th to 21st October 2009 Qais Al Zakwani, the Authority's Deputy Executive Director, attended the World Forum on Energy Regulation in Athens, Greece. The Forum attracted high level and experienced regulators from many countries to discuss the further development of independent utility regulation and the role customers play as a market driver of energy demand and services in developed countries; and
- 3. In November 2009 the Authority joined an Oman delegation participating in the Third Concentrating Solar Power Summit in Seville, Spain. The visit provided valuable insights to approaches adopted by other countries to promote large scale solar projects.

#### Environmental Audits

During 2009 the Authority conducted environmental audits of OETC, Muscat, Majan and Mazoon. The audits, led by a specialist consultant (WSP) and supported by the Technical Directorate, reviewed the environmental management functions of each business, and compliance with environmental laws and regulations. The audits identified a generally low level of environmental awareness and compliance for each Licensee. The audit reports provided to Licensees included guidance and recommendations for improvement. The Authority will follow up and monitor Licensee compliance with each of the respective audit findings throughout 2010.

#### **Health and Safety Audits**

The Authority retained an experienced and independent consultant (KEMA) to conduct rigorous and thorough Health and Safety (HSE) audits of Muscat and RAEC. The HSE audits scrutinised each Licensee's Health and Safety Culture at all levels and included meetings with the Board Chairperson, senior management, and safety managers and officers in the field. The audits reviewed all safety documents including HSE Policies, rules, procedures, plans, equipment standards, etc. Documentation was assessed against HSE laws and regulations. Audit conclusions for Muscat and RAEC are summarized below.

#### **Muscat HSE Audit 2009**

The Audit concluded Muscat was not complying with its Health and Safety obligations under relevant laws and the company's Licence. A key conclusion was that certain failings exposed the public, Muscat staff and contractors to unacceptable risks. The audit report included 44 detailed recommendations in the form of 9 immediate actions, 17 short term actions and 18 longer term actions.

#### **RAEC HSE Audit 2009**

The Audit concluded RAEC was not complying with its Health and Safety obligations under relevant laws and the RAEC Licence. A key conclusion was that certain failings exposed the public, RAEC staff and contractor's to unacceptable risks. The audit found that some power plant and equipment RAEC inherited from MHEW did not comply with modern safety practices, rules and legislation and that RAEC was developing new stations using outdated and inappropriate designs. The Audit report included 43 detailed recommendations in the form of 13 immediate actions, 19 short term actions and 11 longer term actions.



#### Follow up of corrective actions

The Authority agreed action plans with Muscat and RAEC to implement corrective actions and holds monthly meetings with each Licensee to monitor the implementation of the action plans. In addition to providing support to each Licensee, the meetings ensure a strong focus is maintained on key HSE issues.

The Authority investigated three fatal incidents during 2009.

#### **Incident near Al-Harthy Complex on 27 September 2009**

At around 03:00 on the 27th of September 2009 a workman was found dead near a structure supporting flood lights on the Federici Stirling Batco L.L.C site near the Al Harthy Complex in Qurum. The Authority was asked by the Public Prosecution Office to investigate the incident. The investigation found that the electrical system was poorly installed and did not comply with Oman Electrical Standard OES 4. Additional flood lights installed on the site were mounted on a metal structure that was live at 240 V. The workman received an electric shock following contact with that structure.

The Authority issued its report to the Public Prosecution Office and in light of the investigation findings is considering options for monitoring and enforcing OES compliance on construction sites. The Authority asked the Oman Society of Contractors to remind its members of the obligation to comply with Oman Electrical Standard 4 (requiring electrical wiring at construction sites to be implemented in a safe manner).

#### Lima Incident at Lima on 21 November 2009

At around 09:00 on 21 November 2009 on a RAEC network in Lima, Khasab two linemen from United Engineering Projects were connecting a new customer from a nearby Low Voltage overhead line. The lineman fell from a pole sustaining fatal injuries. The Authority initiated a formal investigation and informed the Public Prosecution Office. The investigation found that the deceased had been wearing a safety belt but had at some point un-strapped it from the pole. The autopsy found no physical evidence of electrocution and the cause of the fall could not be determined. The investigation identified shortfalls in the management of Health and Safety within RAEC and noncompliance with RAEC Safety Rules.

The Authority issued its report on 15 February 2010 and sent a copy to the Public Prosecution Office.

#### Incident at Liwa, Al Zahiyah on 20 December 2009

On 20 December 2009 in the village of Al Zahiyah in Liwa on the Majan network a 17 year old boy was electrocuted following contact with a live suspended stay wire that had become disconnected from its ground connection and touched live parts of a Drop out fuse terminal. The Authority initiated a formal investigation into the incident. The time at which the stay wire became disconnected from its ground connection could not be established. However, the investigation concluded that the Oman Electrical Standards did not provide sufficiently clear guidance on the design criteria for determining the location of stay insulators. This incident also highlighted how vandalism can compromise the safety of electrical assets. The investigation identified some post incident failures by Majan in relation to compliance with the Majan Safety Rules and the Distribution Code.

The Authority issued its investigation report on 1 February 2010 following which the Public Prosecution Office filed charges against a Majan Operation Engineer.

# Fatal Incident investigations



#### Seeb Main blackout Incident 29 April 2009

A fault on 132/33kV transformer #1 at Seeb Main grid station resulted in a major loss of supply to customers in Seeb on the evening of 29 April 2009. The Authority investigated the incident and found that the failure was due to an internal transformer fault that could not easily be repaired, forcing OETC to replace the transformer. OETC did this in less than three and a half days, during which OETC and Muscat shifted load to other substations to avoid further load shedding. The Authority's investigation report recognised OETC's impressive performance when replacing the damaged transformer, but highlighted deficiencies in the operation and maintenance procedures followed.

#### Fire at Bousher Grid Substation: 19 October 2009

On 19 October 2009 a fire broke out at 3:20 am at Bousher Grid Substation resulting in a complete loss of electricity Supply to areas served by 8 Muscat primary sub stations affecting 19,000 customers. Emergency services attended the scene and the fire was extinguished by 8:30 am. The fire destroyed one of the three transformers at the grid sub-substation. Damage to 132 kV cables delayed the return to service of two transformers that were undamaged. OETC and Muscat worked quickly to restore Supply. The Ansab Sewage Treatment Plant and the Ministry for Defence allowed their diesel units to generate and Supply customers in affected areas. The Authority is extremely grateful for this cooperation.

#### OETC Incidents at Al Ghubrah on 28 October 2009 and 8 November 2009

On 28 October 2009 a fault on the OETC transmission system resulted in Al Ghubrah power station becoming disconnected from the grid causing supply interruptions to customers in the Ghubrah area. Approximately 60 MW of demand was shed during the incident. On 8 November, an attempt by OETC to reenergise the feeder damaged in the first incident resulted in widespread Supply interruptions in Muscat, and the disconnection of transmission plant and generation as far away as Barka and Jahloot. The Authority engaged a specialist consultant (Vector Power Solutions) to investigate both incidents, and any latent deficiencies in the design, operation and maintenance of the OETC network that may have contributed to the failures.

The investigation identified several problems, including protection design problems that had remained dormant in the system since being commissioned by MHEW, operational issues, and resourcing issues within the OETC protection department. Initial recommendations for immediate short-term corrective actions were sent to OETC on 16 December 2009. The Authority presented the investigation findings to the OETC Board and senior management on 22 February 2010.

The "Summer 2009 Executive Task Team" (ETT-2009) worked to minimize the risk of power supply interruptions during summer 2009. The ETT-2009 helped secure full generating capacity from the SMN Barka II power plant before 2009 summer peak demand and the installation of reactive compensation at various locations on licensed systems.

Executive Task Team Summer 2010 In June 2009 the Authority established an Executive Task Team (ETT-2010) chaired by the Executive Director of the Authority and senior management representatives of Licensees and PAEW. The ETT's principal remit is to identify actions to be taken by Licensees to safeguard the security of electricity supply in 2010 and 2011. No new IPP / IWPP MIS contracted capacity will be commissioned in 2010 and 2011 and as electricity demand growth remains strong, the Authority is concerned that a shortfall of firm generation capacity may have serious implications for system security and electricity supply. In November 2009, the Authority appointed a consultant (SKM) to identify locations where generation could be safely installed before May 2010. OETC prioritised sites to secure maximum benefit to the total system and PWP floated a tender for 117MW of temporary generation at the selected sites in 2010.



PAEW	Two laws promulgated in 2009 confirmed the functions and duties of PAEW and it relationship with the Authority:		
	1. Royal Decree 58/2009 confirms the rules applicable to PAEW, its objectives, management structure and financial system; and		
	2. Royal Decree 59/2009 amends certain provisions of the Sector Law, as follows:		
	I. A Strategic Investment Decision is defined as a PAEW decision requiring investment in regulated activities in the public interest;		
	II. Research and Development Projects are defined as experimental research projects related to regulated activities to assist the introduction of new technologies;		
	III. An amendment to Article (25) of the Sector Law requires the Authority to respond to PAEW requests for consultation and support for the restructuring of the unrelated water sector; and		
	IV. An amendment confirming PAEW's right to approve and publish criteria for Research and Development Projects after coordination with the Authority. The Authority is required to consult with Licensees and Exemption Holders who may be affected by a Research and Development Project and assist the implementation of such projects (see Article (122) of the amended Sector Law).		
Renewable Energy & Energy Efficiency Seminar	In May 2009 the Authority hosted seminars on Renewable Energy (10th & 11th May) and Energy Efficiency (12th May) at the Al Bustan Palace hotel in Muscat. The renewable energy seimnar was opened by HE Mohammed Nasser Al Khasibi, Secretary-General MNE and the energy efficiency seminar by HE Mohammed Al Mahrouqi, PAEW Chairman.		
	The seminars included presentations by international experts and workgroup discussions that focused on practical aspects of energy efficiency and renewable energy initiatives successfully implemented in other jurisdictions. The seminars brought together international industry experts, members of the public, policy makers and government officials as well as private sector developers (photographs of the event are shown in Annex E).		
	The seminars highlighted a number of important renewable energy initiaties that follow recommendations in the Authority's 2008 renewable energy study: the Authorty announced details of its pilot project initiative whereby developers were invited to present proposals for hybrid renewable-diesel projects connected to a RAEC rural system. PAEW confirmed the appointment of international consultants to conduct a feasibility study for what would be the Sultanate's first large solar project. Results of the fesibility study are expected to be presented to PAEW in 2010.		
Water Sector Restructuring	On 2 June 2009 at its session 18/2009 the Council of Ministers approved recommendations for the future restructuring and regulation of the water sector. The Council confirmed the respective roles and responsibilities of the Ministry of Regional Municipalities and Water Resources, the Public Authority for Electricity and Water, the Electricity Holding Company SAOC and the Oman Power and Water Procurement Company SAOC. The Authority was assigned a number of important responsibilities including the role of water sector regulator responsible for the issuance and implementation of regulatory systems pertaining to cost recovery mechanism, quality of service and consumer relations.		



PAEW Consultation on a possible coal IWPP	In June 2009 PAEW initiated consultation on the possible implementation of a coal fired IWPP in Oman. In its response to the consultation the Authority agreed with PAEW that a decision to proceed with a coal IWPP should consider the environmental implications and how environmental compliance costs might increase the economics of coal fired generation. The Authority proposed that the electricity water sector be afforded a higher priority in gas allocation decisions as this would help avoid the need to use coal in the medium term.
Public Consultation: Cost Reflective Tariffs	In October 2009 the Authority initiated public consultation on proposals for Cost Reflective Tariffs for large consumers of electricity. The Authority is considering responses to the Consultation (including from public and private sector entities, electricity consumers and potential investors) and remains committed to implementing Cost Reflective Tariffs as soon as possible. Few changes are envisaged to the tariff proposals outlined in the Consultation Paper. The Authority expects to publish a consolidated response to all consultation responses and its final tariff proposals in 2010.
Renewable Energy Initiative: Pilot Projects	In 2008 the Authority published a Renewable Energy Study that confirmed the availability of solar and wind energy resources in the Sultanate. The Authority accepted a Study recommendation for pilot projects in rural locations presently supplied by RAEC diesel generation and invited developers to submit pilot project proposals.
	During 2009 the Authority received and evaluated proposals from 12 developers for a total of 35 pilot projects with potential aggregate capacity of around 48.7 MW: 2 wind projects with total capacity of 4.7 MW and 33 solar projects with aggregate capacity of 44 MW. Proposals were submitted by Omani entities, and developers from Japan, Turkey, South Korea, Holland, Germany, and the United States.
	In April 2010 the Authority published a shortlist of six pilot projects (see www.aer-oman.org for details) and is discussing their implementation with RAEC and project developers. The Authority is grateful to RAEC for the valuable assistance and support provided to developers during the evaluation process.
Oman Youth Summit	Between the 7th and 9th December 2009, the Deputy Executive Director attended the first Oman Youth Summit at the Al Nahda resort in Barka to participate in a discussion about energy diversity and security.
RAEC Electrification Funding	Article (87) of the Sector Law provides a mechanism by which the Authority approves funding for rural area electrification. No applications were submitted by RAEC for electrification funding in 2005 and 2006, since when the RAEC Board and management have submitted requests for 41 electrification projects with a total value of 81 million RO. The Authority has confirmed Article (87) approval for 15 projects with a total value of 60 million RO (74% of requested funding) of which 49 million RO provided RAEC with funding for a new 70 MW diesel station and distribution system in Al Duqum.



# **REGULATORY FOCUS #1: EXTENDED DIRECT EMPLOYMENT SURVEY**

To mark the fifth year of the new electricity and related water sector structure the Authority extended the scope of its annual employment survey to gather additional information on Direct employment issues such as female participation, staff turnover and employment duration, skill shortages and staff training expenditure. The Authority retained Arabian Research Bureau LLC ("ARB"), an Oman based research organisation, to design a survey questionnaire and help analyse results. The survey focused on Direct employment only (not contractors) and secured responses from 15 companies (14 licensees and DPC SAOG) for the period 1st October 2008 to 31st September 2009.

This Regulatory Focus highlights some Survey results, a fuller assessment of Survey results will be published later in 2010.

#### **Female participation**

Female participation in the electricity and related water sector is extremely low: in 2009 147 Females accounted for just 7.4% of total Direct employment, 8.3% of all Omani employees and 6.8% of Expatriate employees (see Figure 17).



#### Figure 17: Female Employment by Job Function & Nationality

Source: 2009 extended Direct employment survey & ARB/Authority analysis

93% of Female employees occupy Administrative and Supervisory positions, accounting for 20.8% of all Administrative and Supervisory positions and 21.3% of Omani Administrative and Supervisory employees. Technical positions account for 4% of Female employment and Managerial positions just 2% of Female employment.





#### **Staff Turnover**

The Survey defined Staff Turnover as the number of leavers (both voluntary and involuntary) in a twelve month period as a percentage of average employees in the same period. ARB advised the Authority that turnover rates in excess of 10% could indicate problems retaining staff. The Survey returned an average sector Staff Turnover rate of 5%, with considerable variation by Job Function and Regulated Activity, see Figure 18.



Figure 18: Staff Turnover Rates: by Job Function & Activity

Source: 2009 extended Direct employment survey & ARB/Authority analysis

By Job Function, Staff Turnover is highest in Operations (11%) and Management (7%). By Regulated Activity Staff Turnover is highest in Production activities (10%) and lowest in PWP Procurement activities (2%). As shown in Figure 19 the Survey highlighted different turnover rates for Omani and Expatriate graduate and non-graduate employees.



**Figure 19: Turnover Rates for Graduates and Non Graduates** 

Source: 2009 extended Direct employment survey & ARB/Authority analysis

Expatriate Staff Turnover is higher than Omani for both graduates and non graduates. Graduate Staff Turnover at 7% is only slightly higher than the average sector Staff Turnover rate of 5%.

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#### **Employment duration of Leavers**

The Survey provided information on the duration of employment of employees who left positions between October 2008 and September 2009.



#### **Figure 20: Employment Durations of Leavers**

Source: 2009 extended employment survey & ARB/Authority analysis

Figure 20 indicates that 12% of Omani and expatriate employees left positions after employment durations of 12 months or less. Around 37% of Omani leavers had employment terms of 23 months or less compared to 65% for Expatriate leavers.

#### **Skill Shortages & Graduate Recruitment**

Twelve of the fifteen surveyed companies indicated problems due to shortages of skilled labour whereas three companies (Al Rusail Power Company SAOC, SMN Barka SAOC and PWP) reported no shortage of skilled labour.

Companies identified particular shortages for staff with leadership skills and experience of specialist engineering activities. Around half of all companies reported shortages in Managerial, Technical and Administration & Supervisory functions.

Only 3 of the 15 companies surveyed have graduate recruitment programmes. Most companies said they attend career fairs and maintain contacts with educational institutions to fill vacancies when they arise.





#### **Expenditure on Staff Training**

The Survey identified staff training expenditure of just 850,000 RO between October 2008 and September 2009. This accounts for just 0.2% of total sector economic costs in 2009 and just 0.5% of sector subsidy. Figure 21 presents details of staff training expenditure by company, activity, training category and expenditure per staff.

#### Figure 21: Staff Training Expenditure



# B: Staff Training Expenditure by Activity (Company)



C: Staff Training Expenditure by Category



D: Training Expenditure per Staff by Company/Activity R0 per Staff



DPC SAOG Production RAEC SAOC Distribution & Transmission Procurement All Activities activities Supply & Dispatch activities

#### Source: 2009 extended Direct employment survey & ARB/Authority analysis

Health and safety training accounted for just 8% (66,755 RO) of total staff training expenditure of which OETC accounted for 45%, Muscat 2%, Majan 22% and Mazoon 0%, Production companies 20%, and RAEC SOAC 12%. The Authority is concerned by the low level of expenditure on health and safety training and that two operating companies (Mazoon and DPC SOAG) report no expenditure on health and safety training at all.

Customer Service training accounted for just 3% (25,774 RO) of total training expenditure. Three Discos account for 74% of this expenditure (Muscat 14%, Majan 55% and Mazoon 5%) and RAEC SAOC 26%.

Muscat, Majan and Mazoon accounted for 45% of total staff training expenditure: Muscat 71,183 RO (8% of total staff training expenditure), Majan 187,473 RO (22% of total expenditure) and Mazoon 122,794 RO (14% of total expenditure). Muscat has 60% more Direct employees than RAEC but spent 16% less on staff training than RAEC.

Training expenditure per Direct employee for the sector averaged just 427 RO. PWP (1,255 RO) and OETC (631 RO) reported training expenditure per staff above the sector average while all other entities reported training expenditure per staff below the sector average.



# **REGUATORY FOCUS #2: CALCULATING MARKET SHARES**

The Sector Law and licensing regime provide important regulatory protections against excessive concentration in the generation and related water sector desalination capacity markets and vertical reintegration of the unbundled electricity and related water sector. Protections are applied through Article (7) of the Sector Law that imposes regulated activity and economic interest restrictions; and Article (112) para (2) of the Sector Law that requires each Generation and Generation/ Desalination licence to impose market share restrictions on licence holders.

The 'regulated activity' and 'economic interest' restrictions protect against vertical re-integration as this may reduce transparency, weaken incentives to improve efficiency, and delay competition and further market liberalisation. Market share restrictions prevent excessive concentration in generation and desalination capacity markets that could give rise to market power and dominance. This Regulatory Focus explains how the Authority calculates the generation capacity market shares of investors and identifies issues relevant to market share determinations.

#### Market Share Thresholds

Each Generation and Generation/Desalination licence states that: the Licensee shall not... "without the consent in writing of the Regulatory Authority, have more than:

- (i) twenty five per cent (25%) of the Production Capacity of production facilities which Generate electricity and deliver it into the Total System; or
- (ii) twenty five per cent (25%) of the Production Capacity of production facilities which Desalinate water and form part of the Related Water Sector."

Total System is defined by the Sector Law as the interconnected systems of licensees in Oman (therefore excluding RAEC generation capacity and Salalah Power System capacity). The Desalination capacity market includes RAEC related water desalination facilities.

The purpose of market share thresholds is not to automatically disallow interests in excess of them but to recognise that while investors with market shares below the threshold are unlikely to have market power, this might not be the case for market shares above the 25% threshold.

#### **Definition of Generation Capacity Market Share**

The Authority defines an investor's share of the total system generation capacity market as the product of generation capacity (MW) times equity interest. The Authority calculates investor market shares for new I(W)PP competitions and on receipt of applications for consent for a Change of Control of a licensee. The Authority has to determine what market share restrictions, if any, should apply to individual investors or whether the public interest would be best served by allowing a market share in excess of the 25 percent threshold.

#### **Economic Considerations**

Competition authorities and regulators typically define market power in terms of a firm's ability to raise prices above competitive levels for sustained periods. Market share is a useful indicator of possible market power, but is not of itself evidence of market power: "a firm with a high market share may not be able to exert market power if other market features constrain the use of market power, such as switching costs, entry threats and countervailing buyer power".

The Oman electricity market structure and regulatory regime provide significant safeguards against the exercise of market power. The Sector Law: prohibits production facilities selling directly to final consumers; requires production facilities to sell their entire output to the PWP (giving it considerable countervailing buying power); and ensures production facilities have little opportunity to increase prices, as P(W)PA tariffs determined by fair and transparent competitions remain unchanged for the duration of agreements (other than pre-agreed indexation and exchange rate or other adjustments).



Despite these safeguards high market shares would not be without risk. Owners of licensed production facilities may attempt to exercise market power by reducing the quality of contracted outputs (to secure effective price increases), or by influencing the timing of scheduled outages and dispatch arrangements to benefit them but increase total system costs. Concentration might delay further market liberalisation. A significant concern is that investors with high market shares encountering financial difficulties could transmit financial instability throughout the market: the potential for instability is positively correlated with market share.

The Authority attaches significant importance, and has a duty, to ensure competition for market entry is maximised. Any undue weakening of entry competition, by restricting the participation of interested investors, could have long lasting implications for sector costs and subsidy.

#### **Market development considerations**

Electricity demand growth in Oman is increasing rapidly. The addition of new capacity will, other things being equal, reduce the market shares of existing investors. Competitions for new capacity require the owners of new I(W)PP to offer 35% of project company shares to the public through the Muscat Securities Market within three years of full commercial operation, an obligation that further reduces investor market shares in the medium term.

Generation units reaching the end of their economic life, and unit degradation, reduces the existing stock of capacity and, others things being equal, can increase investor market shares. The Authority takes these and other factors into account when calculating market shares.

#### Example Market Share Calculations: Barka III & Sohar II IPPs

In 2009 the PWP initiated a competition for two new IPP: Barka III (750 MW) and Sohar II (750 MW). The Authority was required to determine if it would be appropriate to allow existing investors to participate in the IPP competitions. Suez was of particular interest as it had shareholding interests in three facilities (Sohar IWPP, SMN Barka and Rusail). Market share calculations start by establishing the size of the market and how the market is expected to change over the medium term: the base case assumptions used in the Authority's Barka III & Sohar II market share calculations are shown in Figure 22.


Plant - DNC MW	2009	2010	2011	2012	2013	2014	2015
Al Ghubrah	482	371	371	371	289	234	234
Al Russail	684	684	684	684	684	684	684
Wadi Jizzi (inc unit 1 & 2)	290	290	290	220	220	220	220
Manah (Phase 1 & 2)	279	279	279	279	279	279	279
Al Kamil	282	282	282	282	282	282	282
AES Barka	434	434	434	434	434	434	434
Sohar IWPP	590	590	590	590	590	590	590
SMN Barka	683	681	680	680	679	679	679
new Ghubrah IWPP	0	0	0	400	700	700	700
Barka III	0	0	0	350	750	750	750
Sohar II	0	0	0	350	750	750	750
Solar Plant	0	0	0	0	150	150	150
NEW IWPP	0	0	0	0	0	0	1,000
Total MIS net MW	3,724	3,611	3,610	4,640	5,807	5,752	6,752
Annual capacity change: MW	695	-113	-1	1,030	1,167	-55	1,000
HH Index	1,402	1,417	1,416	1,029	1,006	1,017	957

## Figure 22: MIS Generation Capacity Market 2009 - 2015

Source: Authority calculations

The generation capacity market is assumed to increase from 3,724MW in 2009 to 6,572MW in 2015 reflecting a decline of existing capacity from 3,724MW in 2009 to 3,402 in 2015 and new capacity additions of 3,350MW (including 750MW from both Barka III and Sohar II IPPs).

The Authority adopted a conservative approach to establishing market size and future growth: non-contracted capacity was excluded and the capacities of the Barka III and Sohar II IPPs set at the higher end of expectations.

The Herfindahl-Hirschman Index (HHI) is an indicator of market concentration. A HHI of 1,800 or above indicates a highly concentrated market; a HHI less than 1,000 is consistent with a competitive market. The HHI in Figure 22 reflects 'production facility' concentration and suggests as the Oman market grows concentration will decline. The decline in 'production facility' concentration is welcome but not relevant to the Authority's market share calculations that are required by the Sector Law to focus on investor market shares.

Using as example the Sohar IWPP in 2013, the Authority multiplied the shareholdings of each investor by MW plant capacity and divided the result by total market MW, see Figure 23.





## Figure 23: Example Calculation – Sohar IWPP investor market share in 2013 (590MW)

Source: Authority calculations

Suez has a 45% shareholding in the Sohar IWPP, which when multiplied by plant capacity (590 MW) and divided by total market MW in 2013 (5,807 MW) represents a 4.6% share of the total market. The calculation is repeated for each facility in which Suez has or would have an interest if awarded both the Barka III and Sohar II IPPs (the full 2013 calculation is shown in Annex G).

Suez's bid for the Barka III & Sohar II IPPs proposed shareholdings of 46% in each IPP. Following commissioning of full capacity at each IPP in 2013, Suez would have a 23.7% share of the total system generating capacity market (see Figure 24). Thereafter Suez's market share declines as a result of new MIS capacity and completion of the Barka III and Sohar II initial public offerings expected in 2015.

## Figure 24: Example Calculation – Suez market share in 2013



## **Suez Share of Total System Generation Market**

201	13	Suez Share MIS MW	Share of Total MIS Market %
Sohar I\	NPP	265.5	4.6%
Al Rusai	1	211.2	3.6%
SMN Ba	rka	209.6	3.6%
Barka II	I	345.0	5.9%
Sohar II	[	345.0	5.9%
Suez SI	hare	1,376.3	23.7%
Others \$	Share	4,430.7	76.3%
Total MI	S Generation capacity market	5,807.0 MW	100.0%
Notes:	Barka III & Sohar II full capacity CO	D in 2013	

Al Rusail & SMN Barka IPOs (each 35%) to be completed by 2013

Source: Authority calculations

The Authority tested the sensitivity of Suez's market share results to changes in input assumptions, one sensitivity assumed the large solar plant did not proceed.

The Authority concluded it would be appropriate to allow Suez to participate in the Barka III and Sohar II competitions as Suez would not exceed the 25% market share threshold and would add significant 'competitive tension' to the competition process. The Authority stipulated a requirement for the Barka III and Sohar II IPPs to be financially ring-fenced (cross default provisions are prohibited) providing a further safeguard against potential financial instability.

The Authority notified Suez that as its market share would be close to the 25% threshold should it be awarded both Barka III & Sohar II IPPs the Authority would not consent to Suez's participation in a competition for the next I(W)PP.



# ARTICLE (29) REPORTING

## **Further Market Liberalisation**

Figure 25 presents the Authority's assessment of the possible implementation of the four Liberalisation measures identified in the Sector Law.

#### Liberalisation measure Authority's assessment of market readiness: Disposal of the Government's interest in the Electricity The Authority does not consider the market ready for this Holding Company SAOC or the Oman Power and Water liberalisation measure. Procurement Company SOAC The Authority does not believe customers, investors or the government would benefit from the implementation of this measure at the present time. The Authority does not propose to take steps to prepare the market for the implementation of this measure. Permitting licensed Production Facilities to sell to persons The Authority does not consider the market ready for this other than Oman Power and Water Procurement Company liberalisation measure. SAOC Implementation of this measure would imply a significant change to the risk allocation of existing contracts (PPA and PWPA), and require a reassessment of the Generation Security Planning Standard. The Authority has not and does not propose to consult on this liberalisation measure. Permitting persons other than Oman Power and Water The Authority does not consider the market ready for this Procurement Company SAOC and the Rural Areas Electricity liberalisation measure. Company SOAC to Import or Export electricity from or to another country Preparations for the commissioning of the main Oman - UAE interconnector are at an advanced stage, as are discussions on the establishment of the GCC Interconnection Authority. The Authority will grant licences in 2010 to authorise OETC to operate and PWP to trade across the Oman -UAE interconnector, respectively. No further action is contemplated to promote this liberalisation measure in the medium term. Creation of competition amongst Licensed Suppliers The Authority does not consider the market ready for this liberalisation measure but believes this would be achievable within 3 years. The Authority believes implementation of this measure would have significant benefits for customers and views its implementation as an important and achievable objective. The Authority implemented separate distribution and Supply price controls from 1 January 2009 that, in conjunction with the further development of separate regulatory accounting requirements, will facilitate the introduction of Supply competition within 3 years. The Authority believes the entry of new Licensed Suppliers will promote competition and raise standards of customer service that, five years into the sector restructuring, remain at unsatisfactory levels.

## **Figure 25: Further Market Liberalisation**



## **Electricity Subsidy**

Article (18) of the Sector Law implements a mechanism through which the Ministry of Finance provides electricity subsidy calculated by the Authority to four licensed suppliers (Muscat, Majan and Mazoon and the RAEC) on an annual basis. The Authority undertakes two separate subsidy calculations: the first calculates MIS subsidy required by Muscat, Majan and Mazoon, the second calculates RAEC subsidy.

Subsidy is defined as the difference between the economic cost of Supply (including financing costs) and Permitted Tariff (and other) revenue. Economic Supply costs are derived as the sum of PWP, OETC, and Muscat, Majan and Mazoon and RAEC price control Maximum Allowed Revenues (MAR). Subtracting customer tariff revenue (and other income) from the MAR identifies the electricity subsidy requirement in a particular year.

#### **MIS Subsidy**

Figure 26 presents outturn MIS subsidy in 2009 by company. Outturn MIS subsidy in 2009 was 109.5 m RO, this is 2 m RO higher than forecast in our 2008 Annual Report. The 12% growth in 2009 customer revenue reflects 12% growth in units supplied and a marginally improved rate of revenue collection.



## Figure 26: 2009 MIS Outturn Subsidy by Company

Source: 2009 audited SCRC Statements & Authority calculations

Total 2009 MIS subsidy (109.5 m RO) accounted for 35% of the total economic cost of Supply (311 m RO). Muscat, Majan and Mazoon accounted for 20%, 42% and 49%, respectively, of total 2009 MIS subsidy. Mazoon continues to have the highest subsidy requirement per kWh at 13.7 baiza/kWh, Majan's requirement is 10.6 baiza/kWh and Muscat's just 4.3 baiza per kWh. The subsidy requirement of each company reflects differences in customer mix and the characteristics of their respective distribution systems.



## **2010 MIS Subsidy Forecast**

The Authority expects MIS subsidy of 132.4 m RO in 2010, 23 m RO higher than outturn MIS subsidy in 2009. The increase in MIS subsidy reflects expected increases in economic costs and customer revenues of 15% and 11.5%, respectively. Figure 27 presents the Authority estimates of 2010 MIS subsidy by company.



## Figure 27: Subsidy Forecast - Main Interconnected System 2010

Source: Authority calculations

As anticipated in our 2007 Annual Report, policy decisions are exerting upward pressure on economic costs and electricity subsidy: in addition to the investment needed to sustain strong growth in electricity demand, licensees are required to underground a substantial proportion of new electricity lines and replace and upgrade systems to comply with new security and planning standards. Around half of the increase in 2010 MIS subsidy reflects the cost of 117 MW of temporary diesel generation required to support the MIS in 2010.

For further details of 2009 outturn MIS subsidy and the Authority's 2010 MIS subsidy estimate, please refer to Annex D.

## Underlying Movement in MIS Subsidy: 2006 to 2009

Figure 28 presents the Authority's underlying measure of MIS subsidy between 2006 and 2009 and expected MIS subsidy in 2010. The underlying measure assumes revenues, costs and efficiencies were correctly forecast between 2006 and 2009 so as to return zero correction factors. The estimate of MIS subsidy in 2010 reflects the 2010 MAR of PWP, OETC, Muscat, Majan and Mazoon and assumed growth in Supply (regulated units distributed) of 12.3%.



Economic Cost (RO m)	2006	2007	2008	2009	2010 (e)
PWP (MAR excluding K <sub>t</sub> )	140.5	144.5	161.2	177.6	212.5
OETC (MAR excluding K <sub>t</sub> )	26.5	27.9	31.5	38.5	42.0
Muscat (MAR excluding K <sub>t</sub> )	22.8	23.8	23.9	32.3	33.5
Mazoon (MAR excluding K <sub>t</sub> )	23.0	24.2	27.6	37.5	39.2
Majan (MAR excluding K <sub>t</sub> )	16.6	17.8	19.6	26.0	27.5
Underlying Economic Cost	229.6	238.2	263.8	311.9	354.6
Permitted Tariff (& other) Revenue	143.1	153.9	179.8	201.5	224.7
Underlying Economic Subsidy Requirement	86.5	84.3	84.0	110.4	129.9
Regulated Units Distributed (GWh)	9,194	9,778	11,317	12,714	14,226
Underlying Economic Cost per kWh Supplied	25.0	24.4	23.3	24.5	24.9
Customer Revenue per kWh Supplied (bz/kWh)	15.6	15.7	15.9	15.9	15.8
Underlying Subsidy per kWh Supplied (bz/kWh)	9.4	8.6	7.4	8.7	9.1
Source: Authority calculations					

## Figure 28: Underlying Movement in MIS Subsidy: 2006 to 2009 & 2010 Forecast



Source: Authority calculations

Figure 28 indicates that between 2006 and 2010 the underlying economic cost of supply increased by 54% compared to a 57% increase in revenue. The level of underlying subsidy is expected to be 50% higher in 2010 than in 2006 whereas underlying subsidy per kWh is expected to be 3% lower.



## **RAEC Subsidy**

Outturn RAEC subsidy in 2009 was 32.9 m RO or 75.7 baiza/kWh, this is slightly lower than the 33 m RO subsidy entitlement forecast in the Authority's 2008 Annual Report (28.8 m RO subsidy and a 4.3 m RO subsidy adjustment). Figure 29 presents RAEC outturn subsidy between 2006 and 2009 and forecast RAEC subsidy in 2010.



## Figure 29: RAEC 2009 Outturn Subsidy - 2010 Subsidy Forecast

Source: 2005, 2006, 2007 2008 & 2009 audited SCRC Statement, Authority calculations.

The Authority is forecasting 2010 RAEC subsidy of 30 million RO (70 baiza/kWh). Please see Annex D for further details.

## **Comparison of 2009 Subsidy by Company**

Figure 30 presents a comparison of subsidy provided to Muscat, Majan, Mazoon and RAEC in 2009 and government financial support to DPC in that year. The left hand panel presents subsidy (bazia) per kWh Supplied, the right hand panel shows subsidy (RO) per Customer Account.



Figure 30: 2009 Subsidy Comparisons by Company

Source: 2009 audited SCRC Statements & licensee returns.

Note 1: Muscat, Majan, Mazoon & RAEC Subsidy as per Article (18) of Sector Law. DPC Salalah CA net allowances.

Note 2: DPC Concession Agreement net allowances plus other Salalah purchase costs (RAEC) and PDO i/c cost.



Mazoon accounts for 32% of the 163.2 million RO of subsidy and financial support provided to companies in 2009, RAEC and Majan each account for 20%, Muscat 15% and DPC 13%.

RAEC subsidy per kWh supplied and per account is significantly higher than 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 companies reflect nominal increases in economic costs (in line with higher output) and revenue from Permitted Tariffs that in real terms decline year on year.

A decision to index Permitted Tariffs to inflation would reduce electricity subsidy, but is a matter for the government.

## **Electricity Tariffs**

The Sector Law requires all electricity supplied by licensed suppliers to be charged at a Permitted Tariff approved by the Council of Ministers.

Figure 31 presents details of the present Permitted Tariffs for different customer categories, and Permitted Tariff fees for the disconnection and reconnection of customer accounts.

## Figure 31: Permitted Tariffs

#### A: Permitted Tariffs for Electricity Supply

Permitted Tariff Category	Tariff Structure							
Industrial <sup>1</sup>	All F	Regions except Dho	ofar	Dhofar	Region			
	Septemb	er to April: 12 Baiza	a per kWh	August to March:	12 Baiza perkWh			
	May to	August: 24 Baiza p	er kWh	April to July: 24	Baiza per kWh			
Commercial		F	lat rate @ 20 Baiza	a per KWh				
Ministry of Defence	Flat rate @ 20 Baiza per KWh							
Posidential	0-3000 kWh	3001-5000 kWh	5001-7000 kWh	7001-10000 kWh	above 10000 kWh			
hesidential	10 Bz / kWh	15 Bz / kWh	20 Bz / kWh	25 Bz / kWh	30 Bz / kWh			
Covernment	0-3000 kWh	3001-5000 kWh	5001-7000 kWh	7001-10000 kWh	above 10000 kWh			
Government	10 Bz / kWh	15 Bz / kWh	20 Bz / kWh	25 Bz / kWh	30 Bz / kWh			
Agriculture & Eisberies		0-7000 kWh	7001 kWh & above					
Agriculture & Fishenes		10 Baiza per kWh	20 Baiza per kWh					
Tourism <sup>2</sup>	0-3000 kWh	3001-5000 kWh	5001-7000 kWh	above 7001 kWh				
rourism	10 Bz / kWh	15 Bz / kWh	20 Bz / kWh	20 Bz	/ kWh			

1 Customers require a MOCI letter of recommendation and must maintain a power factor of least 0.9

2 Subject to Ministry of Tourism regulations and approval

### B: 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

No new Permitted Tariffs or tariff modifications, were implemented in 2009.



## 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. In February 2008 Members were appointed for further three year terms.

#### The present Members of the Authority are:

- Dr Saleh Mohammed Al-Alawi non-executive Member (a part time appointment);
- Amur Mubarak Al Kiyumi non-executive Member (a part time appointment); and
- John Cunneen Executive Director and Member (a full time appointment).

Members are collectively responsible for managing the Authority's affairs and for ensuring the Authority fulfils all of its statutory functions and duties. Members met regularly throughout 2009 to administer the Authority's affairs, on the dates shown in Figure 32.

Figure 3	2: Mem	ber Meet	ings in	2009
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	Dr Salah Al Alawi	John Cunneen	Amur Al Kiyumi
	Chairman & Member	Executive Director & Member	Member
Appointed for second term in: Meeting Dates (2009)	February 2008	February 2008	February 2008
21 January	$\checkmark$	✓	$\checkmark$
28 January	$\checkmark$	✓	✓
4 February	$\checkmark$	✓	✓
11 February	✓	✓	✓
7 March	$\checkmark$	✓	✓
18 March	$\checkmark$	✓	✓
5 May	$\checkmark$	✓	✓
10 June	$\checkmark$	✓	✓
17 June	$\checkmark$	√	$\checkmark$
15 July	$\checkmark$	√	√
16 September	$\checkmark$	√	$\checkmark$
17 October	$\checkmark$	√	✓
18 November	$\checkmark$	✓	$\checkmark$
12 December	✓	1	✓



## Funding

The Authority recovers all of its costs through licence fees. Fees are calculated by apportioning costs to each regulated activity on the basis of the time expected to be spent regulating each activity. Figure 33 presents licence fee income by regulated activity and the number of Licence Holders by activity, for 2005 to 2010, inclusive.

	2005		2006		2007		2008		2009		2010	
	Licenc	е	Licence	е	Licenc	е	Licenc	е	Licence	e Licence		е
Activity	Fees RO	#	Fees RO	#	Fees RO	#	Fees RO	#	Fees RO	#	Fees RO	#
Generation	78,200	4	59,700	4	50,776	4	95,284	4	154,351	4	112,724	4
Generation & Desalination	66,726	2	67,239	3	55,854	3	99,087	3	220,501	4	125,096	4
Transmission & Dispatch	117,300	1	104,472	1	177,715	1	320,669	1	514,503	1	259,264	1
Distribution & Supply	336,261	3	292,527	3	399,858	3	474,590	3	782,045	3	428,350	3
RAEC Activities	119,425	1	116,346	1	153,279	1	159,345	1	230,792	1	120,009	1
PWP Activites	132,090	1	142,779	1	273,237	1	232,225	1	547,824	1	329,236	1
PWP: Electricity	93,840		90,543		88,858		192,401		288,122		10,310	
PWP: Related Water	12,750		4,749		6,664		10,359		14,700		206,202	
PWP: Salalah	25,500		47,488		177,715		29,465		245,002		112,724	
Total Fee Income	850,002	12	783,063	13	1,110,719	13	1,381,200	13	2,450,016	14	1,374,679	14

## Figure 33: Licence Fees: 2005 to 2010

The 2009 licence fees provided funding for a new organisation structure approved by Members in 2008, and the cost of new office accommodation. The Authority will move to its new offices in July 2010 and will immediately initiate a recruitment exercise to fill all vacant positions in the new organisation structure. As at December 2009 the Authority had 22 full time staff, most of whom are Omani Nationals with professional qualifications. Under the new organisation structure the Authority will have over 40 full time staff.

Licence fees also fund all work items identified in the Authority's 2010 forward work programme (available for review at **www.aer-oman.org**).

## 2010 Forward Work Programme

Article (34) of the Sector Law requires the Authority to prepare a Forward Work Programme for the coming year, and consult with Persons who may be affected by the proposed work. In December 2009 the Authority consulted on its proposed 2010 Forward Work Programme and is in the process of implementing all of its constituent tasks (available for review at www.aer-oman.org).



## **Customer Affairs Directorate**

The Customer Affairs Directorate is responsible for protecting and promoting the interests of electricity customers and ensuring that customer interests are afforded appropriate priority and attention within the Authority. The Directorate approves and monitors Licensed Suppliers' codes of practice to safeguard the interests of electricity customers and takes up complaints on behalf of Customers who have been unable to resolve disputes directly with a Licensed Supplier.

#### In 2009 the Directorate:

- (i) contributed to a review of the way Customer complaints are handled within the Authority and by licensees. The review identified significant scope for improvement and supported a priority action in the Authority's 2010 FWP that aims to reduce the time taken to process customer complaints;
- (ii) held meetings with several hundred Customers at the Authority to discuss complaints and conducted 25 visits to Customer premises; and
- (iii) provided assistance and support to the Technical Directorate:
  - a) when seeking access to Customer premises to allow KEMA and SQU to take measurement reading of ELF-EMF;
  - b) for various HSE inspections related to Customer complaints; and
  - c) an audit of Digital Metering installations at Customer premises.

#### **Determinations**

The Authority issued ten Customer Complaint Determinations in 2009;

- i. **Determination 1/2009:** the Authority determined that MEDC would be allowed to recalculate under recovered revenue for a 12 month period due to a faulty meter;
- ii. **Determination 2/2009:** the Authority determined that MEDC would be allowed to recalculate under recovered revenue for a 10 month period;
- iii. **Determination 3/2009:** the Authority determined that MEDC had correctly calculated bills for certain months and that the Customer should be required to pay disputed amounts;
- iv. **Determination 4/2009:** the Authority determined following review of a Krooki that the Customer not Mazoon should bear the cost of relocating lines from the Customer's premises;
- v. **Determination 5/2009:** the Authority determined MEDC should apply the Residential Permitted Tariff the date the Customer had requested a tariff change;
- vi. **Determination 6/2009:** the Authority determined that MEDC should recalculate the Customer's bills for periods based on average consumption for corresponding periods in previous years;
- vii. **Determination 7/2009:** the Authority determined that MEDC had incorrectly calculated a Customer's bill and should recalculate the bill using the correct tariff;
- viii. **Determination 8/2009:** the Authority determined that MEDC had failed to prove meter tampering and should withdraw the meter tampering fine;
- ix. **Determination 9/2009:** the Authority determined MEDC could recover under recovered revenue due to a faulty meter for a period of 12 months; and
- x. **Determination 10/2009:** the Authority determined MEDC should recalculate a Customer's bill based on average consumption for corresponding periods in previous years.



## **Analysis of Customer Complaints**

The Directorate received 144 Customer complaints in 2009, a 122% increase on the number of complaints received in 2008. Figure 34 below presents an analysis of the issues that were the subject of customer complaints in 2009.





Billing issues accounted for 51% of total Customer complaints in 2009, with most Billing complaints relating to concerns about High Billing. Requests to relocate assets (poles, transformers, and substations) accounted for 11% of 2009 complaints (24% in 2008), Meter Tampering issues account for 26% of 2009 complaints (8% of 2008 complaints) and Disputed Meter Readings 4% of complaints (9% of complaints in 2008).

Source: Authority Customer Complaints Database



## **Economics and Financial Affairs Directorate**

The Directorate is responsible for the economic regulation of the electricity and related water sector. This includes setting and monitoring RPI-X price controls, and reviewing and approving electricity and related water bulk Supply tariffs. The approved 2010 PWP Electricity and Water Bulk Supply Tariffs are shown in Figure 35.

## Figure 35: 2010 PWP Electricity & Water Bulk Supply Tariffs

#### A: PWP Electricity Bulk Supply Tariff - 2010

Baiza per kWh	Off Peak	Night Peak	Weekday Day- peak	Friday Day- peak		
January to March	7.0	7.0	7.0	7.0		
April	8.0	8.0	8.0	8.0		
May to July	8.0	20.0	40.0	20.0		
August to September	8.0	15.0	30.0	15.0		
October	8.0	8.0	8.0	8.0		
November to December	7.0	7.0	7.0	7.0		
Rate Band	Day(s) / Time(s)					
Off Peak	All days : 02:00 to	13:00 and 17:00 to 2	22:00			
Night Peak	All days : 22:00 to 02:00 (following day)					
Weekday Day-peak	Saturday to Thursday, 13:00 to 17:00					
Friday Day-peak	Friday, 13:00 to 17:00					

Source: PWP 2010 Electricity BST Leaflet

#### B: PWP Water Bulk Supply Tariffs - 2010

	Ghubrah	AES Barka	SMN Barka	Sohar
Fixed charge for committed Water Desalination Capacity	RO 0.368 per m³/day	RO 0.416 per m³/day	RO 0.294 per m³/day	RO 0.340 per m³/day
Summer!	92.5%	93.0%	93.0%	98.0%
Winter	77.5%	85.0%	93.0%	-
Sohar Winter Jan-March	80.0%			
Sohar Winter Oct-Dec				85.0%
Variable charge for Desalinated Water	RO 0.100 per m <sup>3</sup>	0.050 per m <sup>3</sup>	0.050 per m <sup>3</sup>	
1: For the first 50% of daily capacity				RO 0.020 per m <sup>3</sup>
2: For the first 50% to 75% of daily capacity				RO 0.045 per m <sup>3</sup>
3: For excess over 75% of daily capacity				RO 0.080 per m <sup>3</sup>
4: Variable Charge for Distillate Water				RO 0.23334 to 0.8431 <sup>2</sup>
PWP service charge (based on committed Water Desalination Capacity)	RO 0.005 per m³/day	RO 0.005 per m³/day	RO 0.005 per m³/day	RO 0.005 per m³/day

<sup>1</sup> Summer months: April-September for Ghubrah & Sohar, May-September for AES Barka

<sup>2</sup> Subject to volume

## The 2010 RAEC Water Bulk Supply Tariffs are shown in Figure 36.

#### Figure 36: 2010 RAEC Water Bulk Supply Tariffs

	Production Facility					
RO/m <sup>3</sup>	AlHallaniyat	AbuMudabi	Kumzar	Masirah	Sograh	
2005	2.643	2.218	1.972	2.963	1.924	
2006	3.339	2.331	2.721	2.995	2.928	
2007	3.721	2.555	2.792	3.158	3.003	
2008	3.934	2.673	2.484	3.182	2.673	
2009	4.657	3.203	2.442	1.719	3.480	
2010	4.319	3.886	2.263	1.519	3.303	

Source: Rural Areas Electricity Company SAOC



#### In 2009 the Directorate:

- Contributed to the setting of a new OETC price control for the period 1 January 2010 to 31 December 2012. The new price control provides capital expenditure allowances totalling 200m RO and maximum allowed revenues of 125m RO;
- Performed market share calculations for entities participating in competitions for the Barka III & Sohar II IPPS (please refer to Regulatory Focus #2 for further details);
- Responded to a PAEW request for an economic cost-benefit analysis of Oman's membership of the GCC Interconnection Authority. The Authority appointed Horton 4 Consulting to undertake analysis to confirm that the costs of Oman's participation in the GCC project (Oman's contribution to GCCIA capital and the costs of complying with the installed capacity obligation) could be justified on the basis of the potential benefits;
- Assisted with price control audits of three Distribution and Supply licensees;
- Provided significant input to public consultation on the Authority's proposals for Cost Reflective Tariffs for large consumers of electricity;
- Managed an employment survey of electricity sector companies to provide further details of sector employment by nationality and gender and to assess metrics for staff turnover, retention and expenditure on training and development;
- Assisted evaluations of renewable energy pilot projects including detailed economic evaluations of six shortlisted projects; and
- Contributed to reviews and approval of RAEC requests for Electrification Funding submitted in accordance with Article (87) of the Sector Law.

In keeping with the Authority's strong commitment to staff development, Senior Economist Hassan Taqi started full time paid study leave in September 2009 to complete a MSc in Economic Regulation and Competition at City University in London.



## **Technical Directorate**

The Technical Directorate is responsible for approving technical standards and for monitoring compliance with Industry Codes, planning and operating standards, and Oman 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.

#### In 2009 the Directorate:

- (i) Inspected installations and assets that form part of licensed distribution systems to confirm they did not represent a hazard to the general public. The Directorate's inspections supported the issue of Article 116 Notices in May 2009 to three Distribution and Supply licensees;
- (ii) Assisted with the review and approval of competition documentation for the Barka III & Sohar II IPP competitions;
- (iii) Led price control audits that assessed the performance of Distribution and Supply licensees under their respective price controls between 2005 to 2009;
- (iv) Reviewed and approved the 2009 system capability statements of MEDC, MJEC, MZEC, RAEC and OETC;
- (v) Reviewed the capital expenditure proposals of OETC for 2010-2015. The review highlighted significant shortcomings in OETC investment appraisals that did not provide sufficient assurance that proposed investments represented the best or most efficient options. The Authority approved a notional capital expenditure allowance for 2010 to 2013 and will work closely with OETC to approve capital expenditure on a project by project basis;
- (vi) Followed up the Article 116 Notice issued to Al Ghubrah Power and Desalination Company in 2008 for the unsafe operation of the phase 1 Babcock boilers 4, 5, and 6 and found that sufficient improvement had been made to allow the Article 116 Notice for boiler 6 to be withdrawn;
- (vii) Working with a specialist consultant the Directorate developed new Oman Electrical Standards for digital meters that were approved following extensive consultation with electricity sector companies; and
- (viii) The Directorate assisted with detailed evaluations of prospective renewable energy pilot projects throughout 2009. The Authority, supported by its consultant COWI, assessed the feasibility of 34 renewable energy projects of which six have been shortlisted by the Authority for implementation.

#### **Electro-magnetic fields assignment**

Building on work initiated in 2008, the Authority commissioned Sultan Qaboos University to take measurements of electric field strengths and magnetic field strengths during periods of summer peak demand at locations where winter measurements had been taken by KEMA. The measurement results contributed to KEMA's comprehensive review of scientific research on possible health effects of exposure to Extremely Low Frequency Electric and Magnetic Fields (ELF-EMF). The study recommended Oman follow widely recognised guidelines for ELF-EMF published by ICNIRP. The measurement studies confirmed ELF-EMF levels in Oman significantly below the levels recommended in ICNIRP guidelines.

#### **Generation Fuel Changeover Capability**

During 2009 several production facilities failed to changeover from gas to liquid fuel in stipulated timescales. Working with a specialist consultant (SKM) the Directorate conducted assessments of the security of gas supply and the capability of gas turbines to automatically switch over to liquid fuel in the event of gas supply failures. Recommendations arising from the assessment were provided to the Ministry of Oil & Gas, PAEW and PWP and the Technical Directorate will follow up the implementation of recommendations in 2010.



## **Grid Code Review Panel**

The Grid Code Review Panel (GCRP) met four times during 2009, see Figure 37.

## Figure 37: Grid Code Review Panel meetings in 2009

Meeting	Meeting Date	Chaired by
GCRP 16	28 February 2009	OETC
GCRP 17	4-May-2009	OETC
GCRP 18	3-August-2009	OETC
GCRP 19	2-December-2009	OETC

During 2009, a number of revisions to the Grid Code agreed by the GCRP were submitted to the Authority for approval. The revisions were approved in the form of Grid Code Version 2.0 in February 2010.

### **Distribution Code Review Panel**

The Distribution Code Review Panel (DCRP) met four times during 2009, see Figure 38.

## Figure 38: Distribution Code Review Panel meetings in 2009

_	Meeting	Meeting Date	Chaired by
	DCRP 1/2009	28 March 2009	RAEC
	DCRP 2/2009	10-June-2009	MEDC
	DCRP 3/2009	3-November-2009	MEDC
	DCRP 4/2009	28-December-2009	MEDC

During 2009 the DCRP issued 8 new approvals and 48 contractor approvals and renewals.



## Licensing and Legal Affairs Directorate

The Directorate acts as legal counsel for Authority Members and acts to ensure Members' decisions comply with the requirements of the Sector Law and other applicable Laws. The Directorate is responsible for monitoring compliance with conditions of authorizations granted by the Authority and for maintaining channels of communication with relevant ministries and competent authorities to ensure the Authority has the information needed to provide requisite advice to Licence Holders and Exemption Holders. The Directorate is also responsible for maintaining the Public Register.

#### In 2009 the Directorate:

- Reviewed an application for a Generation and Desalination Licence submitted by SMN Barka Power Company SAOC. The Licence was granted on 14 November 2009 and replaced Licence Exemption Order 1/2008 that had authorized early power from the SMN Barka facility;
- (ii) Reviewed an application for consent for a Change of Control of Sharqiyah Desalination Company SAOC being the holder of Licence Exemption Order No. 1/2007. The Authority consented to the Change of Control application submitted by Mubadala and Veolia on 21 November 2009;
- (iii) Supervised modifications to:
  - a) Licence Exemption Order 9/2005 granted to PDO to facilitate the Supply of electricity to certain remote locations;
  - b) the Schedule Charge Restriction Conditions of Distribution and Supply licenses to implement new three year price controls effective from 1 January 2009; and
  - c) the Schedule Charge Restriction Condition of the Transmission and Dispatch License granted to Oman Electricity Transmission Co. SAOC to facilitate a one-year price control extension;
- (iv) Reviewed a complaint against the Rural Areas Electricity Company (RAEC) submitted by Oman National Engineering and Investment Company (ONEIC) claiming unfair discrimination in the award of certain tenders. ONIEC claimed RAEC had breached the Sector Law, the Tender Law and Regulations and terms of the RAEC Licence. After a thorough review the Authority concluded RAEC had not discriminated against ONIEC and had not breached any of its statutory obligations;
- (v) Assisted with the preparation of new regulations requiring licensees and other persons to notify the Authority and other authorities of fatalities and accidents in stipulated timeframes. The Authority will initiate consultation on the new regulations before their issue under the provisions of Article (38) of the Sector Law in 2010.

#### **GCC Electricity Interconnection Agreements**

Throughout 2009 the Directorate made significant contributions to the preparation and review of key GCC Electricity Interconnection Agreements (the General Agreement and the Power Exchange and Trading Agreement) that when signed will confirm Oman's membership of the GCC Interconnection Authority. The Directorate also attended meetings and discussions to finalize the terms of a Bilateral Interconnection Agreement with the United Arab Emirates.

#### **Legal Seminar**

The Directorate organized a legal seminar on 25 October 2009 to introduce and explain the provisions of the Sector Law and related regulations, the new electricity and related water sector market structure, the new regulatory regime and the functions and duties of the Authority. The seminar schedule included time for discussion and feedback from participants which enriched the proceedings and provided important feedback on legal issues and suggestions for future action.

The seminar was attended by judges from the Administrative Court, Primary Court, Court of Appeal and the Supreme Court in addition to Lawyers, Public Prosecution officers, legal advisors of electricity sector companies and other legal practitioners.



## Article (116) Notices

The Authority has power to issue Article (116) Notices to licensees who fail or are expected to fail to comply with a statutory duty or condition of a relevant licence. Article (116) Notices can apply fines and penalties and for serious cases of non-compliance can initiate licence revocation proceedings. In 2009, the Directorate assisted with the preparation and issue of:

- (i) Article (116) Notices issued to Majan Electricity Company SAOC, Mazoon Electricity Company SAOC, Muscat Electricity Distribution Company SAOC, and the Oman Power and Water Procurement Company SAOC (PWP). These licensees had been assigned actions by an Executive Task Team led by the Authority tasked with minimizing the prospect of supply interruptions during summer 2009. The Authority concluded licensees were making insufficient progress to implement tasks assigned to them and issued Article (116) Notices to all licensees. Licensees subsequently complied with the requirements of the notices; and
- (ii) Following a series of installation audits the Authority concluded Distribution and Supply licensees were failing to ensure substations and related plant was locked or otherwise secure and were therefore failing to safeguard the health and safety of the Public. The Authority issued Article (116) Notices to Majan Electricity Company SAOC, Mazoon Electricity Company SAOC, Muscat Electricity Distribution Company SAOC warning that licensees would be fined for any installations found to be unlocked or otherwise unsecure or unsafe.



## ANNEX A: AUDITED FINANCIAL STATEMENTS

Authority for Electricity Regulation, Oman

Report and Financial Statements for the year ended 31<sup>st</sup> December 2009



## Report and financial statements for the year ended 31 December 2009

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Statement of changes in surplus fund	59
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Deloitte & Touche (M.E.) & Co. LLC Muscat International Centre Location: MBD Area P.O. Box 258, Ruwi Postal Code 112 Sultanate of Oman

Tel: +968 2481 7775 Fax: +968 2481 5581 www.deloitte.com

## Independent auditor's report to the members of Authority for Electricity Regulation, Oman

#### Report on the financial statements

We have audited the accompanying financial statements of the Authority for Electricity **Regulation**, Oman, which comprise of statement of financial position as at 31 December 2009 and the statement of comprehensive income, statement of changes in surplus fund and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory notes as set out on pages 3 to 20.

#### Management responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards and compliance with the relevant requirements 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. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

#### Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatements of the financial statements. In making those risk assessments; the auditor considers internal control relevant to the preparation and fair presentation of the financial statements 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 entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.





# Deloitte.

## Independent auditor's report to the members of Authority for Electricity Regulation, Oman (continued)

## Opinion

In our opinion, the financial statements, present fairly, in all material respects, the financial position of the Authority for Electricity Regulation, Oman, as of 31 December 2009, and of its financial performance and its cash flows for the year then ended, in accordance with International Financial Reporting Standards and comply, in all material respects, with the relevant requirements 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.

Deloitte & Touche (M.E.) & Co. LDC// of Touche (M.E.)B

Deloitte & Touche (M.E.) & Co Muscat, Sultanate of Oman 24 May 2010



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## AUTHORITY FOR ELECTRICITY **REGULATION, OMAN**

Stater	nent of	fina	ncial	position
at 31 ]	Decem	ber 2	2009	

	Notes	2009	2008
		RO	RO
ASSETS			
Non-current assets	-	50 424	78 020
Property and equipment	5	/8,424	/8,039
Current assets			
License fees receivable		-	39,550
Prepayments and other receivables		223,481	46,868
Cash and cash equivalents	6	1,129,436	508,966
		1,352,917	595,384
Total assets		1,431,341	673,423
RETAINED SURPLUS AND LIABILITIES			
Retained surplus	7	1,202,640	444,447
Liabilities			
Non-current liabilities Provision for employees' end of service benefits	8	42,016	24,831
Current liabilities			
Accruals and other payables	9	186,685	204,145
Total liabilities		228,701	228,976
Total retained surplus and liabilities		1,431,341	673,423

cutive Executive Director and Member Member Chairman and Member The accompanying notes form an integral part of these financial statements.



# Statement of comprehensive income for the year ended 31 December 2009

	Notes	2009 RO	2008 RO
Licence fees Other income	10	2,450,007 18,563	1,381,201 14,950
Total revenue		2,468,570	1,396,151
Salaries and employee related costs General and administrative expenses Depreciation	11 12 5	789,561 888,055 32,761	658,831 956,683 27,847
Total expenses		1,710,377	1,643,361
Surplus / (deficit) for the year		758,193	(247,210)

The accompanying notes form an integral part of these financial statements.



## Statement of changes in surplus fund for the year ended 31 December 2009

	Retained surplus RO
Balance at 1 January 2008	691,657
Deficit for the year	(247,210)
Balance at 1 January 2009	444,447
Surplus for the year	758,193
Balance at 31 December 2009	1,202,640

The accompanying notes form an integral part of these financial statements.



## Statement of cash flows for the year ended 31 December 2009

	2009	2008
	RO	RO
Operating activities		
Cash receipts from licensees and application fees for		
license exemptions	2,491,557	1,377,973
Cash paid to employees and other suppliers	(1,854,504)	(1,456,719)
Net cash from / (used in) operating activities	637,053	(78,746)
Investing activities		
Purchase of property and equipment	(33,146)	(41,835)
Interest income	15,563	11,950
Proceeds from disposal of assets	1,000	-
Net cash used in investing activities	(16,583)	(29,885)
Net change in cash and cash equivalents	620,470	(108,631)
Cash and cash equivalents at the beginning of the year	508,966	617,597
Cash and cash equivalents at the end of the year (Note 6)	1,129,436	508,966

The accompanying notes form an integral part of these financial statements.



## Notes to the financial statements for the year ended 31 December 2009

## 1. Activities

The Authority for Electricity Regulation, Oman (hereafter referred to as "the Authority"), was established by 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 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, surpluses of income over expenditure are held for the benefit of the licensee companies as explained in Note 7 to the financial statements.

The registered office of the Authority is PO Box 954, PC 133, Al Khuwair, Sultanate of Oman.

# 2. Adoption of new and revised International Financial Reporting Standards (IFRS)

## 2.1 Standards affecting presentation and disclosure

The following new and revised Standards have been adopted in the current period in these financial statements. Details of other Standards and Interpretations adopted but that have had no effect on the financial statements are set out in section 2.2.

• IAS 1 (as revised in 2007)	IAS 1 (2007) has introduced terminology changes (including
Presentation of Financial	revised titles for the financial statements) and changes in the
Statements	format and content of the financial statements.

#### 2.2 Standards and Interpretations adopted with no effect on the financial statements

The following new and revised Standards and Interpretations have also been adopted in these financial statements. Their adoption has not had any significant impact on the amounts reported in these financial statements but may affect the accounting for future transactions or arrangements.

IFRS 8 Operating Segments
 IFRS 8 is a disclosure Standard that requires re-designation of the reportable segments based on the segments used by the Chief Operating Decision Maker to allocate resources and assess performance.
 IFRS for SMEs Small and Medium-sized Entities
 This Standard is available immediately but the adoption has to be decided by the jurisdiction of implementation.



## Notes to the financial statements for the year ended 31 December 2009 (continued)

- 2. Adoption of new and revised International Financial Reporting Standards (IFRS) (continued)
- 2.2 Standards and Interpretations adopted with no effect on the financial statements (continued)
- Amendments to IFRS 2 Sharebased Payment
- IAS 23 (as revised in 2007) Borrowing Costs
- Amendments to IAS 32 Financial Instruments: Presentation and IAS 1 Presentation of Financial Statements
- IFRIC 13 Customer Loyalty Programmes
- IFRIC 15 Agreements for the Construction of Real Estate
- IFRIC 16 Hedges of a Net Investment in a Foreign Operation
- IFRIC 18 *Transfers of Assets from Customers* (adopted in advance of effective date of transfers of assets from customers received on or after 1 July 2009)
- Improvements to IFRSs (2008)

The amendments clarify the definition of vesting conditions for the purposes of IFRS 2, introduce the concept of 'non-vesting' conditions, and clarify the accounting treatment for cancellations.

The principal change to the Standard was to eliminate the option to expense all borrowing costs when incurred.

The revisions to IAS 32 amend the criteria for debt / equity classification by permitting certain puttable financial instruments and instruments (or components of instruments) that impose on an entity an obligation to deliver to another party a pro-rata share of the net assets of the entity only on liquidation, to be classified as equity, subject to specified criteria being met.

The Interpretation provides guidance on how entities should account for customer loyalty programmes by allocating revenue on sale to possible future award attached to the sale.

The Interpretation addresses how entities should determine whether an agreement for the construction of real estate is within the scope of IAS 11 *Construction Contracts* or IAS 18 *Revenue* and when revenue from the construction of real estate should be recognised.

The Interpretation provides guidance on the detailed requirements for net investment hedging for certain hedge accounting designations.

The Interpretation addresses the accounting by recipients for transfers of property, plant and equipment from 'customers' and concludes that when the item of property, plant and equipment transferred meets the definition of an asset from the perspective of the recipient, the recipient should recognise the asset at its fair value on the date of the transfer, with the credit recognised as revenue in accordance with IAS 18 *Revenue*.

Amendments to IFRS 5, IAS 1, IAS 16, IAS 19, IAS 20, IAS 23, IAS 27, IAS 28, IAS 29, IAS 31, IAS 36, IAS 38, IAS 39, IAS 40 and IAS 41 resulting from the May and October 2008 *Annual Improvements to IFRSs* majority of which are effective for annual periods beginning on or after 1 January 2009.



Effective for annual periods

## AUTHORITY FOR ELECTRICITY REGULATION, OMAN

## Notes to the financial statements for the year ended 31 December 2009 (continued)

# 2. Adoption of new and revised International Financial Reporting Standards (IFRS) (continued)

## 2.3 Standards and Interpretations in issue not yet effective

At the date of authorisation of these financial statements, the following new and revised Standards and Interpretations were in issue but not yet effective:

### New Standards and amendments to Standards:

	beginning on or after
• IFRS 1 (revised) <i>First time Adoption of IFRS</i> and IAS 27 (revised) <i>Consolidated and Separate Financial Statements</i> – Amendment relating to Cost of an Investment in a Subsidiary, Jointly Controlled Entity or Associate	1 July 2009
<ul> <li>IFRS 3 (revised) Business Combinations – Comprehensive revision on applying the acquisition method and consequential amendments to IAS 27 (revised) Consolidated and Separate Financial Statements, IAS 28 (revised) Investments in Associates and IAS 31 (revised) Interests in Joint Ventures</li> </ul>	1 July 2009
• IAS 39 (revised) <i>Financial Instruments: Recognition and</i> <i>Measurement</i> – Amendments relating to Eligible Hedged Items(such as hedging Inflation risk and Hedging with options)	1 July 2009
• IFRS 1 (revised) <i>First time Adoption of IFRS</i> – Amendment on additional exemptions for First-time Adopters	1 January 2010
• IFRS 2 (revised) <i>Share-based payment</i> – Amendment relating to cash- settled Share-based payments	1 January 2010
• IAS 32 (revised) <i>Financial Instruments: Presentation</i> – Amendments relating to classification of Rights Issue	1 February 2010
• IAS 24 <i>Related Party Disclosures</i> – Amendment on disclosure requirements for entities that are controlled, jointly controlled or significantly influenced by a Government	1 January 2011
• IFRS 9 Financial Instruments: <i>Classification and Measurement</i> (intended as complete replacement for IAS 39 and IFRS 7)	1 January 2013
• Amendments to IFRS 2, IFRS 5, IFRS 8, IAS 1, IAS 7, IAS 17, IAS 18, IAS 36, IAS 38 and IAS 39 resulting from April 2009 Annual Improvements to IFRSs.	Majority effective for annual periods beginning on or after 1 January 2010



## Notes to the financial statements for the year ended 31 December 2009 (continued)

2. Adoption of new and revised International Financial Reporting Standards (IFRS) (continued)

## 2.3 Standards and Interpretations in issue not yet effective (continued)

New Interpretations and amendments to Interpretations:

	Effective for annual periods beginning on or after
• IFRIC 17: Distributions of Non-cash Assets to Owners	1 July 2009
• IFRIC 19: Extinguishing Financial Liabilities with Equity Instruments	1 July 2010
• Amendment to IFRIC 14: IAS 19: The limit on a defined Benefit Asset, Minimum Funding Requirement and their interaction	1 January 2011
• Amendment to IFRIC 16: <i>Hedges of a Net Investment in a Foreign Operation</i>	1 July 2009
• Amendment to IFRIC 9 (revised): <i>Reassessment of Embedded</i> <i>Derivatives</i> relating to assessment of embedded derivatives in case of reclassification of a financial asset out of the 'FVTPL' category	1 July 2009

The management anticipates that the adoption of these Standards and Interpretations in future periods will have no material impact on the financial statements of the Authority in the period of initial application.



## Notes to the financial statements for the year ended 31 December 2009 (continued)

## 3. Summary of significant accounting policies

## **Basis of preparation**

The financial statements have been prepared in accordance with International Financial Reporting Standards issued by the International Accounting Standards Board, interpretations issued by the International Financial Reporting Interpretations Committee and the requirements of the Sector Law of the Sultanate of Oman.

The following are the significant accounting policies which have been applied consistently:

## Property and equipment

Property and equipment purchased are recorded at cost together with any incidental expenses of acquisition.

The cost of property and equipment is written off in equal installments over their estimated useful economic lives as follows:

	Years
Furniture, fixtures and office equipment	6.67
Vehicles	5
Computers	3 - 4

#### Impairment

At each statement of financial position date, the Authority reviews the carrying amounts of its assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any.

The loss arising on an impairment of an asset or cash generating unit is determined as the difference between the recoverable amount and carrying amount of the asset or cash generating unit and is recognised immediately in the statement of comprehensive income.

Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount and the increase is recognised as income immediately, provided that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised earlier.



## Notes to the financial statements for the year ended 31 December 2009 (continued)

## 3. Summary of significant accounting policies (continued)

## **Financial instruments**

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

The principal financial instruments are cash and bank balances, license fees receivable, other receivables and trade and other payables. License fees receivable are stated at their nominal value as reduced by allowances for doubtful balances, if any. Trade and other payables are stated at their amortised cost.

#### Provisions

Provisions are recognised when the Authority has a present obligation as a result of a past event, which it is probable, will result in an outflow of economic benefits that can be reasonably estimated.

## Staff benefits

Payment is made to the Pension and Gratuities Fund for Omani Government Employees pursuant to the provisions of the Law of Post Service Pensions and Gratuities for Omani Government Employees issued by Royal Decree (26/86) as amended. Provision is also made for amounts payable under the Oman Labour Law applicable to expatriate employees, and is based on current remuneration and accumulated periods of service at the statement of financial position date.

#### Cash and cash equivalents

For the purpose of cash flow statement, cash and cash equivalents consist of cash on hand and bank balances maturing within three months from the date of placement.

#### Licence fees

Licence fees represent the amounts invoiced to the licensees for the year.

#### Foreign currencies

Transactions denominated in foreign currencies entered into during the year have been translated into Rials Omani and recorded at the rates of exchange prevailing at the dates of transactions. Foreign currency monetary assets and liabilities at the reporting date are translated at the rates of exchange prevailing at that date. Exchange differences that arise are taken to the statement of comprehensive income.



## Notes to the financial statements for the year ended 31 December 2009 (continued)

## 3. Summary of significant accounting policies (continued)

## Taxation

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

## Critical accounting judgements and key source of estimation uncertainty

In preparing the financial statements, the management is required to make estimates and assumptions which affect reported income and expenses, assets, liabilities and related disclosures. The use of available information and application of judgment based on historical experience and other factors are inherent in the formation of estimates. Actual results in the future could differ from such estimates.

#### Licence fees

The significant estimate in the preparation of these financial statements is primarily in respect of licence fee income to be recovered in respect of regulation by the Authority of the licensed companies.

#### Depreciation

Depreciation is charged so as to write off the cost of assets over their estimated useful lives. The calculation of useful lives is based on management's assessment of various factors such as the operating cycles, the maintenance programs, and normal wear and tear using its best estimates.

## 4. Financial risk management

Financial instruments carried on the statement of financial position comprise cash and bank balances, license fees receivable, other receivables and trade and other payables.

Financial assets are assessed for indicators of impairment at each reporting date. Financial assets are impaired where there is objective evidence that as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows have been impacted.

The classification of financial assets depends on the purpose for which the financial assets were acquired. Management determines the classification of its financial assets at initial recognition.



## Notes to the financial statements for the year ended 31 December 2009 (continued)

## 4. Financial risk management (continued)

## **Financial risk factors**

## Overview

The Authority's activities expose it to a variety of financial risks: market risk, credit risk and liquidity risk. The Authority's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Authority's financial performance.

Risk management is carried out by finance and administration department under policies approved by the management.

## (i) Credit risk

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 from licensees.

## Licence fee and other receivables

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.

#### (ii) Liquidity risk

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.



## Notes to the financial statements for the year ended 31 December 2009 (continued)

## 4. Financial risk management (continued)

## Financial risk factors (continued)

## (iii) Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates affect the Authority's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

## Foreign currency risk

The Authority's functional and presentation currency is Rial Omani and the Authority's performance is substantially independent of changes in foreign currency rates. There are no significant financial instruments denominated in foreign currency and consequently, foreign currency risk is not significant.

#### Interest rate risk

The Authority has balances with banks, which are interest bearing and exposed to changes in market interest rates.

## Capital management

The Authority's objectives when managing capital are to safeguard the Authority's ability to continue as a going concern and benefit other stakeholders. The Authority is not subject to externally imposed capital requirements (Note 1)

## Fair value of financial instruments

Fair value of the financial instruments approximates to their carrying value at the statement of financial position.



## Notes to the financial statements for the year ended 31 December 2009 (continued)

## 5. **Property and equipment**

	Furniture, fixtures and office			
	equipment RO	Vehicles RO	Computers RO	Total RO
Cost				
At 1 January 2008 Additions	63,707 640	11,750 20,600	46,881 20,595	122,338 41,835
At 1 January 2009 Additions	64,347 3,089	32,350 25,800	67,476 4,257	164,173 33,146
At 31 December 2009	67,436	58,150	71,733	197,319
Depreciation	· ·			
At 1 January 2008 Charge for the year	24,911 9,589	5, <b>8</b> 14 5,104	27,562 13,154	58,287 27,847
At 1 January 2009 Charge for the year	34,500 9,883	10.918 10,089	40,716 12,789	86,134 32,761
At 31 December 2009	44,383	21,007	53,505	118,895
Carrying value At 31 December 2009	23,053	37,143	18,228	78,424
At 31 December 2008	29,847	21,432	26,760	78,039

## 6. Cash and cash equivalents

*	2009 RO	2008 RO
Cash on hand Cash at bank	500 1,128,936	295 508,671
	1,129,436	508,966


### AUTHORITY FOR ELECTRICITY REGULATION, OMAN

### Notes to the financial statements for the year ended 31 December 2009 (continued)

### 7. Retained surplus

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

### 8. Provision for employees' end of service benefits

	2009 RO	2008 RO
Balance brought forward	24,831	18,412
Paid during the year	· –	(5,246)
Charge for the year (Note 11)	17,185	11,665
Balance carried forward	42,016	24,831

### 9. Accruals and other payables

Accruals	12,016	12,786
Other payables	174,669	191,359
	186,685	204,145

### 10. Licence fees

Licence fees represent the amounts invoiced to licensees for the year.

### 11. Salaries and employee related costs

1 0	2009 RO	2008 RO
Salaries and allowances	682,392	552,430
Cost of end of service benefits for expatriate	17 195	11 665
Contribution to defined contribution retirement plan	17,105 AD 110	30.693
Other employee related costs	49,865	64,043
	·	
	789,561	658,831



### AUTHORITY FOR ELECTRICITY REGULATION, OMAN

### Notes to the financial statements for the year ended 31 December 2009 (continued)

### 12. General and administrative expenses

	2009	2008
	RO	RO
Rent	41,400	41,400
Consultancy fees	683,716	765,437
Communications	5,736	5,046
Advertisement and publicity	9,070	18,367
Traveling and conveyance	26,651	37,949
Printing and stationery	15,767	23,828
Utilities	1,021	1,115
Renairs and maintenance	6,302	11,165
Miscellaneous expenses	98,392	52,376
	888,055	956,683

### 13. Taxation

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

### 14. Related party transactions

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

Such transactions comprise compensation to key management personnel and which amounted to:

	2009 RO	2008 RO
Short term employment benefits	175,020	165,061
End of service benefits	9,589	6,046
	the second s	



### AUTHORITY FOR ELECTRICITY REGULATION, OMAN

### Notes to the financial statements for the year ended 31 December 2009 (continued)

### 15. Credit risk

### Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The exposure to credit risk at the reporting date was on account of:

	2009	2008
	RO	RO
License fee receivable	-	39,550
Prepayments and other receivables	223,481	46,868
Cash and bank balances	1,129,436	508,966
	1,352,917	595,384

Licence fees receivable at the reporting date were past due for nil days (2008: 92 days).

### 16. Liquidity risk

The following are the maturities of the financial liabilities.

	200	)9	200	8 .
	Carrying	6 months	Carrying	6 months
	amount	or less	amount	or less
	RO	RO	RO	RO
Accruals	12,016	12,016	12,786	12,786
Other payables	174,669	174,669	191,359	191,359
	186,685	186,685	204,145	204,145



18.

### AUTHORITY FOR ELECTRICITY REGULATION, OMAN

### Notes to the financial statements for the year ended 31 December 2009 (continued)

### 17. Interest rate risk

At the reporting date the interest rate risk profile of the Authority's interest bearing financial instruments was:

	2009 RO	2008 RO
Fixed rate instruments		
Financial assets	1,128,936	508,671
Financial liabilities	-	-
Commitments		
Operating commitments	64,207	8,516

### 19. Approval of financial statements

The financial statements were approved by the Members and authorised for issue on 24 May 2010.



### ANNEX B: AUTHORISED ENTITIES



### **Licence Holders**

Majan Electricity Company SAOC Regulated Activities: the Distribution' and Supply of electricity to Premises	
Mazoon Electricity Company SAOC Regulated Activities: the Distribution' and Supply of electricity to Premises	
Muscat Distribution Company SAOC Regulated Activities: the Distribution' and Supply of electricity to Premises	
Oman Electricity Transmission Company SAOC Regulated Activities: the Transmission; and Dispatch of electricity	
Rural Areas Electricity Company SAOC Regulated Activities: Generation and Desalination & Transmission; Dispatch; Distribution; and Supply of electricity & bulk supply of desalinated water	*
Wadi Al Jizzi Power Company SAOC Regulated Activity: the Generation of electricity	
Al Rusail Power Company SAOC Regulated Activity: the Generation of electricity	athil المالية المرابع
Al Ghubrah Power and Desalination Company SAOC Regulated Activity: Generation of electricity and Desalination of water	شر كة الغبر ه للمالغة والتحلية شمير م مراسع مراسع مراسع د و معرفيناسي مراسع د و معرفين د موجع مراسع د موجع مراسع د موجع مراسع د مراسع مراسع د مراسع د مراسع د مراسع د مراسع د مراسع د مراسع مراسع د مراسع د مراسع د مراسع د مراسع د مراسع د مراسع د مراسع د م م مراسع د مراسع م م م مراسع م م م م م م م م م م م م م م م م م م م
Al Kamil Power Company SAOG Regulated Activity: the Generation of electricity	
United Power Company SAOG Regulated Activity: the Generation of electricity	
AES Barka SAOG Regulated Activity: Generation of electricity and Desalination of water	BARKA
Sohar Power Company SAOG Regulated Activity: Generation of electricity and Desalination of water	A CONTRACT OF A
Oman Power and Water Procurement Company SAOC Regulated Activities: Demand forecasting, capacity procurement; bulk supply of electricity and water, & counterparty to the Salalah Concession Agreement	
SMN Barka Power Company SAOC Regulated Activity: Generation of electricity and Desalination of water	



### **Licence Exemption Holders**

Sohar International Urea Chemical Industries SAOC Regulated Activity: Generation of electricity and Desalination of water	SIUCI
Sohar Refinery Company LLC Regulated Activity: Generation of electricity and Desalination of water; the Distribution of electricity; the Supply of electricity to Premises	
Oman Mining Company LLC Regulated Activities: the Generation; Distribution; and Supply of electricity	
Oman India Fertiliser Company SAOC Regulated Activities: Generation of electricity and Desalination of water	
Oman Cement Company SAOG Regulated Activities: the Generation; Distribution; and Supply of electricity to Premises	
Barr Al Jissah Resort Company Regulated Activities: the Distribution of electricity	<u>ShangtLas</u> منتجع برالجصف سلطنف عمان Barr Al Jissah Resort & Spa Sultanate of Owan
Oman Refinery Company LLC Regulated Activity: Generation of electricity and Desalination of water; the Distribution; and the Supply of electricity to Premises	
Oman LNG LLC Regulated Activity: Generation of electricity and Desalination of water; the Distribution; and the Supply of electricity to Premises	
Petroleum Development Oman Regulated Activities: the Generation; Distribution, Transmission; and Supply of electricity to Premises	
Occidental of Oman Inc Regulated Activity: the Generation; Distribution of electricity	OXY
Sohar Aluminium Company LLC Regulated Activity: Generation of electricity and Desalination of water; the Distribution; and the Transmission of electricity	S
Sharqiyah Desalination Company SAOC Regulated Activity: Generation of electricity and Desalination of water	
Occidental Mukhaizna Regulated Activity: Generation of electricity and Desalination of water; and the Distribution of electricity	<b>exy</b>
Ministry of Defence Regulated Activity: Generation of electricity for sale to PWP	



ANNEX C: Electricity & Related Water Sector Statistics ANNUAL REPORT 2009

 Table 1

 Electricity Customer Accounts by System, Company and Tariff Category: 2008 and 2009

			Main Int	erconnec	cted System	(MIS)			Rural Sys	stems	Salalah S	ystem		
2008 Accounts	Muscat	% Total	Majan	% Total	Mazoon	% Total	Total MIS	% Total	RAEC	% Total	DPC	% Total	Total Oman	% Total
Residential	140,662	76.4%	95,389	76.6%	174,049	79.8%	410,100	77.9%	13,603	72.2%	39,101	75.5%	462,804	77.5%
Industrial	244	0.1%	97	0.1%	42	0.0%	383	0.1%	11	0.1%	49	0.1%	443	0.1%
Commercial	37,149	20.2%	20,812	16.7%	31,859	14.6%	89,820	17.1%	2,989	15.9%	9,265	17.9%	102,074	17.1%
Agriculture & Fisheries	121	0.1%	1,563	1.3%	1,718	0.8%	3,402	0.6%	168	0.9%	86	0.2%	3,656	0.6%
Hotels / Tourism	0	0.0%	266	0.2%	20	0.0%	286	0.1%	20	0.1%	85	0.2%	391	0.1%
Government	5,848	3.2%	6,426	5.2%	10,346	4.7%	22,620	4.3%	2,020	10.7%	3,084	<b>%0</b> '9	27,724	4.6%
Ministry of Defence	49	0.0%	19	0.0%	35	0.0%	103	0.0%	40	0.2%	88	0.2%	231	0.0%
2008 Totals	184,073	100.0%	124,572	100.0%	218,069	100.0%	526,714	100.0%	18,851	100.0%	51,758	100.0%	597,323	100.0%
% of Total Oman	30.8%		20.9%		36.5%		88.2%		3.2%		8.7%		100.0%	
-			Main Int	erconnec	cted System	(MIS)			Rural Sys	stems	Salalah S	ystem		
2009 Accounts	Muscat	% Total	Majan	% Total	Mazoon	% Total	Total MIS	% Total	RAEC	% Total	DPC	% Total	Total Oman	% Total
Residential	147,869	76.5%	100,558	76.8%	184,241	79.6%	432,668	77.9%	14,597	72.1%	41,705	75.8%	488,970	77.5%
Industrial	259	0.1%	116	0.1%	62	0.0%	437	0.1%	15	0.1%	51	0.1%	503	0.1%
Commercial	38,677	20.0%	21,703	16.6%	34,147	14.8%	94,527	17.0%	3,227	15.9%	9,733	17.7%	107,487	17.0%
Agriculture & Fisheries	130	0.1%	1,764	1.3%	1,900	0.8%	3,794	0.7%	178	0.9%	87	0.2%	4,059	0.6%
Hotels / Tourism	0	0.0%	269	0.2%	22	0.0%	291	0.1%	22	0.1%	83	0.2%	366	0.1%
Government	6,178	3.2%	6,569	5.0%	10,963	4.7%	23,710	4.3%	2,159	10.7%	3,236	5.9%	29,105	4.6%
Ministry of Defence	57	0.0%	19	0.0%	37	0.0%	113	0.0%	40	0.2%	94	0.2%	247	0.0%
2009 Totals	193,170	100.0%	130,998	100.0%	231,372	100.0%	555,540	100.0%	20,238	100.0%	54,989	100.0%	630,767	100.0%
% of Total Oman	30.6%		20.8%		36.7%		88.1%		3.2%		8.7%		100'0%	
Net Change in Accounts	9,097		6,426		13,303		28,826		1,387		3,231		33,444	
Annual % Change	4.9%		5.2%		6.1%		5.5%		7.4%		6.2%		5.6%	

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	<u>هيئة تنظيم الكهربا، - عمار</u> UTHORITY FOR ELECTRICTY REGULATION, OMAN
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 Table 2
 Electricity Supplied to Customers by System, Company and Tariff Category: 2008 and 2009

			Main Int	erconne	cted System	(MIS)			Rural Sys	tems	Salalah Sy	stem		
2008 MWh	Muscat	% Total	Majan	% Total	Mazoon	% Total	Total MIS	% Total	RAEC	% Total	DPC	% Total	Total Oman	% Total
Residential	2,680,377	49.4%	1,465,931	55.3%	2,240,596	69.1%	6,386,904	56.4%	165,400	53.1%	477,275	39.1%	7,029,579	54.7%
Industrial	365,057	6.7%	300,022	11.3%	68,891	2.1%	733,970	6.5%	3,306	1.1%	246,153	20.2%	983,429	7.7%
Commercial	1,371,696	25.3%	511,581	19.3%	398,078	12.3%	2,281,355	20.2%	37,072	11.9%	206,957	16.9%	2,525,385	19.7%
Agriculture & Fisheries	2,252	0.0%	53,916	2.0%	88,925	2.7%	145,093	1.3%	10,053	3.2%	13,058	1.1%	168,204	1.3%
Hotels / Tourism	0	0.0%	10,287	0.4%	7,072	0.2%	17,359	0.2%	10,643	3.4%	1,731	0.1%	29,733	0.2%
Government	985,450	18.2%	292,371	11.0%	395,869	12.2%	1,673,690	14.8%	76,219	24.5%	190,999	15.6%	1,940,907	15.1%
Ministry of Defence	18,446	0.3%	16,080	0.6%	44,477	1.4%	79,003	0.7%	8,849	2.8%	85,017	7.0%	172,869	1.3%
2008 Totals	5,423,278	100.0%	2,650,189	100.0%	3,243,906	100.0%	11,317,373	100.0%	311,542	100.0%	1,221,190	100.0%	12,850,105	100.0%
% of Total Oman	42.2%		20.6%		25.2%		88.1%		2.4%		9.5%		100.0%	
			Main Int	erconne	cted System	(MIS)			Rural Sys	tems	Salalah Sy	stem		
2009 MWh	Muscat	% Total	Majan	% Total	Mazoon	% Total	Total MIS	% Total	RAEC	% Total	DPC	% Total	Total Oman	% Total
Residential	2,966,862	50.6%	1,633,459	54.4%	2,567,751	66.8%	7,168,072	56.4%	192,226	52.2%	558,074	39.8%	7,918,373	54.7%
Industrial	345,663	5.9%	445,283	14.8%	87,755	2.3%	878,701	6.9%	4,994	1.4%	291,655	20.8%	1,175,350	8.1%
Commercial	1,495,829	25.5%	563,364	18.7%	521,928	13.6%	2,581,121	20.3%	48,239	13.1%	240,725	17.2%	2,870,085	19.8%
Agriculture & Fisheries	2,831	0.0%	58,430	1.9%	104,458	2.7%	165,719	1.3%	12,840	3.5%	8,025	0.6%	186,584	1.3%
Hotels / Tourism	0	0.0%	9,219	0.3%	8,540	0.2%	17,759	0.1%	10,672	2.9%	1,579	0.1%	30,011	0.2%
Government	1,031,011	17.6%	277,720	9.2%	486,643	12.7%	1,795,374	14.1%	89,600	24.3%	210,348	15.0%	2,095,323	14.5%
Ministry of Defence	23,891	0.4%	17,389	0.6%	65,591	1.7%	106,871	0.8%	9,450	2.6%	91,104	6.5%	207,425	1.4%
2009 Totals	5,866,087	100.0%	3,004,864	100.0%	3,842,668	100.0%	12,713,619	100.0%	368,021	100.0%	1,401,510	100.0%	14,483,150	100.0%
% of Total Oman	40.5%		20.7%		26.5%		87.8%		2.5%		<u>%1</u>		100.0%	
Change in MWh	442,809		354,676		598,761		1,396,246		56,479		180,320		1,633,045	

12.7%

14.8%

18.1%

12.3%

18.5%

13.4%

8.2%

Annual % Change

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 Table 3

 Customer Accounts, MWh Supplied and MWh per Account by System, Company and Tariff Category 2009

ANNUAL REPORT 2009

2009		Mai	in Interconnec	ted System (M	IS)	<b>Rural Systems</b>	Salalah System	
Tariff Category	Item	Muscat	Majan	Mazoon	Total MIS	RAEC	DPC	Total Oman
Residential	Accounts	147,869	100,558	184,241	432,668	14,597	41,705	488,970
Residential	MWh Supplied	2,966,862	1,633,459	2,567,751	7,168,072	192,226	558,074	7,918,373
Residential	MWh Supplied per Account	20	16	14	17	13	13	16
Industrial	Accounts	259	116	62	437	15	51	503
Industrial	MWh Supplied	345,663	445,283	87,755	878,701	4,994	291,655	1,175,350
Industrial	MWh Supplied per Account	1,335	3,839	1,415	2,011	333	5,719	2,337
Commercial	Accounts	38,677	21,703	34,147	94,527	3,227	9,733	107,487
Commercial	MWh Supplied	1,495,829	563,364	521,928	2,581,121	48,239	240,725	2,870,085
Commercial	MWh Supplied per Account	39	26	15	27	15	25	27
Agriculture & Fisheries	Accounts	130	1,764	1,900	3,794	178	87	4,059
Agriculture & Fisheries	MWh Supplied	2,831	58,430	104,458	165,719	12,840	8,025	186,584
Agriculture & Fisheries	MWh Supplied per Account	22	33	55	44	72	92	46
Hotels / Tourism	Accounts	0	269	22	291	22	83	396
Hotels / Tourism	MWh Supplied	0	9,219	8,540	17,759	10,672	1,579	30,011
Hotels / Tourism	MWh Supplied per Account	0	34	388	61	485	19	76
Government	Accounts	6,178	6,569	10,963	23,710	2,159	3,236	29,105
Government	MWh Supplied	1,031,011	277,720	486,643	1,795,374	89,600	210,348	2,095,323
Government	MWh Supplied per Account	167	42	44	76	42	65	72
Ministry of Defence	Accounts	57	19	37	113	40	94	247
Ministry of Defence	MWh Supplied	23,891	17,389	65,591	106,871	9,450	91,104	207,425
Ministry of Defence	MWh Supplied per Account	419	915	1,773	946	236	696	840
<b>Total Customer Accounts</b>	in 2009	193,170	130,998	231,372	555,540	20,238	54,989	630,767
Total MWh Supplied in 20	60	5,866,087	3,004,864	3,842,668	12,713,619	368,021	1,401,510	14,483,150
MWh Supplied per Accouit	nt in 2009	30.4	22.9	16.6	22.9	18.2	25.5	23.0
% change MWh per Acco	unt from 2008	3.1%	7.8%	11.6%	6.5%	10.0%	8.0%	6.7%



Electricity Supply & Registered Accounts by Region & Company: 2008 and 2009

2008						
Region	Company	MWh Supplied	% Oman	Accounts	% Oman	MWh Supply per Account
Al Dahirah	Majan	873,316	6.8%	54,870	9.2%	15.9
Al Sharquia	Mazoon	950,582	7.4%	77,372	13.0%	12.3
Al Wusta	RAEC	87,305	0.7%	6,281	1.1%	13.9
Dakhliyah	Mazoon	968,937	7.5%	65,965	11.0%	14.7
Dhofar	DPC SAOG	1,221,190	9.5%	51,758	8.7%	23.6
Dhofar	RAEC	61,924	0.5%	3,216	0.5%	19.3
Musandam	RAEC	162,313	1.3%	9,354	1.6%	17.4
Muscat	Muscat	5,423,278	42.2%	184,073	30.8%	29.5
North Batinah	Majan	1,776,873	13.8%	69,702	11.7%	25.5
South Batinah	Mazoon	1,324,387	10.3%	74,732	12.5%	17.7
Sultanate Totals 2	008	12,850,105		597,323		<b>21.5</b> 6.7%
2009						
Region	Company	MWh Supplied	% Oman	Accounts	% Oman	MWh Supply per Account
Al Dahirah	Majan	499,291	3.4%	30,922	4.9%	16.1
Al Sharquia	Mazoon	1,134,625	7.8%	82,899	13.1%	13.7
Al Wusta	RAEC	106,887	0.7%	7,158	1.1%	14.9
Burami	Majan	462,102	3.2%	24,175	3.8%	19.1

	i lajan	102,102	01270	= 1/1/0	0.070	1911
Dakhliyah	Mazoon	1,147,347	7.9%	69,248	11.0%	16.6
Dhofar	DPC SAOG	1,401,510	9.7%	54,989	8.7%	25.5
Dhofar	RAEC	87,059	0.6%	3,486	0.6%	25.0
Musandam	RAEC	174,075	1.2%	9,594	1.5%	18.1
Muscat	Muscat	5,866,087	40.5%	193,170	30.6%	30.4
North Batinah	Majan	2,043,473	14.1%	75,901	12.0%	26.9
South Batinah	Mazoon	1,560,695	10.8%	79,225	12.6%	19.7
Sultanate Totals 2	2009	14,483,151		630,767		23.0
Chan	ge from 2008 (%)	12.7%		5.6%		6.7%



### Electricity & Related Water Production by System: 2006 to 2009

2006	Electri	city Pr	oduction		Related	Water I	Production	
System	Gross MWh	% Year	Net MWh	% Year	Gross m3	% Year	Net 9 m3	% Year
Main Interconnected System	12,121,472	88.7%	11,781,999	88.7%	83,801,093	95.1%	82,104,359	95.0%
Rural Systems	272,247	2.0%	252,493	1.9%	4,285,594	4.9%	4,278,981	5.0%
Salalah Power System	1,270,544	9.3%	1,252,300	9.4%				
Total for 2006	13,664,262		13,286,792		88,086,687		86,383,340	
2007	Electri	city Pr	oduction		Related	Water I	Production	
System	Gross MWh	% Year	Net MWh	% Year	Gross m3	% Year	Net 9 m3	% Year
Main Interconnected System	12,914,618	88.3%	12,490,000	88.2%	105,515,615	99.4%	84,250,901	99.3%
Rural Systems	309,354	2.1%	289,175	2.0%	596,858	0.6%	601,982	0.7%
Salalah Power System	1,406,455	9.6%	1,387,520	9.8%				
Total for 2007	14,630,427		14,166,695		106,112,473		84,852,883	
2008	Electri	icity Pro	oduction		Related	Water	Production	
System	Gross MWh	% Year	Net MWh	% Year	Gross m3	% Year	Net 9 m3	% Year
Main Interconnected System	14,211,629	88.5%	14,033,987	88.7%	113,174,090	99.3%	97,078,424	99.3%
Rural Systems	349,265	2.2%	325,839	2.1%	742,651	0.7%	733,091	0.7%
Salalah Power System	1,488,552	9.3%	1,469,197	9.3%				
Total for 2008	16,049,446		15,829,023		113,916,741		97,811,515	
2009	Electri	city Pr	oduction		Related	Water I	Production	
System	Gross MWh	% Year	Net MWh	% Year	Gross m3	% Year	Net 9 m3	% Year
Main Interconnected System	16,292,485	88.3%	15,718,788	88.2%	112,350,338	99.2%	112,928,995	99.2%
Rural Systems	396,011	2.1%	370,232	2.1%	912,305	0.8%	894,429	0.8%
Salalah Power System	1,756,801	9.5%	1,734,060	9.7%				
Total for 2009	18,445,296		17,823,080		113,262,643		113,823,424	



Electricity & Related Water Production by System and Company: 2008 & 2009

		E	ectricity	Production		Re	elated W	ater Productio	n
	2008	Gross MWh	% Oman	Net MWh	% Oman	Gross m3	% Oman	m3	% Oman
<b>A:</b>	Main Interconnected System	า							
	AES Barka SAOG	2,504,660	15.6%	2,312,360	14.6%	30,443,578	26.7%	30,149,960	30.8%
	Al Ghubrah SAOC	2,885,070	18.0%	2,653,731	16.8%	56,111,128	49.3%	55,034,935	56.3%
	Al Kamil SAOG	1,148,682	7.2%	1,135,666	7.2%	0	0.0%	0	0.0%
	Al Rusail SAOC	2,727,790	17.0%	2,702,360	17.1%	0	0.0%	0	0.0%
	UPC Manah SAOG	1,024,426	6.4%	1,012,819	6.4%	0	0.0%	0	0.0%
	Wadi Jizzi SAOC	677,418	4.2%	669,790	4.2%	0	0.0%	0	0.0%
	Sohar Power Company SAOC	3,117,492	19.4%	2,929,854	18.5%	26,619,384	23.4%	11,893,529	12.2%
	SMN Barka SAOC	126,091	0.8%	232,411	1.5%	0	0.0%	0	0.0%
	PWP purchases	0	0.0%	384,996	2.4%	0	0.0%	0	0.0%
	MIS sub-total	14,211,629	<b>88.5</b> %	14,033,987	<b>88.7</b> %	113,174,090	<b>99.3</b> %	97,078,424	<b>99.3</b> %
B.	Rural Systems								
		240 265	7 704	225 020	7 104	742 651	0 704	722 001	0 704
		545,205	2.270	525,059	2.170	742,031	0.7 %	755,091	0.7 %
	Rural Systems sub-total	349,265	2.2%	325,839	2.1%	742,651	0.7%	733,091	0.7%
_									
C:	Salalah Power System								
	RAEC SAOC	2,301	0.0%	2,101	0.0%				
	DPC SAUG	1,486,251	9.3%	1,467,095	9.3%				
	Salalah System sub-total	1,488,552	<b>9.3</b> %	1,469,197	<b>9.3</b> %				
	Totals for 2008	16,049,446	100%	15,829,023	<b>100</b> %	113,916,741	<b>100</b> %	97,811,515	<b>100</b> %
		E	ectricity	Production		Re	elated W	ater Productio	n
		Croco						Not	
	2009	MWh	% Oman	MWh	% Oman	Gross m3	% Oman	m3	% Oman
Α:	2009 Main Interconnected System	MWh	% Oman	Net MWh	% Oman	Gross m3	% Oman	m3	% Oman
<b>A:</b>	2009 Main Interconnected System	1 2 489 860	% Oman 13 5%	2 305 126	% Oman 12 9%	28 571 394	% Oman 25 2%	28 068 015	% Oman 24 7%
<b>A</b> :	2009 Main Interconnected System AES Barka SAOG Al Ghubrah SAOC	2,489,860 2,917,909	% Oman 13.5% 15.8%	2,305,126	% Oman 12.9% 15.2%	28,571,394 51,398,766	% Oman 25.2% 45.4%	28,068,015	% Oman 24.7% 44.3%
<b>A</b> :	2009 Main Interconnected System AES Barka SAOG Al Ghubrah SAOC Al Kamil SAOG	1 2,489,860 2,917,909 1,297,374	% Oman 13.5% 15.8% 7.0%	2,305,126 2,702,257 1.283.926	% Oman 12.9% 15.2% 7.2%	28,571,394 51,398,766 0	% Oman 25.2% 45.4% 0.0%	28,068,015 50,463,598 0	% Oman 24.7% 44.3% 0.0%
<b>A</b> :	2009 Main Interconnected System AES Barka SAOG Al Ghubrah SAOC Al Kamil SAOG Al Rusail SAOC	2,489,860 2,917,909 1,297,374 3,176,678	% Oman 13.5% 15.8% 7.0% 17.2%	2,305,126 2,702,257 1,283,926 3,149,107	% Oman 12.9% 15.2% 7.2% 17.7%	28,571,394 51,398,766 0	% Oman 25.2% 45.4% 0.0% 0.0%	28,068,015 50,463,598 0	% Oman 24.7% 44.3% 0.0% 0.0%
<b>A</b> :	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024	% Oman 13.5% 15.8% 7.0% 17.2% 5.7%	2,305,126 2,702,257 1,283,926 3,149,107 1,045,115	% Oman 12.9% 15.2% 7.2% 17.7% 5.9%	28,571,394 51,398,766 0 0	% Oman 25.2% 45.4% 0.0% 0.0%	28,068,015 50,463,598 0 0	% Oman 24.7% 44.3% 0.0% 0.0%
<b>A</b> :	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1%	2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875	% Oman 12.9% 15.2% 7.2% 17.7% 5.9% 4.2%	28,571,394 51,398,766 0 0 0 0	% Oman 25.2% 45.4% 0.0% 0.0% 0.0%	28,068,015 50,463,598 0 0 0 0	% Oman 24.7% 44.3% 0.0% 0.0% 0.0%
<b>A</b> :	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 18.1%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457	% 0man 12.9% 15.2% 7.2% 17.7% 5.9% 4.2% 17.5%	28,571,394 51,398,766 0 0 0 0 32,380,178	% Oman 25.2% 45.4% 0.0% 0.0% 0.0% 0.0% 28.6%	28,068,015 50,463,598 0 0 0 0 0 30,319,312	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 0.0% 26.6%
<b>A</b> :	2009 Main Interconnected System AES Barka SAOG Al Ghubrah SAOC Al Kamil SAOG Al Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC SMN Barka SAOC	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 18.1% 6.8%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338	% 0man 12.9% 15.2% 7.2% 17.7% 5.9% 4.2% 17.5% 6.6%	28,571,394 51,398,766 0 0 0 0 32,380,178 0	% oman 25.2% 45.4% 0.0% 0.0% 0.0% 28.6% 0.0%	28,068,015 50,463,598 0 0 0 0 30,319,312 4,078,070	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 0.0% 26.6% 3.6%
A:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC SMN Barka SAOC PWP purchases	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 18.1% 6.8% 0.0%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587	% Oman 12.9% 15.2% 7.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1%	28,571,394 51,398,766 0 0 0 0 32,380,178 0 0	%           0man           25.2%           45.4%           0.0%           0.0%           0.0%           28.6%           0.0%           0.0%	28,068,015 50,463,598 0 0 0 0 0 30,319,312 4,078,070 0	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 26.6% 3.6% 0.0%
A:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC Sohar Power Company SAOC SMN Barka SAOC PWP purchases MIS sub-total	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 18.1% 6.8% 0.0% <b>88.3%</b>	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 <b>15,718,788</b>	% 0man 12.9% 15.2% 7.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% 88.2%	Cross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 112,350,338	%           0man           25.2%           45.4%           0.0%           0.0%           28.6%           0.0%           0.0%           999.2%	28,068,015 50,463,598 0 0 0 0 30,319,312 4,078,070 0 <b>112,928,995</b>	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 26.6% 3.6% 0.0% 99.2%
A:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC Sohar Power Company SAOC SMN Barka SAOC PWP purchases MIS sub-total % change from 2008	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6%	%           0man           13.5%           15.8%           7.0%           17.2%           5.7%           4.1%           18.1%           6.8%           0.0%           88.3%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0%	% Oman 12.9% 15.2% 7.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% <b>88.2%</b>	Cross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 112,350,338 -0.7%	%         0man         25.2%         45.4%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         99.2%	m3 28,068,015 50,463,598 0 0 0 0 30,319,312 4,078,070 0 112,928,995 16.3%	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 26.6% 3.6% 0.0% 99.2%
A:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC Sohar Power Company SAOC Sohar Power Company SAOC SMN Barka SAOC PWP purchases MIS sub-total % change from 2008 Rural Systems	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14,6%	%         0man         13.5%         15.8%         7.0%         17.2%         5.7%         4.1%         6.8%         0.0%         88.3%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0%	% Oman 12.9% 15.2% 7.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% <b>88.2%</b>	Cross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 112,350,338 -0.7%	%         0man         25.2%         45.4%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         99.2%	m3 28,068,015 50,463,598 0 0 0 0 30,319,312 4,078,070 0 112,928,995 16.3%	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 26.6% 3.6% 0.0% <b>99.2%</b>
A: B:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC Sohar Power Company SAOC Sohar Power Company SAOC Sohar Power Company SAOC WPU purchases MIS sub-total % change from 2008 Rural Systems RAEC SAOC	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6%	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 18.1% 6.8% 0.0% 88.3% 88.3%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0%	% Oman 12.9% 15.2% 7.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% <b>88.2%</b>	Cross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 112,350,338 -0.7%	% Oman 25.2% 45.4% 0.0% 0.0% 0.0% 28.6% 0.0% 0.0% 99.2%	112,928,94,429	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 26.6% 3.6% 0.0% <b>99.2%</b>
A: B:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAO	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6% 396,011	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 18.1% 6.8% 0.0% 88.3% 2.1% 2.1%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0% 370,232	% 0man 12.9% 15.2% 7.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% 888.2% 2.1% 2.1%	Cross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 112,350,338 -0.7% 912,305	% Oman 25.2% 45.4% 0.0% 0.0% 0.0% 28.6% 0.0% 0.0% 99.2%	112,928,963,015 112,928,995 16.3%	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 26.6% 3.6% 0.0% <b>99.2%</b> 0.8%
A: B:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC Sohar Power Company SAOC SMN Barka SAOC PWP purchases MIS sub-total % change from 2008 Rural Systems sub-total % change from 2008	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6% 396,011 396,011	<ul> <li>%</li> <li>0man</li> <li>13.5%</li> <li>15.8%</li> <li>7.0%</li> <li>17.2%</li> <li>5.7%</li> <li>4.1%</li> <li>18.1%</li> <li>6.8%</li> <li>0.0%</li> <li>88.3%</li> <li>2.1%</li> <li>2.1%</li> </ul>	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0% 370,232 370,232	% 0man 12.9% 15.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% 88.2% 2.1% 2.1%	Cross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 32,380,178 0 0 112,350,338 -0.7% 912,305 912,305	% oman 25.2% 45.4% 0.0% 0.0% 28.6% 0.0% 0.0% 0.0% 99.2% 0.8%	112,928,94,429 894,429 823,096 894,429 894,429	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 26.6% 3.6% 0.0% <b>99.2%</b> 0.8%
A: B:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC Sohar Po	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6% 396,011 396,011 13.4%	<ul> <li>%</li> <li>0man</li> <li>13.5%</li> <li>15.8%</li> <li>7.0%</li> <li>17.2%</li> <li>5.7%</li> <li>4.1%</li> <li>18.1%</li> <li>6.8%</li> <li>0.0%</li> <li>88.3%</li> <li>2.1%</li> <li>2.1%</li> </ul>	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0% 370,232 370,232 13.6%	% 0man 12.9% 15.2% 7.2% 5.9% 4.2% 17.5% 6.6% 1.1% 88.2% 2.1% 2.1%	Cross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 112,350,338 -0.7% 912,305 912,305 22.8%	% oman 25.2% 45.4% 0.0% 0.0% 28.6% 0.0% 0.0% 0.0% 99.2%	112,928,94,429 894,429 894,429 22.0%	% Oman 24.7% 44.3% 0.0% 0.0% 26.6% 3.6% 0.0% 99.2% 0.8% 0.8%
A: B: C:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC Sohar Power Company SAOC Sohar Power Company SAOC Sohar Power Company SAOC Sohar Power System Call Systems sub-total % change from 2008 Salalah Power System	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6% 396,011 396,011 13.4%	<ul> <li>%</li> <li>0man</li> <li>13.5%</li> <li>15.8%</li> <li>7.0%</li> <li>17.2%</li> <li>5.7%</li> <li>4.1%</li> <li>18.1%</li> <li>6.8%</li> <li>0.0%</li> <li>88.3%</li> <li>2.1%</li> <li>2.1%</li> <li>2.1%</li> </ul>	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0% 370,232 370,232 13.6%	% Oman 12.9% 15.2% 7.2% 5.9% 4.2% 17.5% 6.6% 1.1% 88.2% 2.1% 2.1%	Cross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 112,350,338 -0.7% 912,305 912,305 22.8%	%         0.0man         25.2%         45.4%         0.0%         0.8%         0.8%	m3 28,068,015 50,463,598 0 0 0 0 30,319,312 4,078,070 0 112,928,995 16.3% 894,429 894,429 894,429 22.0%	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 26.6% 3.6% 0.0% <b>99.2%</b>
A: B: C:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC MIS sub-total % change from 2008 Rural Systems sub-total % change from 2008 Salalah Power System RAEC SAOC DPC SAOC	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6% 396,011 396,011 13.4% 48,577 1,708,224	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 18.1% 6.8% 0.0% 88.3% 2.1% 2.1% 2.1% 2.1%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0% 370,232 370,232 13.6%	% Oman 12.9% 15.2% 7.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% 88.2% 2.1% 2.1% 2.1% 2.1%	Cross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 112,350,338 -0.7% 912,305 912,305 22.8%	%         0man         25.2%         45.4%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.0%         0.8%         0.8%         0.8%	112,928,968,015 50,463,598 0 0 0 0 30,319,312 4,078,070 0 112,928,995 16.3% 894,429 894,429 894,429 22.0%	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 26.6% 3.6% 0.0% <b>99.2%</b> 0.8% 0.8%
A: B: C:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC MIS sub-total % change from 2008 Salalah Power System RAEC SAOC DPC SAOG	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6% 396,011 396,011 13.4% 48,577 1,708,224	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 18.1% 6.8% 0.0% 88.3% 88.3% 2.1% 2.1% 2.1% 2.1%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0% 370,232 370,232 13.6% 45,700 1,688,361	% Oman 12.9% 15.2% 7.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% 88.2% 2.1% 2.1% 2.1% 2.1%	Cross m3 28,571,394 51,398,766 0 0 32,380,178 0 0 112,350,338 -0.7% 912,305 912,305 22.8%	%         0.0man         25.2%         45.4%         0.0%         0.8%         0.8%         0.8%	<pre></pre>	% Oman 24.7% 44.3% 0.0% 0.0% 0.0% 26.6% 3.6% 0.0% <b>99.2%</b> 0.8% 0.8%
A: B: C:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC SMN Barka SAOC PWP purchases MIS sub-total % change from 2008 Salalah Power System RAEC SAOC DPC SAOG Salalah System sub-total % change form 2008	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6% 396,011 396,011 13.4% 48,577 1,708,224 1,756,801	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 18.1% 6.8% 0.0% 88.3% 88.3% 2.1% 2.1% 2.1% 2.1% 2.1% 3.3% 9.3%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0% 370,232 370,232 370,232 13.6% 45,700 1,688,361 1,734,060	% Oman 12.9% 15.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% 88.2% 88.2% 2.1% 2.1% 2.1% 2.1% 3.1% 2.1% 3.1% 3.1% 3.1% 3.1% 3.1% 3.1% 3.1% 3	Cross m3 28,571,394 51,398,766 0 0 32,380,178 0 32,380,178 0 0 112,350,338 -0.7% 912,305 912,305 22.8%	%         0.0man         25.2%         45.4%         0.0%         0.8%         0.8%	112,928,94,429 894,429 22,0%	% Oman 24.7% 44.3% 0.0% 0.0% 26.6% 3.6% 0.0% 99.2% 0.8% 0.8%
A: B: C:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC PWP purchases MIS sub-total % change from 2008 Salalah Power System RAEC SAOC DPC SAOG Salalah System sub-total % change from 2008	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6% 396,011 396,011 396,011 13.4% 48,577 1,708,224 1,756,801 18,0%	<ul> <li>%</li> <li>Oman</li> <li>13.5%</li> <li>15.8%</li> <li>7.0%</li> <li>17.2%</li> <li>5.7%</li> <li>4.1%</li> <li>18.1%</li> <li>6.8%</li> <li>0.0%</li> <li>88.3%</li> <li>2.1%</li> <li>2.1%</li> <li>2.1%</li> <li>2.1%</li> <li>9.3%</li> <li>9.5%</li> </ul>	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0% 370,232 370,232 370,232 13.6% 45,700 1,688,361 1,734,060 18.0%	% Oman 12.9% 15.2% 7.2% 5.9% 4.2% 17.5% 6.6% 1.1% 88.2% 2.1% 2.1% 2.1% 2.1% 9.5% 9.5%	Gross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 112,350,338 -0.7% 912,305 912,305 912,305 22.8%	% Oman 25.2% 45.4% 0.0% 0.0% 28.6% 0.0% 0.0% 99.2% 0.8% 0.8%	112 822 424	% Oman 24.7% 44.3% 0.0% 0.0% 26.6% 3.6% 0.0% 99.2% 0.8% 0.8%
A: B: C:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC MIS sub-total % change from 2008 Salalah Power System RAEC SAOC DPC SAOG Salalah System sub-total % change from 2008	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14,6% 396,011 396,011 13.4% 48,577 1,708,224 1,756,801 18,0%	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 6.8% 0.0% 88.3% 2.1% 2.1% 2.1% 9.3% 9.5% 100%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0% 370,232 370,232 370,232 13.6% 45,700 1,688,361 1,734,060 18.0%	% Oman 12.9% 15.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% 88.2% 88.2% 2.1% 2.1% 2.1% 2.1% 9.5% 9.5%	Gross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 112,350,338 -0.7% 912,305 912,305 912,305 22.8%	% Oman 25.2% 45.4% 0.0% 0.0% 28.6% 0.0% 28.6% 0.0% 99.2% 0.8% 0.8%	113,823,424	% Oman 24.7% 44.3% 0.0% 0.0% 26.6% 3.6% 0.0% 99.2% 0.8% 0.8%
A: B: C:	2009 Main Interconnected System AES Barka SAOG AI Ghubrah SAOC AI Kamil SAOG AI Rusail SAOC UPC Manah SAOG Wadi Jizzi SAOC Sohar Power Company SAOC Sohar Power Sub-total % change from 2008 Salalah System sub-total % change from 2008 Totals for 2009 Actual change from 2008	MWh 2,489,860 2,917,909 1,297,374 3,176,678 1,056,024 748,302 3,343,225 1,263,114 0 16,292,485 14.6% 396,011 396,011 396,011 13.4% 48,577 1,708,224 1,756,801 18,0% 18,445,296 2,395,850	% Oman 13.5% 15.8% 7.0% 17.2% 5.7% 4.1% 6.8% 0.0% 88.3% 2.1% 2.1% 2.1% 9.3% 9.3% 9.5% 100%	Net MWh 2,305,126 2,702,257 1,283,926 3,149,107 1,045,115 741,875 3,119,457 1,183,338 188,587 15,718,788 12.0% 370,232 370,232 370,232 13.6% 45,700 1,688,361 1,734,060 18.0% 17,823,080 1,994,057	% Oman 12.9% 15.2% 17.7% 5.9% 4.2% 17.5% 6.6% 1.1% 88.2% 2.1% 2.1% 2.1% 9.5% 9.5%	Cross m3 28,571,394 51,398,766 0 0 0 32,380,178 0 0 32,380,178 0 0 112,350,338 -0.7% 912,305 912,305 22.8% 113,262,643 -654,098	% 0man 25.2% (45.4% 0.0% 0.0% 28.6% 0.0% 28.6% 0.0% 0.8% 0.8% 0.8% 0.8%	1113,823,424 16,011,909	% Oman 24.7% 44.3% 0.0% 0.0% 26.6% 3.6% 0.0% 99.2% 0.8% 0.8%



Electricity and Related Water Production by Region: 2008 and 2009

2008	Elect	ricity l	Production		Relate	d Wate	er Production	7
Region	MWh Gross	% 5 Oman	MWh Net	% Oman	m3 Gross	% Oman	m3 Net	% Oman
Al Dahirah	516	0.0%	476	0.0%				
Al Sharqiya	1,181,255	7.4%	1,163,079	7.3%	617,818	0.5%	612,760	0.6%
Al Wusta	43,372	0.3%	96,420	0.6%	57,346	0.1%	55,321	0.1%
Dakhliyah	1,024,426	6.4%	1,012,819	6.4%				
Dhofar	1,556,137	9.7%	1,535,909	9.7%	22,118	0.0%	21,918	0.0%
Musandam	205,219	1.3%	191,537	1.2%	45,369	0.0%	43,092	0.0%
Muscat	5,612,860	35.0%	5,364,548	33.9%	56,111,128	49.3%	55,034,935	56.3%
North Batinah	3,794,910	23.6%	3,919,465	24.8%	26,619,384	23.4%	11,893,529	12.2%
South Batinah	2,630,751	16.4%	2,544,772	16.1%	30,443,578	26.7%	30,149,960	30.8%
Totals for 2008	16,049,446		15,829,023		113,916,741		97,811,515	

2009	Elect	ricity I	Production		Relate	d Wat	ter Production	1
Region	MWh Gross	% Oman	MWh Net	% Oman	m3 Gross	% Oman	m3 Net	% Oman
Al Dahirah Change from 2008 (%)	516 <i>0.0%</i>	0.0%	470 -1.3%	0.0%				
Al Sharqiya Change from 2008 (%)	1,336,465 <i>13.1%</i>	7.2%	1,314,631 <i>13.0%</i>	7.4%	763,000 <i>23.5%</i>	0.7%	751,250 <i>22.6%</i>	0.7%
Al Wusta Change from 2008 (%)	53,080 <i>22.4%</i>	0.3%	62,291 <i>-35.4%</i>	0.3%	60,924 <i>6.2%</i>	0.1%	58,530 5.8%	0.1%
Dakhliyah <i>Change from 2008 (%)</i>	1,056,024 <i>3.1%</i>	5.7%	1,045,115 <i>3.2%</i>	5.9%				
Dhofar Change from 2008 (%)	1,842,577 <i>18.4%</i>	10.0%	1,818,862 <i>18.4%</i>	10.2%	33,852 <i>53.1%</i>	0.0%	33,612 <i>53.4%</i>	0.0%
Musandam Change from 2008 (%)	217,547 <i>6.0%</i>	1.2%	203,731 <i>6.4%</i>	1.1%	54,529 <i>20.2%</i>	0.0%	51,037 <i>18.4%</i>	0.0%
Muscat Change from 2008 (%)	6,094,587 <i>8.6%</i>	33.0%	5,860,263 <i>9.2%</i>	32.9%	51,398,766 <i>-8.4%</i>	45.4%	50,463,598 -8.3%	44.3%
North Batinah Change from 2008 (%)	4,091,527 <i>7.8%</i>	22.2%	4,029,253 <i>2.8%</i>	22.6%	32,380,178 <i>21.6%</i>	28.6%	30,319,312 <i>154.9%</i>	26.6%
South Batinah Change from 2008 (%)	3,752,974 <i>42.7%</i>	20.3%	3,488,464 <i>37.1%</i>	19.6%	28,571,394 <i>-6.1%</i>	25.2%	32,146,085 6.6%	28.2%
Totals for 2009	18,445,296		17,823,080		113,262,643		113,823,424	
Change from 2008 (%)	14.9%		12.6%		-0.6%		16.4%	



### Electricity & Related Water Production by Region and Company: 2008 and 2009

2008		Electr	icity Pr	oduction		Rela	ted Wa	ter Product	tion
Region	Company	Gross MWh	% Oman	Net MWh	% Oman	Gross m3	% Oman	Net m3	% Oman
Al Dahirah	RAEC SAOC	516	0.0%	476	0.0%				
Al Sharqiya	Al Kamil SAOG	1,148,682	7.2%	1,135,666	7.2%				
Al Sharqiya	PWP purchases	0	0.0%	1,953	0.0%				
Al Sharqiya	RAEC SAOC	32,573	0.2%	25,460	0.2%	617,818	0.5%	612,760	0.6%
Al Wusta	PWP purchases	0	0.0%	54,765	0.3%				
Al Wusta	RAEC SAOC	43,372	0.3%	41,655	0.3%	57,346	0.1%	55,321	0.1%
Dakhliyah	UPC Manah SAOG	1,024,426	6.4%	1,012,819	6.4%				
Dhofar	DPC SAOG	1,486,251	9.3%	1,467,095	9.3%				
Dhofar	RAEC SAOC	69,886	0.4%	68,813	0.4%	22,118	0.0%	21,918	0.0%
Musandam	RAEC SAOC	205,219	1.3%	191,537	1.2%	45,369	0.0%	43,092	0.0%
Muscat	Al Ghubrah SAOC	2,885,070	18.0%	2,653,731	16.8%	56,111,128	49.3%	55,034,935	56.3%
Muscat	Al Rusail SAOC	2,727,790	17.0%	2,702,360	17.1%				
Muscat	PWP purchases	0	0.0%	8,457	0.1%				
North Batinah	PWP purchases	0	0.0%	319,821	2.0%				
North Batinah	Sohar Power Company	3,117,492	19.4%	2,929,854	18.5%	26,619,384	23.4%	11,893,529	12.2%
North Batinah	Wadi Jizzi SAOC	677,418	4.2%	669,790	4.2%				
South Batinah	AES Barka SAOG	2,504,660	15.6%	2,312,360	14.6%	30,443,578	26.7%	30,149,960	30.8%
South Batinah	SMN Barka SAOC	126,091	0.8%	232,411	1.5%				
Sultanate Totals	2008	16,049,446	1	5,829,023		113,916,741	9	7,811,515	

2009 **Related Water Production Electricity Production** % Gross Gross Net % Net % % Region Company Oman Oman MWh Oman **m3 m3 MWh** Oman Al Dahirah 0.0% 0.0% 516 470 RAEC SAOC Al Sharqiya 1,297,374 7.0% 1,283,926 7.2% Al Kamil SAOG Al Sharqiya 0 0.0% 845 0.0% **PWP** purchases 39,092 0.2% Al Sharqiya 29,860 0.2% 0.7% 751,250 0.7% 763,000 RAEC SAOC Al Wusta 0 0.0% 10,922 0.1% **PWP** purchases A Wusta 0.3% 51,369 0.3% 0.1% 58,530 0.1% 53,080 60,924 RAEC SAOC Dakhliyah 1,056,024 5.7% 1,045,115 5.9% UPC Manah SAOG Dhofar 1,708,224 9.3% 1,688,361 9.5% DPC SAOG 0.7% Dhofar 0.7% 130,501 33,852 0.0% 33,612 0.0% 134,353 RAEC SAOC Musandam 1.2% 54,529 0.0% 51,037 *0.0%* 217,547 203,731 1.1% RAEC SAOC Muscat 2,917,909 15.8% 2,702,257 15.2% 51,398,766 45.4% 50,463,598 44.3% Al Ghubrah SAOC Muscat 3,176,678 17.2% 3,149,107 17.7% Al Rusail SAOC Muscat 0 0.0% 8,900 0.0% **PWP** purchases 0 **North Batinah** 0.0% 167,921 0.9% **PWP** purchases 18.1% 3,119,457 17.5% 32,380,178 28.6% 30,319,312 26.6% North Batinah 3,343,225 Sohar Power Company North Batinah 748,302 4.1% 741,875 4.2% Wadi Jizzi SAOC 2,305,126 12.9% South Batinah 13.5% 2,489,860 28,571,394 25.2% 28,068,015 24.7% AES Barka SAOG South Batinah SMN Barka SAOC 1,263,114 6.8% 1,183,338 6.6% 4,078,070 3.6% Sultanate Totals 2009 113,823,424 18,445,296 17,823,080 113,262,643 14.9% -0.6% 16.4% Change from 2008 (%) 12.6%



### Table 9 i

### Monthly Production by System: MIS 2008 and 2009

2008		Electri	icity Pr	oduction		Related	Water	Productio	on 🛛
System	Month	Gross GWh	% Year	Net GWh	% Year	Gross '000 m3	% Year	Net '000 m3	% Year
MIS	Jan-08	613.7	4.3%	600.7	4.3%	7,472.5	6.6%	6,953.9	7.2%
MIS	Feb-08	577.1	4.1%	580.2	4.1%	6,930.4	6.1%	6,555.5	6.8%
MIS	Mar-08	846.6	6.0%	842.8	6.0%	8,769.0	7.7%	7,963.5	8.2%
MIS	Apr-08	1,153.8	8.1%	1,151.4	8.2%	9,669.4	8.5%	7,868.3	8.1%
MIS	May-08	1,608.5	11.3%	1,586.8	11.3%	11,273.0	10.0%	8,668.0	8.9%
MIS	Jun-08	1,607.5	11.3%	1,647.0	11.7%	11,117.1	9.8%	8,514.7	8.8%
MIS	Jul-08	1,627.1	11.4%	1,662.7	11.8%	11,039.8	9.8%	8,522.8	8.8%
MIS	Aug-08	1,561.2	11.0%	1,512.8	10.8%	9,538.4	8.4%	8,149.1	8.4%
MIS	Sep-08	1,592.4	11.2%	1,534.6	10.9%	9,391.6	8.3%	8,184.0	8.4%
MIS	Oct-08	1,378.6	9.7%	1,345.8	9.6%	9,899.3	8.7%	8,353.1	8.6%
MIS	Nov-08	928.9	6.5%	893.6	6.4%	9,107.7	8.0%	8,700.1	9.0%
MIS	Dec-08	716.2	5.0%	675.5	4.8%	8,965.9	7.9%	8,645.5	8.9%
2008 Totals		14,211.6		14,034.0		113,174.1	9	7,078.4	

2009		Electri	icity Pr	oduction		Related	Water	Productio	n
System	Month	Gross GWh	% Year	Net GWh	% Year	Gross '000 m3	% Year	Net '000 m3	% Year
MIS	Jan-09	697.1	4.3%	649.3	4.1%	8,229.3	7.3%	7,765.7	6.9%
MIS	Feb-09	715.6	4.4%	673.0	4.3%	8,433.0	7.5%	8,081.1	7.2%
MIS	Mar-09	1,025.5	6.3%	981.8	6.2%	9,680.2	8.6%	9,378.5	8.3%
MIS	Apr-09	1,153.2	7.1%	1,110.3	7.1%	8,920.4	7.9%	8,602.1	7.6%
MIS	May-09	1,777.2	10.9%	1,741.5	11.1%	10,857.3	9.7%	10,429.1	9.2%
MIS	Jun-09	1,898.7	11.7%	1,844.7	11.7%	10,388.5	9.2%	10,125.1	9.0%
MIS	Jul-09	1,979.9	12.2%	1,925.0	12.2%	10,582.2	9.4%	10,317.7	9.1%
MIS	Aug-09	1,925.1	11.8%	1,865.6	11.9%	10,576.5	9.4%	10,293.2	9.1%
MIS	Sep-09	1,751.2	10.7%	1,705.0	10.8%	10,057.2	9.0%	9,787.7	8.7%
MIS	Oct-09	1,476.3	9.1%	1,417.4	9.0%	9,865.6	8.8%	9,468.9	8.4%
MIS	Nov-09	1,026.8	6.3%	977.6	6.2%	7,133.8	6.3%	8,548.8	7.6%
MIS	Dec-09	865.9	5.3%	827.5	5.3%	7,626.4	6.8%	10,131.1	9.0%
2009 Totals		16,292.5		15,718.8		112,350.3	11	12,929.0	



### Table 9 ii

### Monthly Production by System: Rural Systems 2008 and 2009

2008		Electri	icity Pro	oduction		Related	Water	Productio	n
System	Month	Gross GWh	% Year	Net GWh	% Year	Gross '000 m3	% Year	Net '000 m3	% Year
Rural Systems	Jan-08	15.4	4.4%	14.1	4.3%	61.7	8.3%	60.9	8.3%
Rural Systems	Feb-08	14.7	4.2%	13.5	4.2%	54.1	7.3%	53.4	7.3%
Rural Systems	Mar-08	21.8	6.2%	20.4	6.2%	62.4	8.4%	61.5	8.4%
Rural Systems	Apr-08	29.3	8.4%	27.6	8.5%	60.3	8.1%	59.7	8.1%
Rural Systems	May-08	38.3	11.0%	35.9	11.0%	66.5	9.0%	65.7	9.0%
Rural Systems	Jun-08	38.5	11.0%	36.1	11.1%	57.7	7.8%	56.9	7.8%
Rural Systems	Jul-08	38.3	11.0%	35.8	11.0%	51.7	7.0%	50.8	6.9%
Rural Systems	Aug-08	37.7	10.8%	35.3	10.8%	57.7	7.8%	57.0	7.8%
Rural Systems	Sep-08	39.0	11.2%	36.5	11.2%	66.6	9.0%	65.9	9.0%
Rural Systems	Oct-08	34.5	9.9%	32.1	9.9%	71.5	9.6%	71.0	9.7%
Rural Systems	Nov-08	23.9	6.8%	22.2	6.8%	65.5	8.8%	64.7	8.8%
Rural Systems	Dec-08	17.9	5.1%	16.4	5.0%	66.9	9.0%	65.6	9.0%
2008 Totals		349.3		325.8		742.7		733.1	

2009		Electri	icity Pro	oduction		Related	l Water	Productio	n
System	Month	Gross GWh	% Year	Net GWh	% Year	Gross '000 m3	% Year	Net '000 m3	% Year
Rural Systems	Jan-09	17.2	4.3%	15.6	4.2%	70.0	7.7%	66.9	7.5%
Rural Systems	Feb-09	17.9	4.5%	16.5	4.4%	69.6	7.6%	63.8	7.1%
Rural Systems	Mar-09	24.9	6.3%	23.2	6.3%	73.1	8.0%	72.5	8.1%
Rural Systems	Apr-09	29 <b>.</b> 9	7.5%	27.9	7.5%	73.8	8.1%	72.4	8.1%
Rural Systems	May-09	42.9	10.8%	40.1	10.8%	83.4	9.1%	80.5	9.0%
Rural Systems	Jun-09	42.6	10.8%	39.9	10.8%	76.4	8.4%	71.0	7.9%
Rural Systems	Jul-09	44.4	11.2%	41.8	11.3%	72.6	8.0%	68.0	7.6%
Rural Systems	Aug-09	44.8	11.3%	42.2	11.4%	76.0	8.3%	76.9	8.6%
Rural Systems	Sep-09	43.5	11.0%	40.9	11.0%	76.5	8.4%	79.5	8.9%
Rural Systems	Oct-09	37.6	9.5%	35.1	9.5%	83.4	9.1%	82.3	9.2%
Rural Systems	Nov-09	27.6	7.0%	25.8	7.0%	78.3	8.6%	80.0	8.9%
Rural Systems	Dec-09	22.8	5.8%	21.2	5.7%	79.4	8.7%	80.7	9.0%
2009 Totals		396.0		370.2		912.3		894.4	



### Table 9 iii

### Monthly Production by System: Salalah Power System 2008 and 2009

2008		Electri	icity Pro	oduction		Related	Water	Productio	n
System	Month	Gross GWh	% Year	Net GWh	% Year	Gross '000 m3	% Year	Net '000 m3	% Year
Salalah Power System	Jan-08	95.5	6.4%	94.2	6.4%				
Salalah Power System	Feb-08	82.0	5.5%	80.8	5.5%				
Salalah Power System	Mar-08	111.8	7.5%	110.2	7.5%				
Salalah Power System	Apr-08	135.5	9.1%	133.8	9.1%				
Salalah Power System	May-08	159.3	10.7%	157.3	10.7%				
Salalah Power System	Jun-08	155.6	10.5%	153.5	10.4%				
Salalah Power System	Jul-08	137.4	9.2%	135.6	9.2%				
Salalah Power System	Aug-08	122.8	8.2%	121.1	8.2%				
Salalah Power System	Sep-08	141.1	9.5%	139.4	9.5%				
Salalah Power System	Oct-08	134.0	9.0%	132.4	9.0%				
Salalah Power System	Nov-08	115.6	7.8%	114.1	7.8%				
Salalah Power System	Dec-08	98.1	6.6%	96.7	6.6%				
2008 Totals		1,488.6		1,469.2					

2009		Electri	icity Pro	oduction		Related	Water	Productio	n
System	Month	Gross GWh	% Year	Net GWh	% Year	Gross '000 m3	% Year	Net '000 m3	% Year
Salalah Power System	Jan-09	95.3	5.4%	94.1	5.4%				
Salalah Power System	Feb-09	100.3	5.7%	99.0	5.7%				
Salalah Power System	Mar-09	133.6	7.6%	132.0	7.6%				
Salalah Power System	Apr-09	155.8	8.9%	154.1	8.9%				
Salalah Power System	May-09	182.4	10.4%	179.6	10.4%				
Salalah Power System	Jun-09	181.2	10.3%	178.6	10.3%				
Salalah Power System	Jul-09	170.7	9.7%	168.3	9.7%				
Salalah Power System	Aug-09	160.2	9.1%	158.0	9.1%				
Salalah Power System	Sep-09	151.2	8.6%	149.3	8.6%				
Salalah Power System	Oct-09	155.6	8.9%	153.9	8.9%				
Salalah Power System	Nov-09	135.5	7.7%	133.9	7.7%				
Salalah Power System	Dec-09	135.0	7.7%	133.4	7.7%				
2009 Totals		1,756.8		1,734.1					



### Table 10 i

### Quarterly Production by System: 2006, 2007, 2008 & 2009

		Electri	icity Pr	oduction		Related	Water	Productio	n
System	Period	Gross GWh	% Year	Net GWh	% Year	Gross '000 m3	% Year	Net '000 m3	% Year
MIS	Qtr 1-06	1,731.7	14.3%	1,653.0	14.0%	19,294.5	23.0%	18,591.8	22.6%
MIS	Qtr 2-06	3,718.5	30.7%	3,621.1	30.7%	21,890.4	26.1%	21,574.3	26.3%
MIS	Qtr 3-06	4,126.0	34.0%	4,036.9	34.3%	22,260.8	26.6%	21,915.8	26.7%
MIS	Qtr 4-06	2,545.4	21.0%	2,471.0	21.0%	20,355.4	24.3%	20,022.4	24.4%
2006 Totals		12,121.5		11,782.0		83,801.1		82,104.4	
MIS	Qtr 1-07	1,908.6	14.8%	1,822.2	14.6%	23,859.1	22.6%	19,157.0	22.7%
MIS	Qtr 2-07	3,973.3	30.8%	3,866.1	31.0%	27,661.9	26.2%	21,198.1	25.2%
MIS	Qtr 3-07	4,453.2	34.5%	4,311.6	34.5%	29,449.6	27.9%	22,752.1	27.0%
MIS	Qtr 4-07	2,579.5	20.0%	2,490.1	19.9%	24,545.0	23.3%	21,143.8	25.1%
2007 Totals		12,914.6		12,490.0		105,515.6		84,250.9	
MIS	Qtr 1-08	2,037.4	14.3%	2,023.7	14.4%	23,171.9	20.5%	21,472.9	22.1%
MIS	Qtr 2-08	4,369.9	30.7%	4,385.2	31.2%	32,059.5	28.3%	25,051.0	25.8%
MIS	Qtr 3-08	4,780.7	33.6%	4,710.1	33.6%	29,969.9	26.5%	24,855.9	25.6%
MIS	Qtr 4-08	3,023.7	21.3%	2,915.0	20.8%	27,972.9	24.7%	25,698.7	26.5%
2008 Totals		14,211.6		14,034.0		113,174.1		97,078.4	
MIS	Qtr 1-09	2,438.3	15.0%	2,304.1	14.7%	26,342.4	23.4%	25,225.3	22.3%
MIS	Qtr 2-09	4,829.0	29.6%	4,696.5	29.9%	30,166.3	26.9%	29,156.2	25.8%
MIS	Qtr 3-09	5,656.3	34.7%	5,495.6	35.0%	31,215.9	27.8%	30,398.6	26.9%
MIS	Qtr 4-09	3,368.9	20.7%	3,222.5	20.5%	24,625.8	21.9%	28,148.9	24.9%
2009 Totals		16,292,5		15,718,8		112,350.3		112,929,0	



### Table 10 ii

### Quarterly Production by System: 2006, 2007, 2008 & 2009

		Electri	icity Pro	oduction		Related	Water	Productio	n
System	Period	Gross GWh	% Year	Net GWh	% Year	Gross '000 m3	% Year	Net '000 m3	% Year
Rural Systems	Qtr 1-06	40.3	14.8%	36.8	14.6%	993.5	23.2%	991.2	23.2%
Rural Systems	Qtr 2-06	81.3	29.9%	75.6	30.0%	1,092.1	25.5%	1,087.8	25.4%
Rural Systems	Qtr 3-06	89.1	32.7%	83.0	32.9%	1,097.9	25.6%	1,094.1	25.6%
Rural Systems	Qtr 4-06	61.6	22.6%	57.1	22.6%	1,102.1	25.7%	1,105.8	25.8%
2006 Totals		272.2		252.5		4,285.6		4,279.0	
Rural Systems	Qtr 1-07	45.5	14.7%	41.9	14.5%	154.1	25.8%	150.0	24.9%
Rural Systems	Qtr 2-07	94.2	30.4%	88.3	30.5%	143.7	24.1%	136.9	22.7%
Rural Systems	Qtr 3-07	101.7	32.9%	95.4	33.0%	133.9	22.4%	137.5	22.8%
Rural Systems	Qtr 4-07	68.0	22.0%	63.6	22.0%	165.2	27.7%	177.6	29.5%
2007 Totals		309.4		289.2		596.9		602.0	
Rural Systems	Qtr 1-08	51.9	14.9%	48.0	14.7%	178.2	24.0%	175.8	24.0%
Rural Systems	Qtr 2-08	106.1	30.4%	99.6	30.6%	184.5	24.8%	182.3	24.9%
Rural Systems	Qtr 3-08	115.0	32.9%	107.6	33.0%	176.0	23.7%	173.6	23.7%
Rural Systems	Qtr 4-08	76.2	21.8%	70.7	21.7%	203.9	27.5%	201.4	27.5%
2008 Totals		349.3		325.8		742.7		733.1	
Rural Systems	Qtr 1-09	60.0	15.1%	55.3	14.9%	212.7	23.3%	203.2	22.7%
Rural Systems	Qtr 2-09	115.3	29.1%	107.9	29.2%	233.5	25.6%	223.8	25.0%
Rural Systems	Qtr 3-09	132.7	33.5%	125.0	33.8%	225.0	24.7%	224.3	25.1%
Rural Systems	Qtr 4-09	88.0	22.2%	82.1	22.2%	241.1	26.4%	243.0	27.2%
2009 Totals		396.0		370.2		912.3		894.4	



### Table 10 iii

### Quarterly Production by System: 2006, 2007, 2008 & 2009

		Electri	icity Pr	oduction		Related	Water	Productio	<i>n</i>
System	Period	Gross GWh	% Year	Net GWh	% Year	Gross '000 m3	% Year	Net '000 m3	% Year
Salalah Power System	Qtr 1-06	246.5	19.4%	243.2	19.4%				
Salalah Power System	Qtr 2 <b>-</b> 06	397.4	31.3%	391.1	31.2%				
Salalah Power System	Qtr 3-06	320.0	25.2%	315.5	25.2%				
Salalah Power System	Qtr 4-06	306.6	24.1%	302.5	24.2%				
2006 Totals		1,270.5		1,252.3					
Salalah Power System	Qtr 1-07	275.0	19.6%	271.5	19.6%				
Salalah Power System	Qtr 2-07	418.6	29.8%	412.3	29.7%				
Salalah Power System	Qtr 3-07	376.8	26.8%	372.2	26.8%				
Salalah Power System	Qtr 4-07	336.0	23.9%	331.6	23.9%				
2007 Totals		1,406.5		1,387.5					
Salalah Power System	Qtr 1-08	289.2	19.4%	285.3	19.4%				
Salalah Power System	Qtr 2-08	450.4	30.3%	444.5	30.3%				
Salalah Power System	Qtr 3-08	401.3	27.0%	396.2	27.0%				
Salalah Power System	Qtr 4-08	347.7	23.4%	343.2	23.4%				
2008 Totals		1,488.6		1,469.2					
Salalah Power System	Qtr 1-09	329.2	18.7%	325.0	18.7%				
Salalah Power System	Qtr 2 <b>-</b> 09	519.4	29.6%	512.3	29.5%				
Salalah Power System	Qtr 3-09	482.1	27.4%	475.5	27.4%				
Salalah Power System	Qtr 4-09	426.1	24.3%	421.2	24.3%				
2009 Totals		1,756.8		1,734.1					

RAEC Capacity, System Peak demands, Electricity and Water Production, and Fuel consumption by Region

2009				Concert		, in the second s	Woton Can	- ditre		ú			Ducklinet	ion 9. Eucl C	Concentration	
				מכווכו מו	uny capa	כורא	אמוכו כמי	שכורא	-	n					ousuinprio	110
RSNum	Facility	Type	Start Year	Installed kw	Derated kW	Num units	Installed m3/day	Num units	SC B @	System Peak kW	Demand margin	Gross MWh	Net MWh	Gross 000'm3	Net 000'm3	Diesel 000'Ltrs
Al Dahii	rah															
02/020	Masrooq	Electricity	1994	769	615	9	0	0	50oC	288	53.2%	516	470	0	0	193
	Totals for 1 Sy	/stems in Al Da	ahirah	769	615	9	0	0				516	470	0	0	193
Al Shar	qiya															
02/019	Masirah	Cogen	1976	16,869	13,495	12	3,300	8	50oC	8,200	39.2%	39,092	29,860	763	751	10,793
04/001	Al Kamil	Electricity	1980	2,200	1,760	m	0	0	50oC			0	0	0	0	0
04/002	BBB Hassan	Electricity	1980	20,836	16,668	4	0	0	50oC			0	0	0	0	0
04/003	Mudhaibi	Electricity	1980	24,000	19,277	7	0	0	50oC			0	0	0	0	0
04/004	Mudhairib	Electricity	1980	35,938	28,750	12	0	0	50oC			0	0	0	0	0
04/005	Sur 1	Electricity	1980	49,200	40,900	14	0	0	50oC			0	0	0	0	0
	Totals for 6 Sy	/stems in Al St	ıarqiya	149,043	120,850	52	3,300	ø				39,092	29,860	763	751	10,793

	Totals for 6 Sys	stems in Al Sh	larqiya	149,043	120,850	52	3,300	8	
Al Wust	g								
02/001	AbuMudabi	Cogen	1985	670	536	7	100	2	50oC
02/027	Sawgrah	Cogen	1998	584	467	з	100	1	50oC
02/004	AI Kahal	Electricity	1999	6,360	5,088	9	0	0	50oC
02/005	Al Khaluf	Electricity	2007	2,000	1,600	2	0	0	50oC
02/006	Al Khuiaima	Electricity	2004	1,200	960	4	0	0	50oC
02/007	AI Lakbi	Electricity	1999	773	613	4	0	0	50oC
02/008	Alajaiz	Electricity	2006	1,130	904	4	0	0	50oC
02/010	AlNajdah	Electricity	2007	2,200	1,760	ю	0	0	50oC
02/012	AlZhaiah	Electricity	2003	400	320	2	0	0	50oC
02/016	Hij	Electricity	1999	10,600	8,480	7	0	0	50oC
02/017	Hitam	Electricity	2007	1,330	1,064	5	0	0	50oC
02/025	Ras Madraka	Electricity	2000	1,079	863	5	0	0	50oC
02/030	Surab	Electricity	2006	2,200	1,760	ю	0	0	50oC
02/031	Al Duqm	Electricity	1999	1,331	1,065	5	0	0	50oC
02/045	Dhafrat	Electricity	2009	1,860	1,488	4	0	0	50oC
	Totals for 15 S	stems in Al V	Vusta	33,717	26,968	64	200	в	

603 1,025 983 566 814 296 4,654 667 1,576

25 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

2,949 1,085 2,004 825

 2,200
 56.8%

 367
 77.1%

 367
 77.1%

 800
 16.7%

 1,230
 -100.7%

 430
 52.4%

 669
 62.0%

 275
 14.1%

 4,300
 49.3%

 370
 65.2%

 1,050
 -21.7%

 641
 63.6%

 1,770
 -66.2%

1,494 3,257 2,992 1,294 2,120 861

2,946

4

0 0

265

78.2%

117 50

4

8,552 1,399 3,143

8,635

89.3% 56.8% 77.1% 16.7%

17,678

59

61

51,369 962

2,211

451

0

0 00

2,085 6,935

2,196 7,008 1,035 53,080

69.8%

450

789

15,550 1,348 4,533

15,830 1,498 4,591

RAEC Capacity, System Peak demands, Electricity and Water Production, and Fuel consumption by Region

oduction & Fuel Consumption		vet Gross Net Diesel Wh 000'm3 000'm3 000'Ltrs	vet Gross Net Diesel Wh 000'm3 000'm3 000'Ltrs	Vet Gross Net Diesel Wh 000'm3 000'm3 000'Ltrs ,004 34 34 471	Vet         Gross         Net         Diesel           Wh         000'm3         000'm3         000'Lts           ,004         34         34         471           155         0         0         91	Vet         Gross         Net         Diesel           Wh         000'm3         000'm3         000'Lts           ,004         34         34         471           155         0         0         91           409         0         0         0         185	Vet         Gross         Net         Diesel           Mh         000'm3         000'm3         000'Lts           ,004         34         34         471           155         0         0         91           409         0         0         91           512         0         0         0         265	Vet         Gross         Net         Diesel           Mh         000'm3         000'm3         000'Ltrs           004         34         34         471           155         0         34         471           155         0         0         91           409         0         0         91           410         0         0         0           512         0         0         185           512         0         0         165           31         0         0         145	Vet         Gross         Net         Diesel           /004         34         000'm3         000'Ltrs           /004         34         34         471           155         0         0         91           409         0         0         91           409         0         0         91           212         0         0         0           331         0         0         265           321         0         0         145           ,223         0         0         0         409	Vet         Gross         Net         Diesel           /001         34         34         471           /155         0         34         471           /155         0         0         91           409         0         0         91           409         0         0         91           409         0         0         91           409         0         0         91           2512         0         0         185           311         0         0         145           223         0         0         145           223         0         0         961           294         0         0         961	Vet         Gross         Net         Diesel           000         000         000         000         155           001         155         00         34         471           155         0         0         91         91           409         0         0         91         91           2512         0         0         0         185           391         0         0         0         145           223         0         0         0         145           223         0         0         0         145           234         0         0         0         145           234         0         0         0         961           595         0         0         0         1,798	Vet         Gross         Net         Diesel           /00         34         34         471           /155         0         34         471           /155         0         0         91           /155         0         0         91           /155         0         0         91           /155         0         0         91           /155         0         0         91           /150         0         0         91           /151         0         0         185           /101         0         0         145           /1145         0         0         145           /1145         0         0         961           /1145         0         0         961           /1145         0         0         1/798           /1145         0         0         1/798           /1145         0         0         1/798           /1145         0         0         1/798           /1145         0         0         1/798	Ver         Gross         Net         Diesel           001         000'm3         000'm3         000'ltrs           001         155         0         91           155         0         3         471           155         0         0         91           155         0         0         91           150         0         0         185           512         0         0         145           391         0         0         145           223         0         0         0         145           223         0         0         0         145           223         0         0         0         145           223         0         0         0         961           249         0         0         0         145           595         0         0         0         17798           491         0         0         0         162	Vet         Gross         Net         Diesel           ,004         34         34         471           ,155         0         34         471           ,155         0         0         91           ,155         0         0         91           ,155         0         0         91           ,155         0         0         145           ,212         0         0         145           ,212         0         0         145           ,213         0         0         145           ,224         0         0         961           ,294         0         0         961           ,595         0         0         961           ,595         0         0         961           ,694         0         0         1,798           ,669         0         0         162	Vert         Gross         Net         Diesel           000         300         300         471           155         0         34         471           155         0         34         471           155         0         3         91           409         0         0         91           415         0         0         91           409         0         0         91           409         0         0         91           512         0         0         91           331         0         0         91           521         0         0         96           223         0         0         96           2595         0         0         96           595         96         0         17798           595         0         0         17798           669         0         0         162           669         0         0         162           320         0         0         165	Var         Gross         Net         Diesel           ,004         34         34         471           ,155         0         34         34           ,155         0         34         34           ,155         0         3         91           ,155         0         0         91           ,155         0         0         91           ,151         0         0         91           ,152         0         0         91           ,212         0         0         91           ,212         0         0         91           ,212         0         0         96           ,223         0         0         96           ,294         0         0         96           ,595         0         0         96           ,596         0         0         1,73           ,597         0         0         1,123           ,592         90         0         1,123           ,594         0         0         1,123           ,594         0         0         1,123           ,504	Ver         Gross         Net         Diesel           /00         34         34         471           155         0         34         34           155         0         3         90           155         0         3         91           155         0         0         91           155         0         0         91           409         0         0         91           409         0         0         91           409         0         0         91           2512         0         0         91           2513         0         0         96           252         96         0         961           252         969         0         961           250         969         0         961           264         0         0         162           969         0         0         162           969         0         0         162           974         0         0         162           974         0         0         173           974         0	Ver         Gross         Net         Diesel           /00         34         34         471           /155         0         34         34           /155         0         3         90           /155         0         3         34           /155         0         0         91           /155         0         0         91           /155         0         0         91           /151         0         0         91           /152         0         0         91           /11         0         0         961           /11         0         0         1/1798           /11         0         0         1/1798           /11         0         0         1/173           /11         0         0         1/173           /11         0         0         1/173           /11         0         0         1/173           /11         0         0         1/173           /11         0         0         1/173           /11         0         0         1/173           /11	Var         Gross         Net         Diesel           7001         34         34         471           155         0         34         34           155         0         3         90           155         0         0         91           409         0         0         91           410         0         0         91           410         0         0         91           512         0         0         91           265         391         0         145           223         0         0         961           730         0         0         961           592         0         0         17798           564         0         0         17798           564         0         0         162           669         0         0         1723           5204         0         0         1723           5204         0         0         1723           5204         0         0         17123           5204         0         0         17123      1705         0	Vit         Gross         Net         Diesel           7004         34         34         471           155         0         34         34           155         0         0         91           155         0         0         91           409         0         0         91           410         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         91           524         0         0         961           523         0         0         961           546         0         0         11/23           564         0         0         11/23           564         0         0         11/123           570         0         0         11/123           570         0         0         11/123           570         0         0         11/123           500         0 </th <th>Vit         Gross         Net         Diesel           000         34         34         471           155         0         34         37           155         0         3         000'Ltrs           155         0         3         471           155         0         0         91           409         0         34         471           152         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         961           524         0         0         961           524         0         0         961           546         0         0         162           669         0         0         11/23           5204         0         0         11/23           531         0         0         11/23           670         0         0         11/23           5204         0</th> <th>Var         Gross         Net         Diesel           000         34         34         471           155         00         34         471           155         0         0         91           155         0         0         91           409         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         91           524         0         0         961           523         0         0         961           524         0         0         961           532         0         0         162           669         0         0         1457           530         0         0         139           531         0         0         139           532         0         0         2460           0         0         <td< th=""><th>Var         Gross         Net         Diesel           001         33         000'LTS         000'LTS           155         0         34         471           155         0         3         000'LTS           155         0         3         471           155         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         91           524         0         0         961           524         0         0         961           524         0         0         162           669         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204<!--</th--><th>Var         Gross         Net         Diesel           000         34         34         471           155         00         34         471           155         0         3         000'tts           155         0         3         471           155         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         91           524         0         0         961           524         0         0         145           524         0         0         152           669         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204</th><th>Var         Gross         Net         Diesel           000         155         000'tts         000'tts           155         00         34         471           155         0         3         000'tts           150         0         91         91           151         0         0         91           151         0         0         91           512         0         0         91           331         0         91         91           512         0         0         91           523         0         0         91           524         0         0         96           524         0         0         145           524         0         0         145           524         0         0         146           530         0         0         143           531         0         0         143           532         0         0         143           531         0         0         238           532         0         0         238           532         0</th><th>Var         Gross         Net         Dissel           7004         34         34         471           155         512         00         91           155         512         0         91           409         34         34         471           155         512         0         91           409         0         0         91           723         50         0         961           791         0         0         961           792         9         0         961           793         0         0         961           794         0         0         961           793         9         0         17798           964         0         0         17798           964         0         0         17123           792         9         0         17123           793         70         0         17123           792         9         0         17123           792         9         0         17123           793         7         0         17123           7040</th></th></td<><th>Var         Gross         Net         Dissel           7004         34         34         471           155         00         34         34           155         15         0         91           409         34         34         471           409         0         0         91           409         0         0         91           409         0         0         91           409         0         0         91           2512         90         0         91           401         0         0         91           2512         91         91         91           2512         91         0         145           252         91         0         961           252         91         0         961           320         0         0         1462           253         92         92         1463           254         0         0         1462           321         92         92         1463           250         92         92         2460           91</th></th>	Vit         Gross         Net         Diesel           000         34         34         471           155         0         34         37           155         0         3         000'Ltrs           155         0         3         471           155         0         0         91           409         0         34         471           152         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         961           524         0         0         961           524         0         0         961           546         0         0         162           669         0         0         11/23           5204         0         0         11/23           531         0         0         11/23           670         0         0         11/23           5204         0	Var         Gross         Net         Diesel           000         34         34         471           155         00         34         471           155         0         0         91           155         0         0         91           409         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         91           524         0         0         961           523         0         0         961           524         0         0         961           532         0         0         162           669         0         0         1457           530         0         0         139           531         0         0         139           532         0         0         2460           0         0 <td< th=""><th>Var         Gross         Net         Diesel           001         33         000'LTS         000'LTS           155         0         34         471           155         0         3         000'LTS           155         0         3         471           155         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         91           524         0         0         961           524         0         0         961           524         0         0         162           669         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204<!--</th--><th>Var         Gross         Net         Diesel           000         34         34         471           155         00         34         471           155         0         3         000'tts           155         0         3         471           155         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         91           524         0         0         961           524         0         0         145           524         0         0         152           669         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204</th><th>Var         Gross         Net         Diesel           000         155         000'tts         000'tts           155         00         34         471           155         0         3         000'tts           150         0         91         91           151         0         0         91           151         0         0         91           512         0         0         91           331         0         91         91           512         0         0         91           523         0         0         91           524         0         0         96           524         0         0         145           524         0         0         145           524         0         0         146           530         0         0         143           531         0         0         143           532         0         0         143           531         0         0         238           532         0         0         238           532         0</th><th>Var         Gross         Net         Dissel           7004         34         34         471           155         512         00         91           155         512         0         91           409         34         34         471           155         512         0         91           409         0         0         91           723         50         0         961           791         0         0         961           792         9         0         961           793         0         0         961           794         0         0         961           793         9         0         17798           964         0         0         17798           964         0         0         17123           792         9         0         17123           793         70         0         17123           792         9         0         17123           792         9         0         17123           793         7         0         17123           7040</th></th></td<> <th>Var         Gross         Net         Dissel           7004         34         34         471           155         00         34         34           155         15         0         91           409         34         34         471           409         0         0         91           409         0         0         91           409         0         0         91           409         0         0         91           2512         90         0         91           401         0         0         91           2512         91         91         91           2512         91         0         145           252         91         0         961           252         91         0         961           320         0         0         1462           253         92         92         1463           254         0         0         1462           321         92         92         1463           250         92         92         2460           91</th>	Var         Gross         Net         Diesel           001         33         000'LTS         000'LTS           155         0         34         471           155         0         3         000'LTS           155         0         3         471           155         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         91           524         0         0         961           524         0         0         961           524         0         0         162           669         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204 </th <th>Var         Gross         Net         Diesel           000         34         34         471           155         00         34         471           155         0         3         000'tts           155         0         3         471           155         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         91           524         0         0         961           524         0         0         145           524         0         0         152           669         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204</th> <th>Var         Gross         Net         Diesel           000         155         000'tts         000'tts           155         00         34         471           155         0         3         000'tts           150         0         91         91           151         0         0         91           151         0         0         91           512         0         0         91           331         0         91         91           512         0         0         91           523         0         0         91           524         0         0         96           524         0         0         145           524         0         0         145           524         0         0         146           530         0         0         143           531         0         0         143           532         0         0         143           531         0         0         238           532         0         0         238           532         0</th> <th>Var         Gross         Net         Dissel           7004         34         34         471           155         512         00         91           155         512         0         91           409         34         34         471           155         512         0         91           409         0         0         91           723         50         0         961           791         0         0         961           792         9         0         961           793         0         0         961           794         0         0         961           793         9         0         17798           964         0         0         17798           964         0         0         17123           792         9         0         17123           793         70         0         17123           792         9         0         17123           792         9         0         17123           793         7         0         17123           7040</th>	Var         Gross         Net         Diesel           000         34         34         471           155         00         34         471           155         0         3         000'tts           155         0         3         471           155         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           512         0         0         91           523         0         0         91           524         0         0         961           524         0         0         145           524         0         0         152           669         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204         0         0         11/123           5204	Var         Gross         Net         Diesel           000         155         000'tts         000'tts           155         00         34         471           155         0         3         000'tts           150         0         91         91           151         0         0         91           151         0         0         91           512         0         0         91           331         0         91         91           512         0         0         91           523         0         0         91           524         0         0         96           524         0         0         145           524         0         0         145           524         0         0         146           530         0         0         143           531         0         0         143           532         0         0         143           531         0         0         238           532         0         0         238           532         0	Var         Gross         Net         Dissel           7004         34         34         471           155         512         00         91           155         512         0         91           409         34         34         471           155         512         0         91           409         0         0         91           723         50         0         961           791         0         0         961           792         9         0         961           793         0         0         961           794         0         0         961           793         9         0         17798           964         0         0         17798           964         0         0         17123           792         9         0         17123           793         70         0         17123           792         9         0         17123           792         9         0         17123           793         7         0         17123           7040	Var         Gross         Net         Dissel           7004         34         34         471           155         00         34         34           155         15         0         91           409         34         34         471           409         0         0         91           409         0         0         91           409         0         0         91           409         0         0         91           2512         90         0         91           401         0         0         91           2512         91         91         91           2512         91         0         145           252         91         0         961           252         91         0         961           320         0         0         1462           253         92         92         1463           254         0         0         1462           321         92         92         1463           250         92         92         2460           91
	Gross Net MWh MWh		1,445 1,004	160 155	420 409	532 512	404 391	1,238 1,223	3,299 3,294	5,617 5,595	1,873 1,864	503 491	3,686 3,669	1,339 1,320	522 504	388 377	1,541 1,500	8,083 8,024	2,091 2,072	494 483	1,992 1,973	1,080 1,062	15,014 13,855	33,563 31,844	34,794 34,756		10,154 10,046
System P	n Demanc V margin		75.8%	3.3%	67.7%	52.2%	65.6%	59.0%	28.2%	25.7%	19.2%	59.0%	8.0%	44.3%	53.1%	62.7%	55.9%	7.6%	29.1%	56.8%	35.1%	44.5%			58.1%	700 c	1. Z.U.70
	System Peak kV		280	78	128	220	202	320	850	1,860	630	150	880	390	184	120	490	1,780	560	152	615	355			6,890	744	- 1,1-3
_	SC & @		50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	50oC	
pacity	Num units		m	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	,
Water Ca	Installed m3/day		198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ity	Num units		7	4	4	4	4	4	4	5	4	4	m	4	4	4	5	5	4	2	5	4	9	œ	12	4	-
ting Capac	Derated kW		1,155	292	396	460	596	781	1,184	2,502	780	366	957	700	392	322	1,112	1,926	790	352	947	640	30,000	40,000	16,435	2 800	2000/2
Genera	Installed kW		1,444	365	495	575	745	976	1,480	3,128	975	458	1,196	875	490	402	1,390	2,408	987	440	1,184	800	36,000	53,000	20,544	3 500	00010
	Start Year		1987	2002	2002	2006	2000	2000	1992	1997	2000	2002	1992	2001	2002	2002	2001	2000	2001	2006	1993	2000	1983	1988	2006	0000	1000
	Type		Cogen	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Electricity	Flectricity	
	Facility		Al Halaniyat	Al Mathfa	Ayboot (1)	Ayboot (2)	Ayun	Barbazum	Dalkut A	Dalkut B	Dhahabun	Fatkhat	Hasik	Hirweeb	Horaat	Mahwice	Maqshan	Mazyunah	Mitan	Mothorah	Mudhai	Rabkut	Raysut A	Raysut B	Saih Alkirat	Shahh Asavh	
2009	RSNum	Dhofar	01/001	01/002	01/005	01/006	01/007	01/008	01/010	01/011	01/012	01/014	01/015	01/016	01/017	01/019	01/020	01/021	01/023	01/024	01/025	01/026	01/027	01/028	01/032	01/035	000/40



RAEC Capacity, System Peak demands, Electricity and Water Production, and Fuel consumption by Region

2009				Generat	ting Capac	city	Water Cal	pacity		Sy	stem Pea	ik Demand	s, Producti	ion & Fuel (	Consumpti	u
RSNum	Facility	Type	Start Year	Installed kW	Derated kW	Num units	Installed m3/day	Num units	SC Re	System Peak kW	Demand margin	Gross MWh	Net MWh	Gross 000'm3	Net 000'm3	Diesel 000'Ltrs
Musang	lam															
03/006	Kumzar	Cogen	1984	936	749	2	250	2	50oC	850	-13.5%	480	289	55	51	172
03/001	Al Rawda	Electricity	1996	325	260	4	0	0	50oC	170	34.6%	489	449	0	0	228
03/002	Dibba	Electricity	1978	17,430	13,944	8	0	0	50oC	12,600	9.6%	57,519	53,327	0	0	16,134
03/004	HB Hameed	Electricity	1994	100	80	2	0	0	50oC	62	22.5%	232	181	0	0	132
03/005	Khasab	Electricity	1982	41,000	32,800	10	0	0	50oC	31,600	3.7%	141,466	133,139	0	0	37,978
03/007	Madha	Electricity	1982	7,516	6,013	7	0	0	50oC	4,060	32.5%	17,362	16,346	0	0	4,975
	Totals for 6 Sy	stems in Musa	Indam	67,307	53,846	33	250	2				217,547	203,731	55	51	59,619
Totals	for 54 RAEC	Production 5	ystems	386,887	309,924	278	3,948	16				444,588	415,931	912	894	127,281

	Generat	ing Capa	city	Water Ca	pacity
2009 Regional Summary	Installed kW	Derated kW	Num units	Installed m3/day	Num units
Totals for 1 RAEC System in AI Dahirah	769	615	9	0	0
Totals for 6 RAEC Systems in Al Sharqiya	149,043	120,850	52	3,300	8
Totals for 15 RAEC Systems in Al Wusta	33,717	26,968	64	200	m
Totals for 26 RAEC Systems in Dhofar	137,485	108,787	123	198	m
Totals for 6 RAEC Systems in Musandam	67,307	53,846	33	250	2
<b>Totals for 54 RAEC Production System</b>	388,321	311,066	278	3,948	16

	Productior	n & Fuel Con	sumption	
Gross MWh	Net MWh	Gross 000'm3	Net 000'm3	Diesel 000'Ltrs
516	470	0	0	193
39,092	29,860	763	751	10,793
53,080	51,369	61	59	17,678
134,353	130,501	34	34	38,998
217,547	203,731	55	51	59,619
444,588	415,931	912	894	127,281



Technical and non-technical Losses by System: 2006, 2007, 2008 and 2009

	Mai	n Interconn	ected Syste	m			Rural Sys	tems			S	alalah Sy:	stem		
GWh	2006	2007	2008	2009	% Change	2006	2007	2008	2009	% Change	2006	2007	2008	2009	% Change
Sent out Generation:	11,753.1	12,367.5	13,649.0	15,530.2	10.4%	252.5	289.2	326.8	370.2	13.3%	1,224.3	1,373.0	1,467.1	1,688.4	15.1%
'Other' Purchases (note 1):	28.9	122.5	385.0	188.6	214.3%	25.3	29.5	33.5	40.2	20.3%	28.0	14.5	2.1	45.7	2074.7%
GWh entering systems:	11,782.0	12,490.0	14,034.0	15,718.8	12.4%	277.8	318.7	360.3	410.5	13.9%	1,252.3	1,387.5	1,469.2	1,734.1	18.0%
GWh Suppy to Customers:	9,219.8	9,757.8	11,317.4	12,713.6	16.0%	246.1	273.0	311.5	368.0	18.1%	1,029.4	1,162.4	1,221.2	1,401.5	14.8%
Total Losses %	21.7%	21.9%	19.4%	19.1%	-1.2%	11.4%	14.3%	13.5%	10.3%	-23.6%	17.8%	16.2%	16.9%	19.2%	13.6%

Note 1: Main Interconnected System Other purchases are PWP purchases from MIS connected entities Rural Systems Other purchases are purchases from PDO Salalah Other purchases are units purchased by PWP from RAEC for sale to DPC SAOG



### ANNEX D: Electricity Subsidy Calculations



Variance

15% 30% <del>-</del>53% 28%

35%



# Annex D - A: 2009 MIS Outturn Subsidy

Maximum Allowed Revenues				2009 Outturn	2008 Outturn
Rial Omani	Muscat	Majan	Mazoon	Total	Total
PC	83,093,887	42,446,572	56,785,265	182,325,724	158,682,747
C	1,202,310	717,463	1,498,581	3,418,354	37 101 066
UofS	17,249,088	8,605,333	12,562,254	38,416,675	000/767/70
DB (Distribution)	26,710,543	22,441,383	31,797,317	80,949,243	70 505 576
SB (Supply)	5,374,808	3,307,045	5,409,477	14,091,330	01010000
Ľ	260,682	260,682	260,682	782,045	474,590
×	6,342,817	1,084,226	1,536,025	8,963,068	19,041,803
MAR (2009)	127,548,501	76,694,251	106,777,551	311,020,303	242,902,175

## **Actual Regulated Revenues**

	Muscat	Majan	Mazoon	Total	Total	Variance
Approved Subsidy	25,402,000	31,199,000	50,891,000	107,492,000	71,681,154	50%
Permitted Tariff (& other) Revenue	102,536,644	44,801,939	54,180,495	201,519,078	179,837,092	12%
ARR (2009)	127,938,644	76,000,939	105,071,495	309,011,078	251,518,246	23%
Outturn Subsidy Requirement	25,011,857	31,892,313	52,597,055	109,501,225	63,065,083	74%

## 2009 Economic Cost

(bz/kWh)	Muscat	Majan	Mazoon	Total	Total	Variance	
Economic Cost	21.7	25.5	27.8	24.5	21.5	14%	
Subsidy (Outturn)	4 <u>.</u> 3	10.6	13.7	8.6	5.6	52%	
Customer Revenue	17.5	14.9	14.1	15.9	15.9	0.1%	

Source: Company returns, Authority Estimates

2009 MIS Revenue & Subsidy

Key:

- means the cost of bulk supply purchases from the PWP
  - means Connection related costs
- means Use of System costs PC C UofS
  - means the Licence Fee ± ×
- means the Correction Factor





# ANNUAL REPORT 2009

Variance

15% 16% %6 5% %9 -45% -122%

15%

# Annex D - B: 2010 MIS Subsidy Forecast

Maximum Allowed Revenues				ZUIU FURCASI	
Rial Omani	Muscat	Majan	Mazoon	Total	Total
PC	95,160,511	49,203,458	64,641,303	209,005,271	182,325,724
U	1,566,205	1,109,373	1,277,492	3,953,070	3,418,354
UofS	17,965,817	10,790,754	13,212,478	41,969,049	38,416,675
DB (Distribution)	27,660,260	23,858,230	33,285,032	84,803,522	80,949,243
SB (Supply)	5,690,567	3,503,568	5,739,436	14,933,571	14,091,330
Ľ	142,783	142,783	142,783	428,350	782,045
K	399,465	-709,874	-1,643,865	-1,954,274	8,963,068
MAR (2010)	147,786,678	89,318,039	119,942,390	357,047,107	311,020,303

## **Actual Regulated Revenues**

	Muscat	Majan	Mazoon	Total	Total	Variance
Subsidy	37,352,512	35,467,794	59,568,585	132,388,891	107,492,000	23%
Permitted Tariff (& other) Revenue	110,434,166	53,850,246	60,373,805	224,658,216	201,519,078	11%
ARR (2010)	147,786,678	89,318,039	119,942,390	357,047,107	309,011,078	16%

zoon Total Total Variance	7.8         25.1         24.6         2%	3.8 <b>9.3 8.6</b> 8%	4.0         15.8         15.9         -1%
uscat Majan Mazo	23.4 24.8 27.	5.9 9.9 13.	17.5 15.0 14.
bz/kWh)	Economic Cost	Subsidy	Customer Revenue 1

# Source: Company returns, Authority Estimates

Key:

- means the cost of bulk supply purchases from the PWP
- means Connection related costs 2 0
- means Use of System costs UofS
  - means the Licence Fee ц
- means the Correction Factor  $\mathbf{x}$

All in relevant year t





### Annex D - C: RAEC 2009 Outturn & 2010 Subsidy Estimate

$MAR = G_t + D\&S_t + Fuel_t + PC_t$	Final 2009 outturn		
Where $D\&S_t = a_t + (b_t * RUD_t) + (c_t * CA_t))$	2010 forecast, NV up	lifted by CPI	
t	2009	2010	
G <sub>t</sub>	8,262,586	8,360,563	1
a <sub>t</sub>	5,644,395	5,711,326	1
b <sub>t</sub>	2.99	3.03	1
RUD <sub>t</sub>	368,021	434,684	
b <sub>t</sub> Revenue	1,100,555	1,315,323	
ct	80.05	80.99	
CA <sub>t</sub>	20,238	21,727	
ct Revenue	1,619,966	1,759,781	
D&S <sub>t</sub>	8,364,916	8,786,430	
Fuel <sub>t</sub>	16,866,000	19,564,560	1
PCt	402,488	430,000	1
License Fees	164,641	120,009	
Total Econ. Costs	34,060,631	37,261,562	
Customer Revenue	5,435,985	7,606,967	
Economic Subsidy	28,624,646	29,654,594	
Subsidy correction t - 1	4,261,075	772,107	
Subsidy Requirement Year t	32,885,721	30,426,701	
Actual Subsidy payments in 2009	32,113,614		
Overrecovery	-772,107		
		2010	т
Q1		4,411,872	1
Q2		8,397,769	2
Q3		9,797,398	3
		7,819,662	2
Check lotal		30,426,701	

Sources: RAEC 2009 SCRC, Authority calculations

### Key: MAR means Maximum Allowed Revenue Gt means Generation costs

All in relevant year t

Gt D&S	means Generation costs means Distribution & Supply costs
where	RUD means Regulated Units Distributed CA means Customer Accounts a b and c are the Notified Values (NV)
Fuel	means Fuel costs
PC	means PDO Purchase Costs





### ANNEX E: RENEWABLE ENERGY AND ENERGY EFFICIENCY SEMINARS



**Guests of Honour and VIPs** 



**Presentation Speakers** 

# newahi ergy & En









Delegates











### Annex F: Electricity & Related Water Sector Employment - 2009

### Employment by Nationality, Direct/Indirect (Contractor) Job Function, Company and System

### Main Interconnected System

					P	Productio	on Faciliti	ies			Transmission & Dispatch	Distri	bution &	Supply	Procurement						
Nationalit	y Type	Detail	AES Barka	Al Kamil	Manah	Rusail	Sohar IWPP	Wadi Jizzi	SMN Barka II	Ghubrah	OETC	Majan	Mazoon	Muscat	PWP (Muscat)	Total MIS	RAEC SAOC	PWP (Salalah)	Dhofar Power Company SAOG	Total Salalah	Total Sultanate of Oman
Omani	Direct	Administrative/ Supervisory	3	1	2	0	3	14	2	48	51	93	154	120	16	507	73	3	14	17	597
		Managerial	3	1	1	2	0	9	0	5	9	21	8	28	5	92	14	2	5	7	113
		Operations	19	0	0	5	0	17	0	74	5	0	0	13	0	133	2	0	7	7	142
		Technical	5	0	0	2	0	8	0	59	68	95	165	138	5	545	71	4	23	27	643
		Others	0	0	0	0	0	13	0	3	7	8	7	34	1	73	37	2	18	20	130
-	Direct Total		30	2	3	9	3	61	2	189	140	217	334	333	27	1,350	197	11	67	78	1,625
_	Contractor	Contracted Admin/Supervisory	0	3	3	1	3	0	15	0	2	88	242	153	0	510	17	0	27	27	554
		Contracted Managerial	0	0	0	0	1	0	2	0	0	12	17	0	0	32	5	0	4	4	41
		Contracted Operations	0	8	17	14	15	0	20	0	261	32	409	0	0	776	126	0	1	1	903
		Contracted Technical	0	5	12	11	8	0	5	0	0	24	28	218	0	311	104	0	86	86	501
		Contracted Others	8	0	8	12	4	0	15	0	7	118	154	0	0	326	191	0	30	30	547
	Contractor T	otal	8	16	40	38	31	0	57	0	270	274	850	371	0	1,955	443	0	148	148	2,546
Omani To	tals		38	18	43	47	34	61	59	189	410	491	1,184	704	27	3,305	640	11	215	226	4,171
Expatriate	Direct	Administrative/ Supervisory	4	1	2	0	3	0	1	9	12	6	4	6	0	48	7	0	3	3	58
		Managerial	4	2	1	0	4	2	2	3	0	0	0	4	7	29	3	2	10	12	44
		Operations	9	0	0	0	0	0	0	22	0	0	0	2	0	33	2	0	9	9	44
		Technical	10	0	0	0	0	14	0	81	13	11	3	13	2	147	12	0	31	31	190
-		Others	0	0	0	0	0	0	0	1	0	0	0	1	0	2	2	0	0	0	4
	Direct Total		27	3	3	0	7	16	3	116	25	17	7	26	9	259	26	2	53	55	340
	Contractor	Contracted Admin/Supervisory	0	0	3	0	4	0	21	4	5	61	34	22	0	154	51	0	9	9	214
		Contracted Managerial	0	3	3	3	4	0	16	0	0	19	2	0	0	50	17	0	5	5	72
		Contracted Operations	0	5	3	2	21	0	18	0	81	28	29	0	0	187	160	0	16	16	363
		Contracted Technical	0	6	9	15	20	0	41	15	24	257	330	223	0	940	202	0	31	31	1,173
-		Contracted Others	15	0	3	4	4	0	13	0	7	63	24	0	0	133	27	0	1	1	161
	Contractor T	iotal	15	14	21	24	53	0	109	19	117	428	419	245	0	1,464	457	0	62	<u>62</u>	1,983
Expatriate	e Totals		42	17	24	24	60	16	112	135	142	445	426	271	9	1,723	483	2	115	117	2,323
Grand Tot	als		80	35	67	71	94	77	171	324	552	936	1,610	975	36	5,028	1,123	13	330	343	6,494
0/ 0	10	<b>T</b> ( )																			
% Compar	ny/System	Iotal	1.6%	0.7%	1.3%	1.4%	1.9%	1.5%	3.4%	6.4%	11.0%	18.6%	32.0%	19.4%	0.7%	100.0%	100.0%	3.8%	96.2%	100.0%	400.00/
% IOTAI Su		Weyetem Total	1.2%	0.5%	1.0%	1.1%	1.4%	1.2%	2.6%	5.0%	8.5%	14.4%	24.8%	15.0%	0.6%	/7.4%	17.3%	0.2%	5.1%	5.3%	100.0%
% Omani «	of Sultanat	of Oman Total	0.8%	0.4%	0.9%	0.9%	0.7%	0.0%	0.0%	3.8% 2.0%	8.2%	9.8%	18 2%	14.0%	0.5%	50 00/-	9.9%	0.3%	0.5% 3.3%	3 50/	64 2%
	n Junandl	G UI UIIIall IUlai	0.0%	0.5%	0.7%	0.7%	0.5%	0.9%	0.9%	2.9%	0.5%	7.0%	10.2%	10.0%	0.4%	50.9%	9.9%	0.2%	5.5%	5.5%	04.2%

RAEC Systems

Salalah System

### Total Sultanate of Oman

### Annex G: MIS Total System Market Share: Suez, in 2013







11.8% Suez; Suez: 3 30.9% National Mubadal IPO; 35.0% Rusail (684 MW) IPO: 35 National Trading; 3.3% Mubadala; 30.9%

Rusail;

	Share of Plant MW	MIS Market %
0.9% * 684MW =	211.2	3.6%
Trading: 3.3% * 684MW =	22.2	0.6%
a: 30.9% * 684MW =	211.2	3.6%
% * 684MW =	239.4	3.9%
	684.0	11 8%

**SMN** Barka (679 MW)





	Share of Plant MW	Share of Total MIS Market %
Suez : 30.9% * 679MW =	209.6	3.6%
National Trading : 3.3% * 679MW =	22.1	0.6%
Mubadala : 30.9% * 679MW =	209.6	3.6%
IPO : 35% * 679MW =	237.7	3.9%
	679.0	11.7%

Barka 111; PASI; Share of Share of Total 12.9% 10.0% Sojitz ; MIS Market % Plant MW 11.0% Suez : 46% \* 750MW = 345.0 5.9% Multitech : 22% \* 750MW = 165.0 2.8% Suez; Shikoku : 11% \* 750MW = Shikoku; 82.5 1.4% 46.0% Barka III (750 MW) Sojitz : 11% \* 750MW = 82.5 1.4% 11.0% PASI : 10% \* 750MW = 75.0 1.3% 750.0 12.9% Multitech; 22.0%





### **Suez Share of Total System Generation Market**

201	13	Suez Share MIS MW	Share of Total MIS Market %
Sohar IV	WPP	265.5	4.6%
Al Rusa	il	211.2	3.6%
SMN Ba	arka	209.6	3.6%
Barka II	l	345.0	5.9%
Sohar II		345.0	5.9%
Suez Sh	nare	1,376.3	23.7%
Others S	Share	4,430.7	76.3%
Total MIS Generation capacity market		5807 MW	100.0%
Notes:	Barka III & Sohar II full capacity CO 35% IPO of Sohar IWPP completed	D in 2013	

Al Rusail & SMN Barka IPOs (each 35%) to be completed by 2013