

OPWP'S 7 YEAR STATEMENT

(ISSUE 3)



For The Years 2009-2015



OMAN POWER AND WATER PROCUREMENT CO. (SAOC)





HIS MAJESTY
SULTAN QABOOS BIN SAID



OPWP'S 7-YEAR STATEMENT

(2009 – 2015)

**APPROVED BY
THE AUTHORITY FOR ELECTRICITY REGULATION, OMAN**

(Issue 3)

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GLOSSARY

CCGT	combined-cycle gas turbine
DPC	Dhofar Power Company SAOG
GJ	gigajoule(s)
GPDC	Al-Ghubrah Power and Desalination Company SAOC
GWh	gigawatt hour(s) = million (10^6) kWh
I(W)PP	independent (water and) power project
kWh	kilowatt hour(s)
LOLH	loss of load hours
m ³	cubic metre(s)
MEDC	Muscat Electricity Distribution Company SAOC
MIGD	million imperial gallons per day
MIS	Main Interconnected System
MISC	Majis Industrial Services Company SAOC
MJEC	Majan Electricity Company SAOC
MW	megawatt(s)
MZEC	Mazoon Electricity Company SAOC
OCGT	open-cycle gas turbine
OETC	Oman Electricity Transmission Company SAOC
OPWP	Oman Power and Water Procurement Company SAOC
PAEW	Public Authority for Electricity and Water
PDO	Petroleum Development Oman
RAEC	Rural Areas Electricity Company SAOC
Sm ³	standard cubic metre(s)
TCF	trillion (10^{12}) (standard) cubic feet
TWh	terawatt hour(s) = billion (10^9) kWh



OVERVIEW

This statement provides a 7-year outlook, for the period from 2009 to 2015, on the demands for electricity and desalinated water, and the power generation and water desalination resources required to meet those demands, in the two main systems in Oman, the Main Interconnected System (MIS) and the Salalah System. The statement has been prepared and published in accordance with Condition 5 of OPWP's license.

This year's statement has been prepared at a time of heightened uncertainty, due to global economic and financial developments. Although it remains to be seen how significantly Oman will be affected by these developments, it is probable that there will be some impact on the local economy and on electricity and water demands. Electricity demand is most likely to be affected as some of the key growth drivers, in particular the development of export-commodity oriented industries and tourism oriented real estate projects, may be especially sensitive to international conditions and financing issues.

In light of these considerations, OPWP has made some downward adjustments to the demand projections contained in this statement, though it is possible that the full impact of the global developments is not yet fully incorporated. OPWP had taken a relatively cautious view for the time being in light of the uncertainty (so as to not risk underestimating future resource requirements) and intends to continue to assess the situation closely.

In this context, the highlights of this statement are as follows:

DEMAND FOR ELECTRICITY

- The maximum power demand in the MIS is expected to grow from **3,031 MW** in 2008 to **5,348 MW** by 2015, an average increase of around 8.5% or 330 MW per year. Annual energy demand is expected to grow similarly, from **14.0 TWh** in 2008 to **25.6 TWh** in 2015.
- Under "high case" assumptions, MIS demands grow an additional 2% per year to reach **6,134 MW** and **30.6 TWh** by 2015.
- In the Salalah System, the maximum demand is expected to grow from **260 MW** in 2008 to **552 MW** by 2015, an average annual increase of around 11% or 40 MW per year, with annual energy demand growing at around 12% in average, from **1.5 TWh** in 2008 to **3.2 TWh** in 2015.
- Under "high case" assumptions, Salalah System demands grow an additional 4% per year to reach **710 MW** and **4.2 TWh** by 2015.

DEMAND FOR DESALINATED WATER

- Demand for desalinated water in the regions covered by the MIS is expected to increase from **102 million m³** in 2008 to **234 million m³** by 2015, reflecting a policy of reduced



reliance on groundwater resources, as well the effects on demand of population growth and economic development.

- Demand for desalinated water in the Salalah area is expected to increase to **24 million m³** per year which is planned to be met (from 2012) by the Salalah IWPP.

ADDITIONAL POWER GENERATION / WATER DESALINATION REQUIREMENTS

- Between **2,100 MW** and **3,000 MW** of additional power generation resources are needed for the MIS by 2015.
- Between **320 MW** and **470 MW** of additional power generation resources are needed for the Salalah System by 2015. All or most of this will ultimately be provided by the Salalah IWPP. However, up to **65 MW** of additional power generation is required on a short-term basis by 2010, prior to the anticipated availability of early power of the Salalah IWPP.
- At least **143,000 m³ per day (31 MIGD)** of additional water desalination capacity is needed for the regions covered by the MIS. Further additional capacity may be required to support enhanced security of supply.
- For Salalah, no additional desalination requirements are foreseen for the time being beyond those covered by the Salalah IWPP.

PROCUREMENT STRATEGY

- OPWP to pursue procurement strategy focussed on:
 - ensuring sufficient resources are available to meet demands;
 - improving fuel efficiency, to reduce energy (and water) costs and emissions, and to operate within committed gas reservations for the power and related water sector; and
 - achieving Government goals for resource diversification through the introduction of alternative fuels into the fuel mix and the potential implementation of renewable energy projects.
- OPWP to launch competitive procurement processes during 2009 for:
 - two new "green-field" gas-fired IPPs, located at Barka and Sohar, and each having a capacity of around **650 MW**. These are expected to provide up to **750 MW** of early power from 2011 and be fully commissioned by 2012;
 - expansion/redevelopment of the Al-Ghubrah Power and Desalination Plant, including a new gas-fired IWPP providing additional power capacity of up to **500 MW**, to be available from 2013 and located on part of the site presently occupied by Al-Ghubrah Power and Desalination Company SAOC (GPDC), combined with integration of existing assets to be acquired from GPDC and addition of new desalination capacity of **136,000 m³ per day (30 MIGD)**; and



- a new “green-field” I(W)PP, located at Ad-Duqm, with a capacity of **1,000 MW**. There is a possibility that this I(W)PP may be coal fired. This I(W)PP is expected to be completed in phases in 2015 and 2016 with the first phase providing up to 500 MW in 2015.
- OPWP to pursue options for procurement of additional generation for the MIS, to meet the evolving demand scenario requirements of 2013 and 2014, supplement capacity provided by IWPPs and/or provide fuel efficiency benefits, from:
 - existing non-contracted resources;
 - interconnected systems; and/or
 - conversion of existing open-cycle gas turbine capacity to combined-cycle.
- Ongoing procurement process for **370-430 MW** and **68,000 m³ per day (15 MIGD)**. Salalah IWPP expected to be completed during the first half of 2009, with a view to securing full availability of the plant by first quarter of 2012. Up to **200 MW** of “early power” may be secured for summer 2011.
- OPWP is pursuing and/or considering a number of additional options to address short-term generation requirements in the Salalah System prior to 2011, including:
 - fast-track completion of interconnect with PDO system, tapping surplus generation resources available in the PDO system and/or the MIS;
 - enhancement of the capacity of the Raysut NPS gas turbines by DPC; and
 - temporary generation based on gas or diesel engine rental.

FUEL REQUIREMENTS FOR POWER GENERATION / WATER DESALINATION

- Total fuel requirements for MIS power generation and water desalination increase from **184 million GJ** in 2008 to around **256 million GJ** by 2015, based on expected demand growth, or to **299 million GJ** under “high case” demand growth.
- The introduction of coal into the fuel mix in 2015 would initially account for around 10% of MIS fuel requirements, resulting in a 2015 gas requirement of **227 million GJ (or 16.8 million Sm³ per day)** for the expected demand and **271 million GJ (or 20.1 million Sm³ per day)** for the “high case”. The maximum annual gas requirements (prior to the arrival of coal) are **243 million GJ (or 18.0 million Sm³ per day)** for the expected demand and **282 million GJ (or 20.9 million Sm³ per day)** for the “high case”.
- Total gas requirements for Salalah System power generation and water desalination are expected to increase from around **17 million GJ (or 1.3 million Sm³ per day)** in 2008 to around **29 million GJ (or 2.2 million Sm³ per day)** by 2015, based on expected demand growth, or to **40 million GJ (or 3.0 million Sm³ per day)** under “high case” demand growth.



- MOG has provided OPWP with a medium-term committed gas reservation, covering both the MIS and Salalah systems, of around **19.5 million Sm³ per day**. This leaves a possibility of moderate shortfalls under the expected demand, and more significant shortfalls in the “high case” scenario, that could need to be met by utilization of diesel fuel in the event that additional gas is not confirmed by MOG, and it is not possible to reduce or otherwise substitute the gas requirements.
- To mitigate this risk, OPWP intends to specify at least one of the two proposed 2011/2012 gas-fired IPPs for optional continuous operation on diesel fuel, to focus on gas reduction/substitution options, to further assess the probability of the high-case demand scenario (and the consequent gas shortfalls) materializing, and to continue to consult closely with MOG on likely gas requirements and the possibility of additional gas reservations.

Further details in respect of each of the MIS and the Salalah System are set out in Section 1 and Section 2 below. More information is available on the web at www.omanpwp.co.om.

The next statement (for 2010 to 2016) will be published in December 2009.



SECTION 1 MAIN INTERCONNECTED SYSTEM (MIS)

The Main Interconnected System (MIS) covers the Governorate of Muscat, the Governorate of Buraimi and most of the South Batinah, Dakhliyah, Sharqiya, North Batinah and Dhahirah regions, serving around 500,000 electricity customers.

It comprises a number of power generation facilities, owned and operated by various companies; a single 220/132 kV transmission grid, owned and operated by Oman Electricity Transmission Co. (OETC); and three distribution networks, owned and operated by Muscat Electricity Distribution Co. (MEDC), Mazoon Electricity Co. (MZEC) and Majan Electricity Co. (MJEC). The three distribution network operators also act as "licensed electricity suppliers", supplying existing and new electricity customers in their respective service areas. The MIS is presently interconnected in Oman with the power system of Petroleum Development Oman (PDO), and will shortly be interconnected with the power system of the Emirate of Abu Dhabi. Several of the power generation facilities connected to the MIS produce desalinated water in conjunction with electricity, to meet the regional requirements of "water departments" responsible for supplying water to customers [including the Public Authority for Electricity and Water (PAEW) and Majis Industrial Services Co. (MISC)].

OPWP's role is to aggregate the power and desalinated water requirements of licensed electricity suppliers and water departments, and to economically procure the required power and desalinated water in bulk from facilities connected to the MIS and interconnected systems. OPWP is required to ensure that sufficient power generation resources are available to meet licensed electricity suppliers' demands and wherever feasible to co-procure desalinated water to meet the needs of water departments.

1.1 DEMAND FOR ELECTRICITY

Expected Demand

The maximum power demand in the MIS is expected to grow from 3,031 MW in 2008 to 5,348 MW by 2015, an average increase of around 8.5% or 330 MW per year. Annual energy demand is expected to grow similarly, from 14.0 TWh in 2008 to 25.6 TWh in 2015.

This growth is the product of:

- continuing underlying "normal" growth in all areas, from increasing population and number of households, rising personal incomes and general economic development;
- a major increase in demand from new industrial projects, concentrated in particular around the Sohar Industrial Port (in MJEC's service area);
- a major increase in demand from new tourism related developments, concentrated in

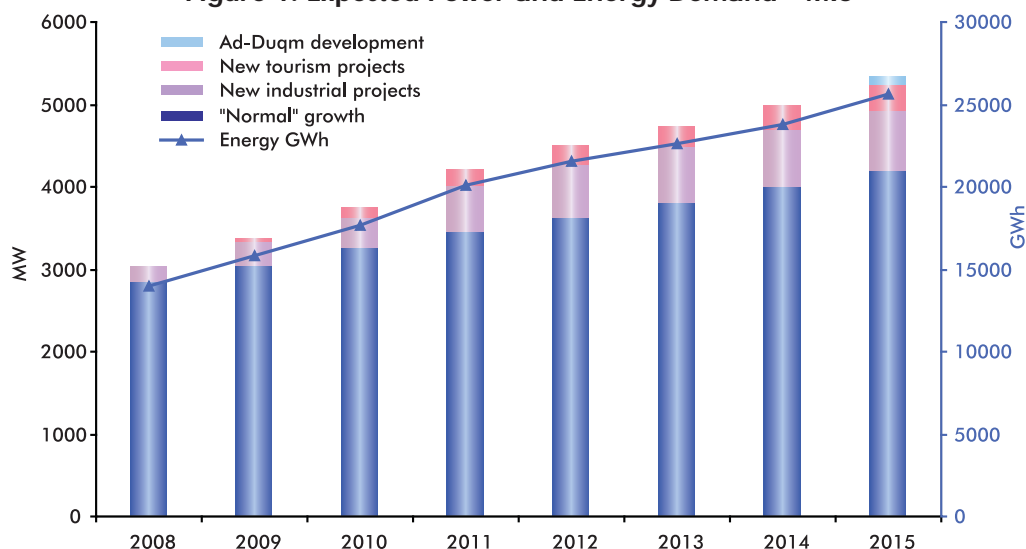


particular around Muscat (in MEDC's service area) and in the South Batinah region (in MZEC's service area); and

- a potential extension of the MIS to Ad-Duqm in the Al-Wusta region towards the end of the 7 Year period.

The annual build up of expected power and energy demands to 2015, and the contribution to the growth of each of the main drivers identified above, are shown in Figure 1.

Figure 1: Expected Power and Energy Demand – MIS



	2008	2009	2010	2011	2012	2013	2014	2015	Average annual growth
Demand (MW), including increase from:	3,031	3,371	3,739	4,220	4,507	4,742	4,984	5,348	8.5%
"Normal" growth	-	199	412	608	780	962	1,152	1,352	
New industrial projects	-	114	193	387	470	496	525	558	
New tourism projects	-	27	103	195	226	254	277	306	
Ad-Duqm area development	-	-	-	-	-	-	-	102	
Change from 2008 Statement	16	40	-75	66	9	-22	-127	n.a.	
Energy (GWh)	14,017	15,844	17,644	20,089	21,564	22,621	23,772	25,598	

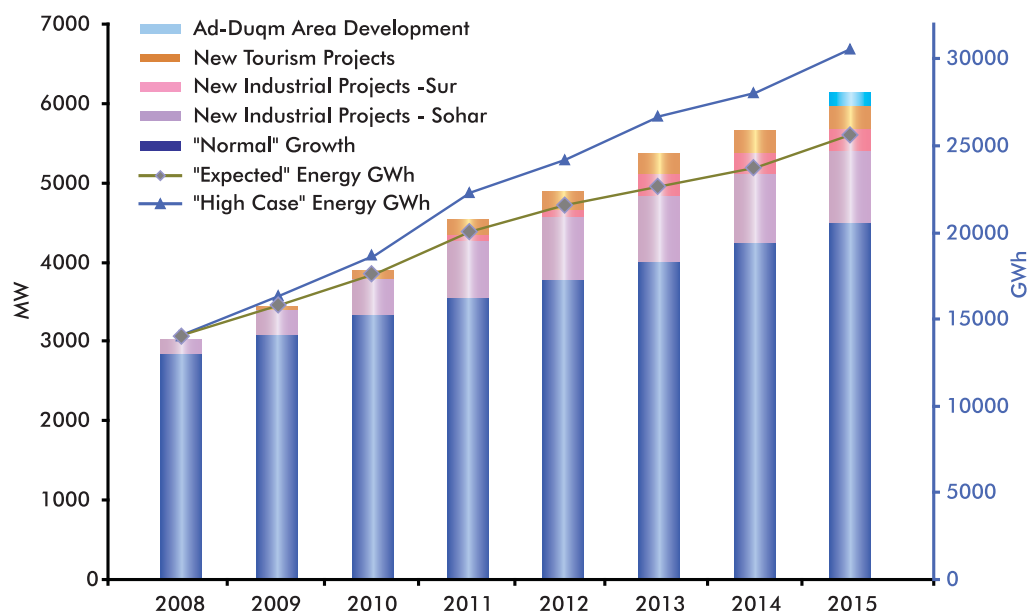
The expected demand is similar to that projected in the 2008 7-Year Statement, with a moderate decrease (of around 127 MW) by 2014, due mainly to the deferral of some new projects over the past year. The expected integration of Ad-Duqm has also been shifted by one year to 2015.



"High Case" Demand

Although the projection shown in Figure 1 reflects the currently expected development of demand, OPWP is cognizant of the possibility of significant further industrial development at the Sohar Industrial Port Area, at Sur and the Ad Duqm area. This could potentially add an additional 786 MW of peak demand by 2015, as shown in Figure 2 as a "high case" demand scenario.

Figure 2: "High Case" Power and Energy Demand - MIS



	2008	2009	2010	2011	2012	2013	2014	2015	Average annual growth
Demand (MW), including:	3,031	3,435	3,893	4,539	4,888	5,364	5,660	6,134	10.6%
Expected Demand	3,031	3,371	3,739	4,220	4,507	4,742	4,984	5,348	8.5%
Add. "Normal" Growth	-	44	78	116	157	203	253	308	
Add. New Industrial Projects - Sohar	-	20	76	119	140	143	146	150	
Add. New Industrial Projects - Sur	-	-	-	83	83	275	275	275	
Add. New Tourism Projects	-	-	1	1	1	1	1	2	
Add. Duqm Area Development	-	-	-	-	-	-	-	52	
Change from 2008 Statement	16	-18	-242	-81	-304	-94	-146	n.a.	
Energy (GWh)	14,017	16,330	18,712	22,283	24,157	26,653	28,084	30,580	

The "high-case" demands are marginally lower than those projected in the 2008-2014 7-Year Statement. This reflects a more conservative underlying "normal" growth and a reduction in the potential additional industrial demand at Sohar and Sur.

In OPWP's view, the likelihood of the "high-case" demands being realized is most dependent on the rate of recovery of the current global economic and financial conditions. OPWP intends to closely monitor the situation in order to assess the probability associated with the "high case" projection.



Exports to Interconnected Systems

The MIS is presently interconnected in Oman with the PDO power system (by a 132 kV link), and will shortly be interconnected with the power system of the Emirate of Abu Dhabi (by a 220 kV link). It is anticipated that the latter will in due course become part of the wider GCC interconnect, linking the power systems of all six GCC countries.

In addition to providing reliability benefits (through the sharing of generation reserves), these interconnects provide the opportunity for the “commercial” export of power, which would add to the expected demand to be served by generation resources in the MIS.

For the time being, however, no definite arrangements have been agreed for commercial exports, and accordingly the current demand projections (presented above) include the native power demands of the MIS only.

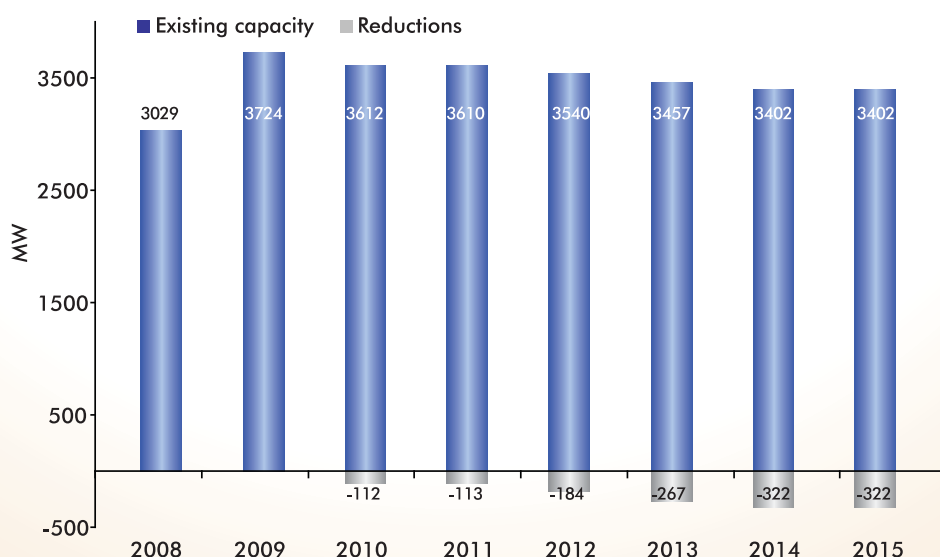
1.2 POWER GENERATION RESOURCES

Contracted Generation Capacity

OPWP’s present portfolio of contracted generation capacity in the MIS is expected to provide around 3,725 MW of firm capacity in 2009, an increase from the 2008 capacity due to the full commissioning of the Barka II plant, and then falling to 3,402 MW by 2015 as a result of some capacity at Al-Ghubrah and Wadi Al-Jizzi falling out of contract.

A summary of the contracted generation capacity (rated at 45°C ambient, corresponding to peak summer conditions) is provided in Figure 3.

Figure 3: Contracted Generation Capacity – MIS





MW	2008	2009	2010	2011	2012	2013	2014	2015
Existing capacity (MW), including:								
Al-Ghubrah Power & Desalination Plant	473	482	371	371	371	289	234	234
Rusail Power Plant	684	684	684	684	684	684	684	684
Wadi Al-Jizzi Power Plant	287	290	290	290	220	220	220	220
Manah Power Plant	279	279	279	279	279	279	279	279
Al Kamil Power Plant	282	282	282	282	282	282	282	282
Barka (I) Power & Desalination Plant	434	434	434	434	434	434	434	434
Sohar Power & Desalination Plant	590	590	590	590	590	590	590	590
Barka (II) Power & Desalination Plant	–	683	681	680	680	679	679	679
Total	3,029	3,725	3,612	3,611	3,540	3,457	3,402	3,402
Reductions			-113	-114	-184	-267	-322	-322

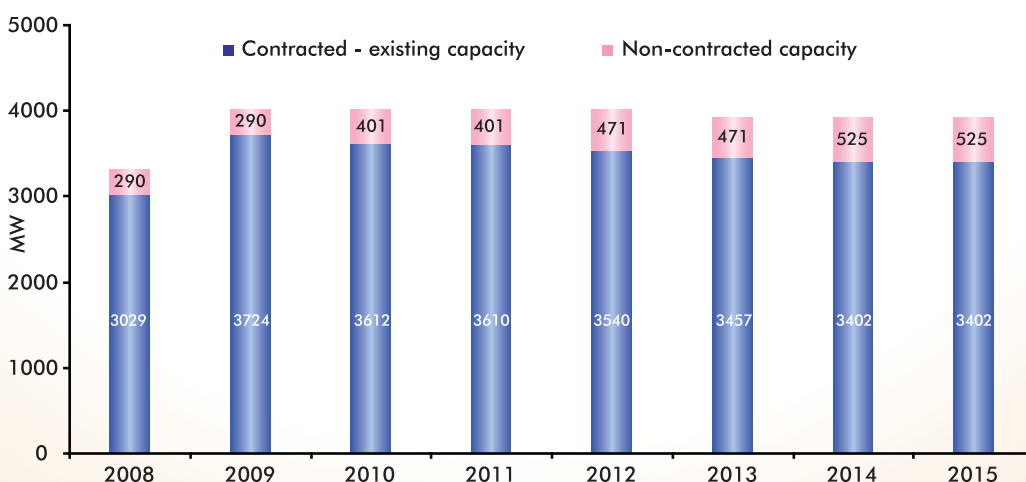
Non-Contracted Generation Capacity

In addition to the contracted capacity identified above, there are a number of other generation resources in the MIS, either existing or under development, which (subject to contract) are potentially available to OPWP during 2009-2015. These include:

- continued availability of some out of contract capacity at Al-Ghubrah and Wadi Al-Jizzi;
- availability in excess of contracted capacity levels at some plants; and
- surplus capacity of several industries with captive generation (including most significantly the aluminium smelter at Sohar).

Such resources are expected to add up to around 290 MW in 2009, rising to around 525 MW by 2015, and resulting in total installed capacity potentially available to OPWP of around 4,000 MW from 2009 to 2015. The annual build up of these resources is shown in Figure 4.

Figure 4: Contracted and Non-Contracted Generation Capacity – MIS





MW	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	Average annual growth
Out of Contract Capacity:									
Al-Ghubrah Power & Desalination Plant	-	-	111	111	111	111	165	165	
Wadi Al-Jizzi Power Plant	-	-	-	-	70	70	70	70	
Above Contract Capacity:									
Al Kamil Power Plant	5	5	5	5	5	5	5	5	
Barka (I) Power & Desalination Plant	20	20	20	20	20	20	20	20	
Sohar Power & Desalination Plant	15	15	15	15	15	15	15	15	
Industries Surplus Capacity :									
Oman Mining Co.	20	20	20	20	20	20	20	20	
Sohar Refinery Co.	10	10	10	10	10	10	10	10	
Sohar Aluminium Co.	220	220	220	220	220	220	220	220	
Total Non-contracted Capacity	290	290	401	401	471	471	525	525	8.8%
Total Contracted Capacity	3,029	3,725	3,612	3,611	3,540	3,457	3,402	3,402	1.7%
Total Capacity potentially available to OPWP	3,319	4,015	4,013	4,012	4,011	3,928	3,927	3,927	2.4%

Imports from Interconnected Systems

As noted above, the MIS is interconnected in Oman with the PDO power system, and will shortly be interconnected with the power system of the Emirate of Abu Dhabi. These interconnects facilitate both reliability imports (through reserve sharing arrangements) as well as the possibility of "commercial" imports.

The import-direction capacities of the PDO and Abu Dhabi interconnects are around 100 MW (0 MW firm) and 600 MW (170 MW firm for 2009-2010 and 300 MW from 2011) respectively.

Subject to surplus generation availability in the interconnected systems, both interconnects will contribute to the reliability of supply in the MIS throughout the 2009-2015 period. In addition, OPWP intends to pursue the possibility of importing power commercially over the Abu Dhabi interconnect as part of its overall generation resource procurement strategy.

1.3 ADDITIONAL POWER GENERATION REQUIREMENTS

OPWP is required to ensure the adequacy of generation resources to meet future power demands. This requires as a minimum that sufficient on-peak generation capacity is available to OPWP to cover each year's expected maximum demand. Further, the Authority for Electricity Regulation, Oman has stipulated a generation security standard for the MIS which takes into account expected demand profiles as well the expected reliability and dispatch capability of generation resources. This is expressed in terms of the expected loss of load hours (known as "LOLH"), which in any year must not exceed 24 hours.

OPWP's intention is to ensure that these requirements are met on the basis of firm, contracted resources (noting that the availability of additional non-firm resources and reserve sharing arrangements with interconnected systems will further enhance reliability, i.e. reduce loss of load hours below the 24 hour limit).



Based on the demand projections and considering OPWP's present portfolio of contracted capacity, shortfalls in firm generation and corresponding excesses in LOLH (above the 24 hour limit) are expected to occur and increase during 2010-2015, as shown in Figure 5.

Figure 5: Potential Generation Shortfall and LOLH - MIS

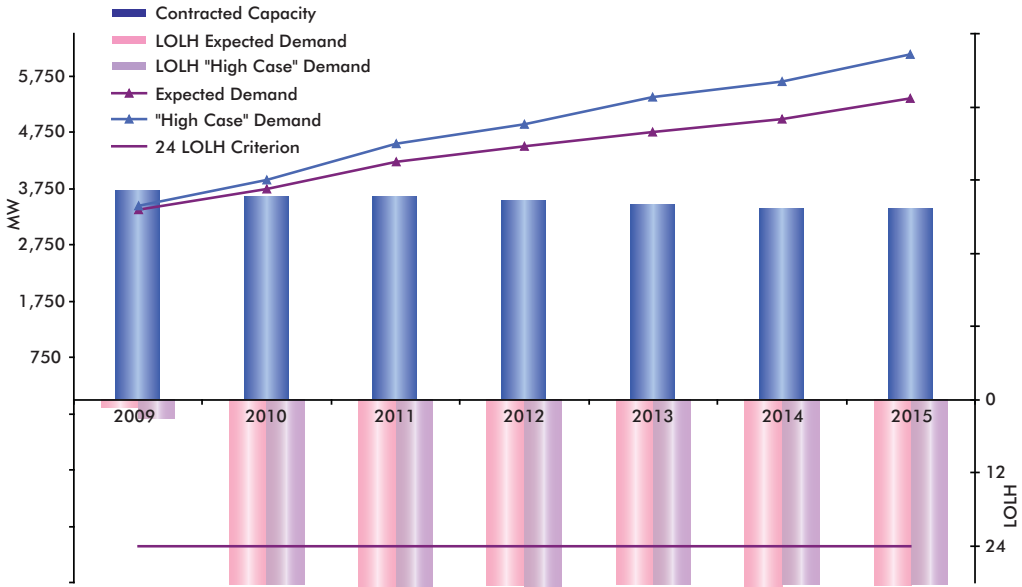
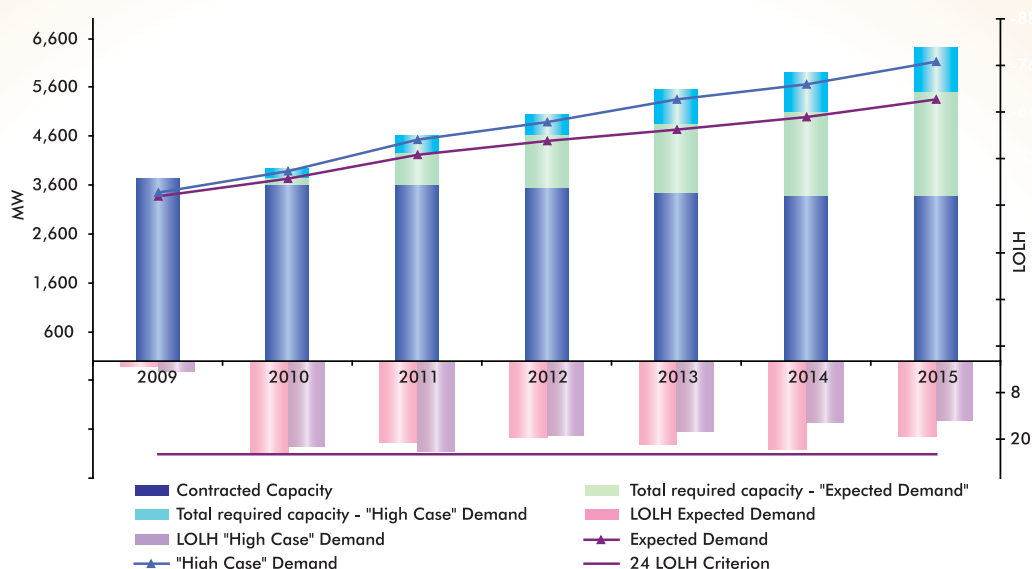


Figure 5 illustrates the need for OPWP to contract for additional generation resources during the 7 Year period. OPWP has calculated that it will need to contract for a minimum of around 2,100 MW of firm on-peak generation by 2015 under the expected demand scenario, and a further 900 MW in the "high case" demand scenario. The annual build up of these requirements is shown in Figure 6.



Figure 6: Additional Generation Required – MIS



	2009	2010	2011	2012	2013	2014	2015
Total required capacity - "Expected Demand"	-	150	650	1,100	1,400	1,700	2,100
Total required capacity - "High Case" Demand	-	320	1,000	1,500	2,100	2,500	3,000

Details of OPWP's strategy in respect of the procurement of these additional resource needs are provided in section 1.8 below.

1.4 DEMAND FOR DESALINATED WATER

The total demand for desalinated water in the regions covered by the MIS is expected to grow from around 102 million m³ per year in 2008 to 234 million m³ per year in 2015, an average annual increase of around 13% per year.

This increase reflects a major policy drive away from reliance on groundwater resources in most regions, as well as the effects on demand of population growth and economic development.

Detailed demand projections have been provided to OPWP by the responsible water departments, PAEW and MISC, and these have been organized into four separate zones, reflecting the general configuration of the water supply infrastructure and the likely sources of supply.

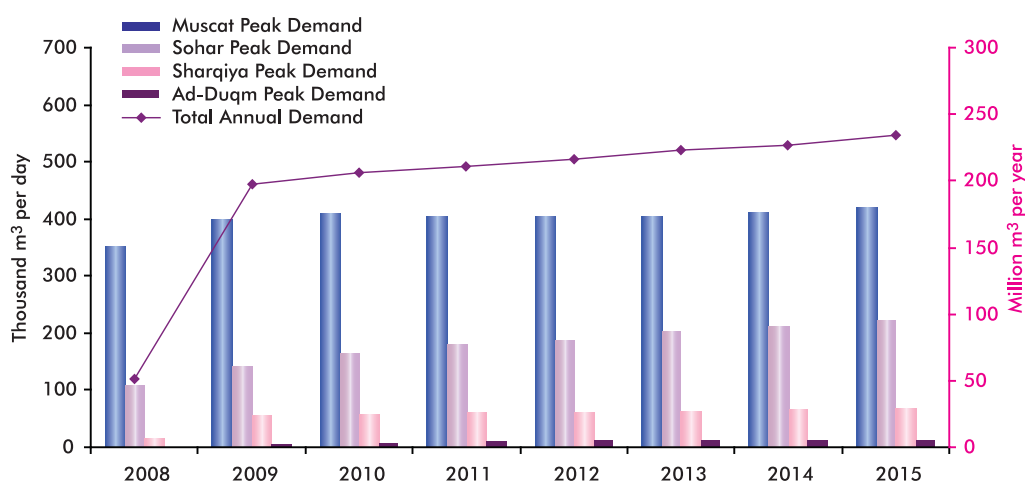
The "Muscat" zone covers the Governorate of Muscat and the South Batinah and Dakhliyah regions. The "Sohar" zone covers the North Batinah and Dhahirah regions, and the Governorate of Buraimi. The "Sharqiya" zone covers the Sharqiya region, and the "Ad-Duqm" zone covers the town of Ad-Duqm, which is expected to be connected with the MIS in 2015.



The “peak demand” for desalinated water (defined as the average daily demand during the peak month of the year) is projected reach 420,000 m³ per day, 222,000 m³ per day, 67,000 m³ per day and 14,000 m³ per day in the “Muscat”, “Sohar”, “Sharqiya” and “Ad-Duqm” zones respectively by 2015.

The expected build up of the total demand and the peak demands in the four zones is summarized in Figure 7.

Figure 7: Expected Desalinated Water Demand – MIS Regions



Peak Demand (thousand m ³ per day)	2008	2009	2010	2011	2012	2013	2014	2015
“Muscat” zone	352	399	410	404	405	404	412	420
“Sohar” zone	109	142	163	178	186	202	212	222
“Sharqiyah” zone	15	56	58	60	62	64	66	67
Total	476	597	631	642	653	670	690	710
Total Annual Demand (million m³ per year)	102	198	207	211	215	220	227	234
“Ad-Duqm” zone	-	5	7	9	11	12	13	14

It may be noted that after growing rapidly in 2009 (as new areas are supplied with desalinated water), the “Muscat” zone demand levels off and actually falls between 2010 and 2013. OPWP understands that this is due to an ambitious loss-reduction program to be implemented by PAEW, and that the assumptions associated with the impact of this program add a dimension of uncertainty to the projections.

1.5 WATER DESALINATION RESOURCES

The “Muscat” zone is currently served by the Al-Ghubrah Power and Desalination Plant, with a capacity of around 182,000 m³ per day (approximately 40 MIGD) and the Barka I Power and Desalination Plant, with a capacity of around 91,000 m³ per day (20 MIGD). This capacity will be supplemented in 2009 with the commissioning of the Barka II Power and Desalination



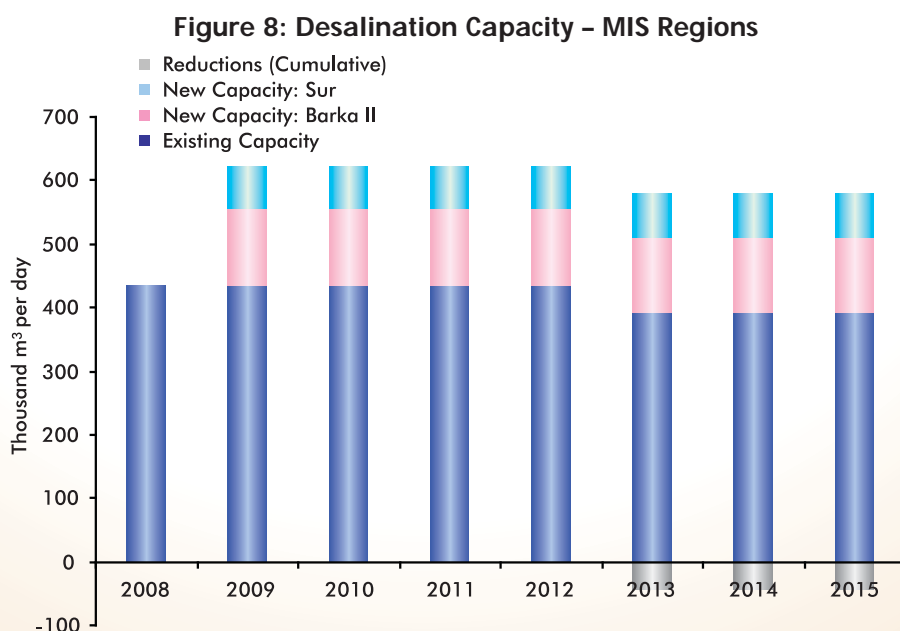
Plant, with a capacity of 120,000 m³ per day (26.4 MIGD). This will bring the total capacity in the “Muscat” zone in 2009 to around 394,000 m³ per day (86.4 MIGD). This capacity is all contracted to OPWP and the water purchased is sold by OPWP to PAEW.

OPWP’s present contract in respect of the desalination capacity at Al-Ghubrah contemplates the retirement of two of the seven desalination units at the plant, with a combined capacity of 44,000 m³ per day (9.7 MIGD), after the summer of 2009. However, OPWP has already agreed in principle to contract extensions in respect of these units. This involves necessary refurbishments of the units to ensure reliability, and an extension of the contracted period to 2012. With this capacity extended, the contracted desalination capacity at Al-Ghubrah remains at 182,000 m³ per day up to 2012 and will fall to 138,000 m³ per day from 2013 onwards. As a result, the total “Muscat” zone capacity is 393,000 m³ per day and 349,000 m³ per day during the same periods.

The Sohar Power and Desalination Plant, with a capacity of 150,000 m³ per day, serves the “Sohar” zone. This capacity is contracted to OPWP and the water purchased will be sold by OPWP to PAEW and MISC.

The “Sharqiya” zone is presently served by the Sur Desalination Plant, with a capacity of 12,000 m³ per day. This will be supplemented in 2009 with the commissioning of the new 68,000 m³ per day Sur Desalination Plant, bringing the total desalination capacity for the “Sharqiya” zone to 80,000 m³ per day. This capacity, being desalination only, is contracted directly to PAEW not OPWP.

The existing and new desalination capacity of the three zones presently covered by the MIS (“Muscat”, “Sohar”, and “Sharqiya”) is summarized in Figure 8.





	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
"Muscat" Zone								
Existing Capacity (thousand m ³ per day)								
Al-Ghubrah Power & Desalination Plant	182	182	182	182	182	138	138	138
Barka I Power & Desalination Plant	91	91	91	91	91	91	91	91
New Capacity (thousand m ³ per day)								
Barka II Power & Desalination Plant		120	120	120	120	120	120	120
"Muscat" Total (thousand m ³ per day)	273	393	393	393	393	349	349	349
Reductions (Cumulative)						-44	-44	-44
"Sohar" Zone								
Existing Capacity (thousand m ³ per day)								
Sohar Power & Desalination Plant	150	150	150	150	150	150	150	150
"Sohar" Total (thousand m ³ per day)	150	150	150	150	150	150	150	150
"Sharqiya" Zone								
Existing Capacity (thousand m ³ per day)								
Sur Desalination Plant	12	12	12	12	12	12	12	12
New Capacity (thousand m ³ per day)								
New Sur Desalination Plant		68	68	68	68	68	68	68
"Sharqiya" Total (thousand m ³ per day)	12	80	80	80	80	80	80	80
Total Capacity (thousand m ³ per day)	435	623	623	623	623	579	579	579

1.6 ADDITIONAL WATER DESALINATION REQUIREMENTS

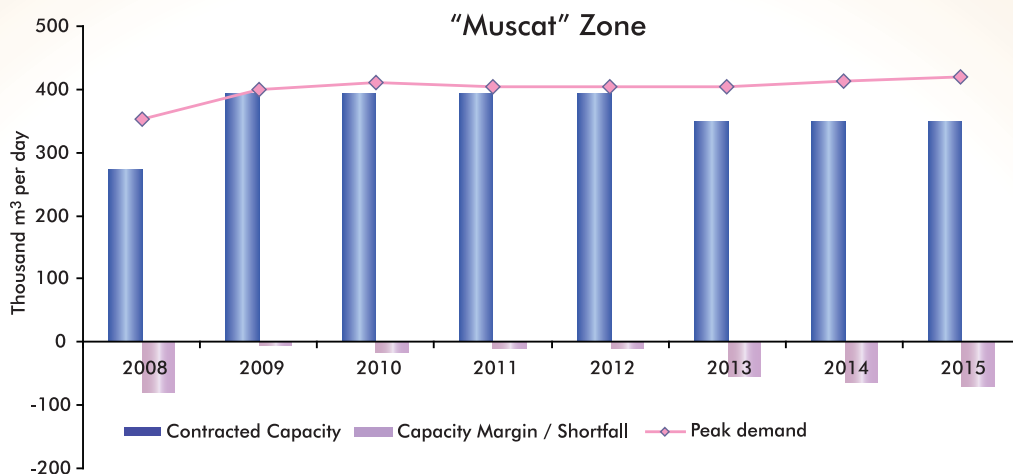
Figure 9 to Figure 11 below provide the annual peak demands and desalination capacities for each of the "Muscat", "Sohar" and "Sharqiya" zones respectively.

As illustrated in Figure 9, for the "Muscat" zone:

- a capacity shortfall of around 6,000 m³ per day is indicated in 2009 this may be mitigated by transfers from the "Sohar" zone. OPWP understands that PAEW is able to transfer up to 50,000 m³ per day between Muscat and Sohar zones;
- Between 2010 and 2012 shortfalls of up to 17,000 m³ per day are forecasted. Therefore the projections for Sohar show that no surplus would be available for transfer to "Muscat" zone in these years. It is understood that PAEW is exploring the possibility of installing around 23,000 m³ per day (5 MIGD) of temporary desalination capacity at Al Ghubrah plant which would offset the expected shortfalls. Otherwise these can be met from utilization of local groundwater resources; and



Figure 9: Desalination Capacity Margin/Shortfall



	2008	2009	2010	2011	2012	2013	2014	2015
"Muscat" Zone								
Peak Demand (thousand m³ per day)	352	399	410	404	405	404	412	420
Contracted Capacity (thousand m³ per day)								
Al- Ghubrah Power & Desalination Plant	182	182	182	182	182	138	138	138
Barka I Power & Desalination Plant	91	91	91	91	91	91	91	91
Barka II Power & Desalination Plant	-	120	120	120	120	120	120	120
Total	273	393	393	393	393	349	349	349
Capacity Margin / (Shortfall)	(79)	(6)	(17)	(11)	(12)	(55)	(63)	(71)

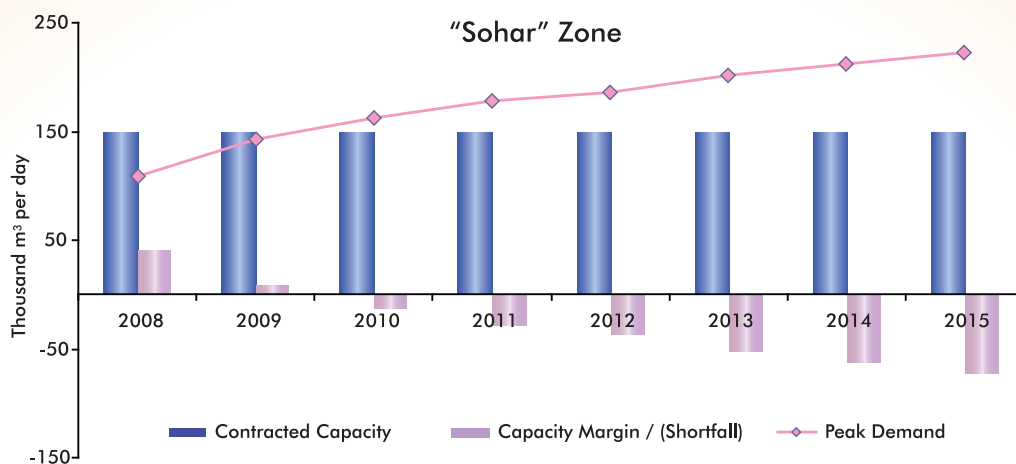
- the reduction of capacity at Al Ghubrah after 2012 will result in increased shortfalls of between 55,000 m³ per day and 71,000 m³ per day from 2013 to 2015. New capacity is planned at Al Ghubrah to offset against this loss in capacity to avoid any shortfalls.

The "Sohar" zone as shown in Figure 10 has expected capacity margins of 8,000 m³ per day in 2009, which as noted above could potentially be utilized to cover shortfalls in the "Muscat" zone. From 2010 onwards however, shortfalls are expected in the "Sohar" zone, reaching up to 72,000 m³ per day by 2015. In the later years, this shortfall could be partially offset by transfers from "Muscat" zone of up to 50,000 m³ per day (once additional capacity is installed in the "Muscat" zone). The remaining shortfall would need to be covered by additional desalination capacity or reliance on local groundwater resources.

For the Ad-Duqm zone, OPWP understands that RAEC intends to install water desalination capacity to meet demands at least until such time as the area is connected to the MIS (which is expected in 2015).



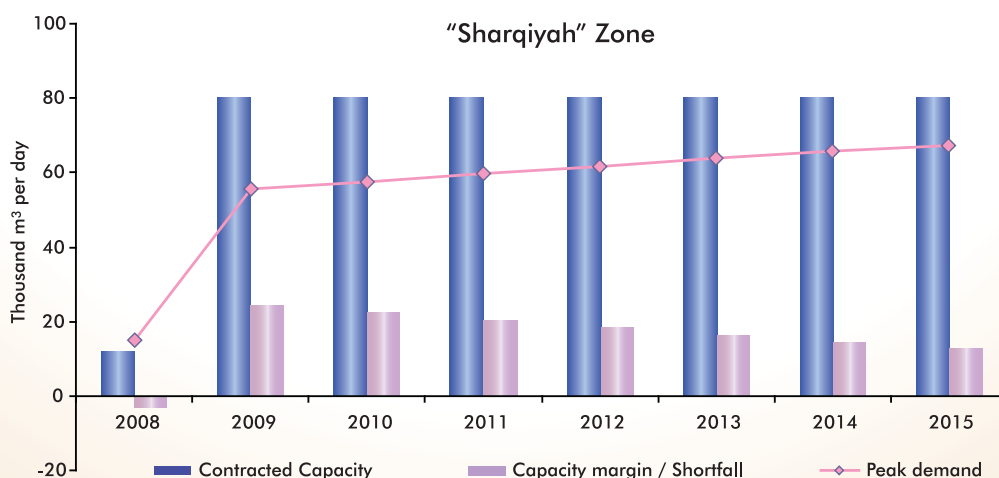
Figure 10: Desalination Capacity Margin/Shortfall



	2008	2009	2010	2011	2012	2013	2014	2015
"Sohar" Zone								
Peak Demand (thousand m ³ per day)	109	142	163	178	186	202	212	222
Contracted Capacity (thousand m ³ per day)	150	150	150	150	150	150	150	150
Sohar Power & Desalination Plant	150	150	150	150	150	150	150	150
Capacity Margin / (Shortfall)	41	8	(13)	(28)	(36)	(52)	(62)	(72)

Following the installation of the new desalination capacity at Sur in 2009, the "Sharqiya" zone shows a surplus capacity out to 2015 as illustrated in Figure 11 below.

Figure 11: Desalination Capacity Margin / Shortfall





	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
"Sharqiya" Zone								
Peak Demand (thousand m ³ per day)	15	56	58	60	62	64	66	67
Capacity (thousand m ³ per day)								
Sur Desalination Plant	12	12	12	12	12	12	12	12
New Sur Desalination Plant		68	68	68	68	68	68	68
Total	12	80	80	80	80	80	80	80
Capacity Margin / (Shortfall)	(3)	24	22	20	18	16	14	13

As indicated in Figure 9 and Figure 10 above, the "Muscat" and "Sohar" zones have an expected combined desalination capacity shortfall of around 143,000 m³ per day by 2015. PAEW has confirmed the requirement for 136,000 m³ per day (30 MIGD) of additional capacity at Al Ghubrah starting from 2012.

OPWP is in discussions with PAEW and MISC about further requirements up to 2015.

OPWP understands that PAEW is reviewing the overall planning philosophy with respect to security of supply of water. The philosophy has traditionally been to aim to match installed desalination capacity with the peak demand for desalinated water, and to rely on storage capacity and groundwater resources to cover contingencies. In light of increasing issues with groundwater resources, and greater overall reliance on desalination, it is understood that PAEW may move towards a policy of maintaining some reserve capacity (in conjunction with increased storage capacity).

With the uncertainty in the present demand projections (which could be on the low side due to overly ambitious assumptions with respect to the planned loss-reduction program), this may result in an increased requirement for additional capacity.

OPWP will liaise with PAEW on their requirements as necessary, and where appropriate include this in any future power capacity procurement.

1.7 OPPORTUNITY FOR COMBINING POWER GENERATION AND WATER DESALINATION

In developing plans for procuring power generation resources OPWP is required to consider the opportunity for combining power generation with water desalination so as to benefit from economies of co-location and co-procurement.

Given the need for additional power generation in the MIS and the requirements of water departments for additional desalination capacity, there is clearly an opportunity for procuring the capacity together.

Further, the preferred locations identified by PAEW for additional desalination capacity (Al-Ghubrah and Barka) are both potentially suitable sites for additional power generation capacity, due to proximity to demand, availability of land and infrastructure (fuel supply, power transmission etc.). These factors are particularly relevant at Al-Ghubrah, where there are also good opportunities to improve gas utilization efficiency through redevelopment of the plant.



Accordingly OPWP is planning to proceed with an IWPP, combining the procurement of additional power generation and water desalination capacity, at Al-Ghubrah. The exact water desalination capacities required in each case are expected to be finalized, in consultation with PAEW, in early 2009.

1.8 PROCUREMENT STRATEGY FOR POWER GENERATION AND WATER DESALINATION

As noted above, OPWP is required to ensure that sufficient generation resources are available to meet future power demands. As identified in section 1.3, OPWP expects to need to procure between 2,100 MW and 3,000 MW of additional generation for the MIS during the 2010-2015 period, to meet growing demand (and to compensate for capacity falling out of contract).

In light of global trends in energy prices and in particular the rising opportunity costs associated with gas consumption, OPWP intends to also focus its future procurement strategy on optimizing gas utilization efficiency. This will heavily influence the selection of generation options and may result in the procurement of capacity in excess of the minimum required needs (in order to benefit from fuel-efficiency savings).

In this context, OPWP's present thinking in relation to the procurement of additional generation resources during the 2010 to 2015 period is summarized below.

2010 Requirement: 150-320 MW

OPWP intends to procure additional generation capacity during this period from:

- existing non-contracted resources, as identified in Figure 4 above; and/or
- interconnected systems.

2011-2012 Requirement: 650-1,500 MW (650-1,000 MW in 2011; and 1,100-1,500 MW in 2012)

Subject to regulatory approval, OPWP intends within the first half of 2009 to issue request for proposals for two new "green-field" dual fuelled combined cycle gas/distillate fired IPPs each having a capacity of around 650 MW (providing a total capacity of 1,300 MW) to be located at Barka and Sohar. These are expected to provide up to 750 MW of early power in 2011 and be fully commissioned in 2012. These capacities would be sufficient to meet the expected demand in 2011 and 2012.

To the extent that further additional resources are required to supplement the above (to meet the "high case" demand), OPWP would look to secure the required generation from existing non-contracted resources and/or interconnected systems.



2013-2014 Requirement: 1,700-2,500 MW (1,400-2,100 MW in 2013; and 1,700-2,500 MW in 2014)

OPWP intends to issue by early 2010 a request for proposals for the expansion/redevelopment of the Al-Ghubrah Power and Desalination Plant, which will include a new IWPP providing additional power capacity of up to 500 MW together with additional desalination capacity, to be located on part of the site presently occupied by Al-Ghubrah Power and Desalination Company SAOC (GPDC), and combined with integration of existing assets to be acquired from GPDC. This project is intended to both provide additional capacity and significantly improve the fuel-efficiency of power generation and water desalination at Al-Ghubrah.

The power capacity from this project is expected to be commissioned by 2013 and together with the 2012 additional capacity (amounting to 1,700 MW in total) would cover the expected demand for 2013 and 2014.

For the "high case" demand an additional 400 MW would be required in 2013 and 800 MW in 2014. The following options or combination thereof may be exercised:

- OPWP would look to secure this capacity from the non-contracted sources and/or interconnected systems.
- Conversion of existing OCGT plant to CCGT. This option would improve fuel efficiency and also provide up to around 400 MW of additional capacity within the 2013-2014 timeframe.
- There are also some possibilities for the development of renewable energy resources (in particular wind power and solar), which may be pursued for the 2013-2014 timeframe. This could significantly reduce fuel consumption, though it is uncertain to what extent any such resources would provide firm generation, and reduce the requirement for traditional generation capacity. OPWP would respond to any policy initiatives of the Government in this area.
- OPWP could look to implement a "green-field" I(W)PP to cover some or all of the 2013-2014 requirements.

In order to achieve the implementation of the I(W)PP by 2013, an immediate decision to proceed would be required. If 2014 is the required commissioning date, then a decision would need to be made by the end of 2009. Given this option is only required to meet the "high case" demand, and this demand scenario has a degree of uncertainty and only 400 MW is required in 2013, this "high case" demand may be met from the other three options present above.

Based upon the above scenario, OPWP will continue to review this position until there is greater certainty on the likely load demand forecast. In the interim period, OPWP will pursue and evaluate future potential sites for this potential I(W)PP.



2015 Requirement: 2,100-3,000 MW

Pursuant to a decision made by the Government aimed, a power plant with a nominal capacity of around 1,000 MW is to be procured in Ad-Duqm. This capacity is expected to be commissioned in two phases of around 500 MW each in 2015 and 2016. There is a possibility that this I(W)PP will be coal fired.

The addition of the first phase of Ad Duqm to the system, will provide an additional 500 MW which will meet the expected demand along with the 2012-2014 implemented schemes. In the "high case" demand, additional capacity would be necessary from the new I(W)PP as mentioned above. A decision on this would be required by end 2009 in order to achieve its target commissioning date. As stated above, evaluation of the demand trend would need to be assessed during 2009.

Beyond 2015 Requirement:

Whilst this time period is not within the horizon of the 7-Year Statement, it is prudent to look ahead given the lead time required for the implementation of large generation capacities particularly coal fired generation plant.

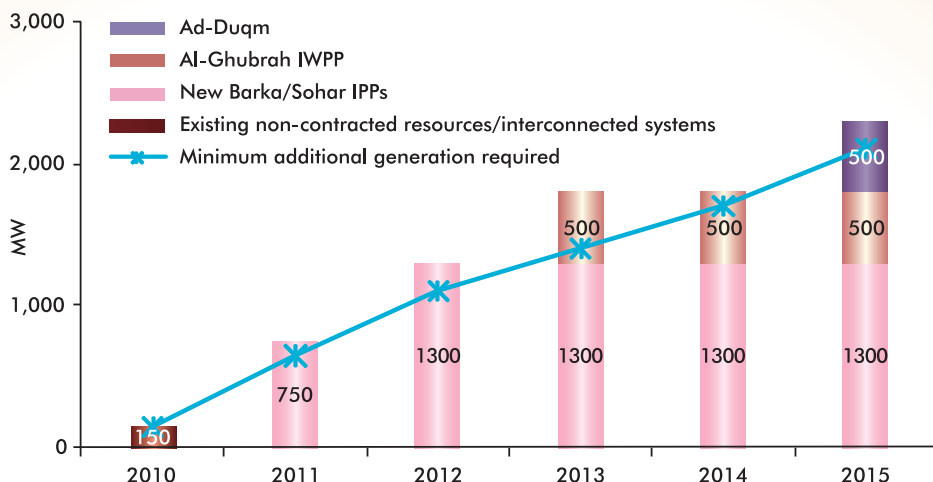
The demand forecast for this period is assumed to have the same trend growth rate as that of the 2014-2015 period. This results in an increase of approximately 400 to 500 MW per year in additional demand. The second phase of the Ad Duqm plant would meet the 2016 requirement. A second 500 MW phase of the redevelopment of the Al Ghubrah facility is an option available for consideration. This would entail the redevelopment of the portion of the site that was not included in the 2013 redevelopment. For 2017 and beyond, new capacity would have to be procured at a rate of approximately 500 MW per year. This may be as an additional phase of coal plants, in which case a decision to proceed would need to be made by the end of 2009. Alternatively, gas fired generating plant may be implemented with a possible shorter lead time. Following on from an ongoing fuel selection study being conducted, the medium-term fuel options available are likely to be gas or coal.

OPWP will provide an update of the anticipated requirements, and its procurement strategy, in respect of the 2013-2014 period in the next 7-Year Statement.

Figure 12 and Figure 13 below outline the respective strategies for capacity procurement to meet the expected and "high case" demand scenarios described above.

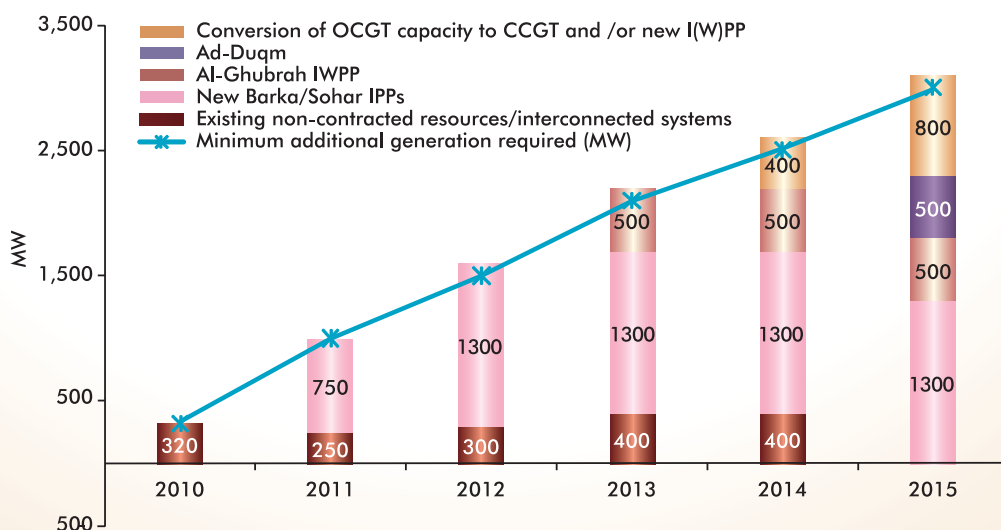


Figure 12: Expected Demand Procurement Strategy Summary - MIS



	2010	2011	2012	2013	2014	2015
For Expected Demand						
Minimum additional generation required (MW)	150	650	1,100	1,400	1,700	2,100
Sources of additional generation						
Existing non-contracted resources/interconnected systems	150	-	-	-	-	-
New Barka/Sohar IPPs	-	750	1,300	1,300	1,300	1,300
Al-Ghubrah IWPP	-	-	-	500	500	500
Ad-Duqm	-	-	-	-	-	500
TOTAL	150	750	1,300	1,800	1,800	2,300

Figure 13 "High Case" Demand Procurement Strategy Summary - MIS





	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
For "High Case" Demand						
Minimum additional generation required (MW)	320	1,000	1,500	2,100	2,500	3,000
Sources of additional generation						
Existing non-contracted resources/interconnected systems	320	250	300	400	400	-
New Barka/Sohar IPPs	-	750	1,300	1,300	1,300	1,300
Al - Ghubrah IWPP	-	-	-	500	500	500
Ad-Duqm	-	-	-	-	-	500
Conversion of OCGT capacity to CCGT and/or new (W)PP	-	-	-	-	400	800
TOTAL	320	1000	1,600	2,200	2,600	3,100

1.9 FUEL REQUIREMENTS FOR POWER GENERATION AND WATER DESALINATION

The primary fuel resource for the MIS is currently natural gas, supplied to power generation facilities by the Ministry of Oil & Gas (MOG). Essentially all MIS power generation and associated desalinated water production in 2008 was fuelled by gas, with the total consumption being around 184 million GJ (or 13.6 million Sm³ per day), an 8% increase over 2007.

As shown in Figure 14, total fuel requirements will continue to increase with growing demands for power and water, though the impact of OPWP's fuel-efficiency focused procurement should result in the slower rates of growth in fuel consumption. Indeed under the expected demand scenario, fuel consumption essentially levels off between 2011 and 2014 as the efficiency benefits of the 2012 CCGT projects and the 2013 Al-Ghubrah redevelopment in particular are realized. Under the high case demand, fuel consumption continues to grow during this period but at a much slower rate than electricity demand. By 2015, total fuel consumption is expected to reach 256 million GJ per year for the expected electricity demand and 299 million GJ per year in the "high case", increases of around 39% and 63% respectively on 2008 levels. This may be compared with increases of 83% and 118% in electricity demand as well as an approximate doubling of water production.

As indicated previously, there is the possibility that the proposed I(W)PP at Ad-Duqm may be coal fired. OPWP commissioned a study on probable fuel options for future I(W)PPs. The study reviewed the availability of fossil fuels including coal.

The introduction of coal into the fuel mix in 2015 with the initial phase of the Ad-Duqm plant could reduce the required gas consumption by around 10%. This results in a 2015 gas requirement of 227 million GJ (or 16.8 million Sm³ per day) for the expected demand and 271 million GJ (or 20.1 million Sm³ per day) for the "high case" demand. The maximum annual gas requirements (in 2014 prior to the arrival of coal) are 243 million GJ (or 18.0 million Sm³ per day) for the expected demand and 282 million GJ (or 20.9 million Sm³ per day) for the "high case".

MOG has provided OPWP with a medium-term committed gas reservation, covering both the MIS and Salalah systems, of around 19.5 million Sm³ per day – additional quantities will be subject to future MOG confirmation. In this context, Figure 14 shows the maximum shortfalls that may arise under the current projections and could need to be met by utilization of diesel fuel in the event that additional gas is not confirmed by MOG, and it is not possible to reduce or otherwise substitute the gas requirements. In the expected demand scenario,

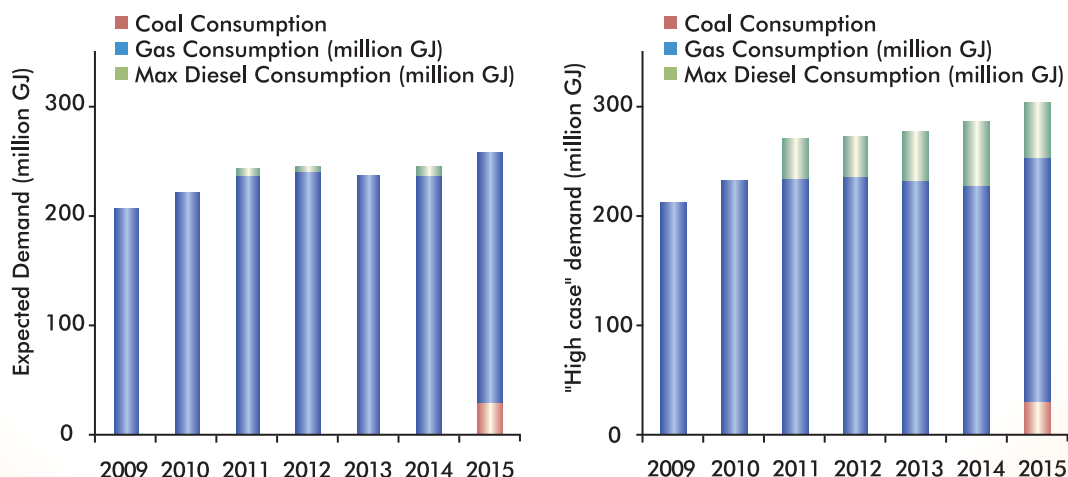


the potential diesel requirements are relatively low, reaching a maximum of 8 million GJ (235 million litres) or 3% of total fuel demand in 2014. For the “high case” demand, however, the requirements are very much greater, reaching 57 million GJ (1,627 million litres) or 20% of total fuel demand in 2014.

A number of the additional generation options described in section 1.8 above could provide means of reducing or substituting gas requirements in the short to medium term (including power imports, conversion of OCGT plant to CCGT, introduction of renewables, etc) and OPWP believes that through a combination of these options, together with further measures to optimize the utilization of existing resources, it may be possible to substantially offset the currently projected gas shortfall in the expected demand scenario. Offsetting the shortfall in the “high case” demand scenario through such means however is likely to be much more challenging and in this scenario significant diesel consumption is probably unavoidable.

In light of the present position, OPWP intends to specify at least one of the two proposed 2011/2012 gas-fired IPPs for optional continuous operation on diesel fuel (instead of the traditional “back-up” specification). OPWP also intends to continue to work on gas reduction/substitution options, to further assess the probability of the high-case demand scenario (and the consequent gas shortfall) materializing, and to continue to consult closely with MOG on likely gas requirements and the possibility of additional gas reservations.

Figure 14: Fuel Requirements – MIS





	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
<i>For Expected Demand</i>							
Energy (GWh)	15,844	17,644	20,089	21,564	22,621	23,772	25,598
Water (million m ³)	198	207	211	215	220	227	234
Total Fuel Consumption (million GJ)	204	218	241	243	234	242	256
Gas Consumption (million GJ)*	204	218	241	243	234	242	227
Gas Consumption (million Sm ³ per day)	15.1	16.1	17.8	18.0	17.3	17.9	16.8
Cumulative Gas Consumption (TCF)	0.2	0.4	0.6	0.9	1.1	1.3	1.5
Coal Consumption (million GJ)	-	-	-	-	-	-	28
Coal Consumption (million tonnes)	-	-	-	-	-	-	1.1
Max Diesel Consumption (million GJ)#	-	-	6	5	-	8	-
Diesel Consumption (million litres)	-	-	180	151	-	235	-
% of Total fuel requirement	-	-	3%	2%	-	3%	-
<i>For "High Case" Demand</i>							
Energy (GWh)	16,330	18,712	22,283	24,157	26,653	28,084	30,580
Water (million m ³)	198	207	211	215	220	227	234
Total Fuel Consumption (million GJ)	209	230	266	269	274	282	299
Gas Consumption (million GJ)*	209	230	266	269	274	282	271
Gas Consumption (million Sm ³ per day)	15.5	17.0	19.7	19.9	20.3	20.9	20.1
Cumulative Gas Consumption (TCF)	0.2	0.4	0.7	0.9	1.2	1.5	1.7
Coal Consumption (million GJ)	-	-	-	-	-	-	28
Coal Consumption (million tonnes)	-	-	-	-	-	-	1.1
Max Diesel Consumption (million GJ)#	-	-	36	36	45	57	50
Diesel Consumption (million litres)	-	-	1,022	1,029	1,284	1,627	1,420
% of Total fuel requirement	-	-	13%	13%	16%	20%	17%

* Subject to availability

maximum required to fully substitute gas requirement in excess of committed gas quantities



SECTION 2: SALALAH SYSTEM

The Salalah System covers the city of Salalah and surrounding areas in the Governorate of Dhofar, serving around 50,000 electricity customers.

It currently comprises an integrated generation, transmission and distribution system, owned and operated by Dhofar Power Co. (DPC) pursuant to a Concession Agreement signed with the Government in 2001, along with a single independent generation facility owned and operated by Rural Areas Electricity Co. (RAEC). DPC acts as the electricity supplier within the service area covered by the system, supplying existing and new electricity customers.

The Salalah System presently operates as an isolated system. However, it is anticipated that an interconnect with the power system of Petroleum Development Oman (PDO) will be established by 2010.

A further significant development of the system is expected in 2011 with the addition of a new independent power generation and water desalination facility (the "Salalah IWPP"), providing a substantial increase in power generation capacity as well as (for the first time in Salalah) desalination capacity to meet the requirements of the responsible "water department", the Directorate General of Water in the Office of the Minister of State & Governor of Dhofar.

OPWP's role in the Salalah System is twofold. Firstly, it acts as counter-party to the Concession Agreement, in place of the Government. And secondly, it performs a similar role as in the MIS, procuring additional power to meet the requirements of the electricity supplier (that are not covered by its own generation), and wherever feasible co-procuring desalinated water to meet the needs of the water department.

2.1 DEMANDS FOR ELECTRICITY

Expected Demand

The maximum power demand in the Salalah System is expected to grow from 260 MW in 2008 to 552 MW by 2015, an average increase of around 11% or 40 MW per year. Annual energy demand is expected to grow from 1.5 TWh in 2008 to 3.2 TWh in 2015, an average annual growth of around 12%.

As for the Main Interconnected System, this growth is the product of:

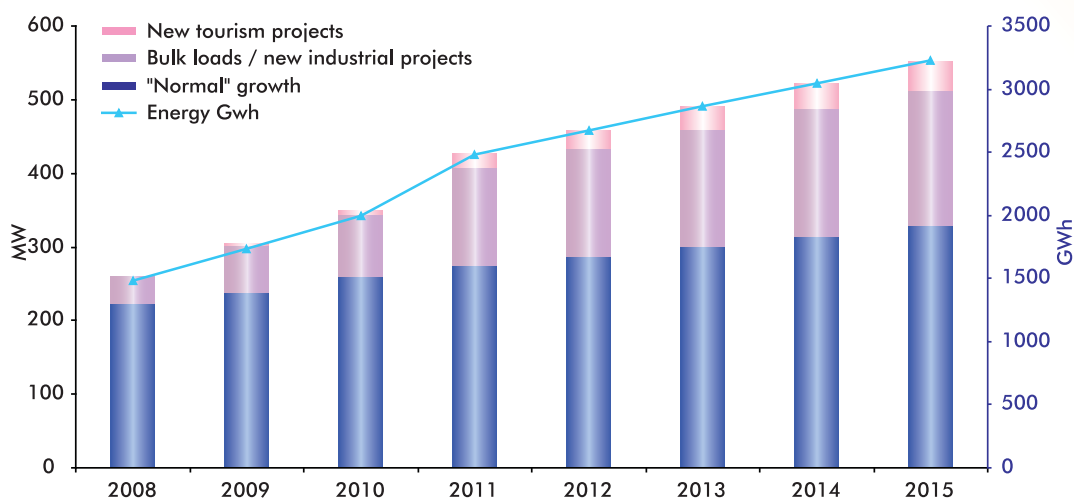
- continuing underlying "normal" growth from increasing population and number of households, rising personal incomes and general economic development;
- a major increase in demand from new industrial projects, in the case of the Salalah System concentrated in particular around the Salalah Free Zone; and



- an increase in demand from new tourism related developments.

The annual build up of expected power and energy demands to 2015, and the contribution to the growth of each of the main drivers identified above, are shown in Figure 15.

Figure 15: Expected Power and Energy Demand – Salalah System



	2008	2009	2010	2011	2012	2013	2014	2015	Average annual growth
Demand (MW), including:	260	305	349	427	458	492	523	552	11.4%
"Normal" Growth	224	238	259	275	287	300	314	328	
Bulk Loads / New Industrial Projects	36	65	86	134	147	160	173	183	
New Tourism Projects	0	1	4	18	23	31	35	41	
Change from 2008 Statement	-50	-66	-93	-63	-78	-66	-58	n.a.	
Energy (GWh)	1,482	1,733	1,996	2,481	2,676	2,868	3,049	3,225	11.7%

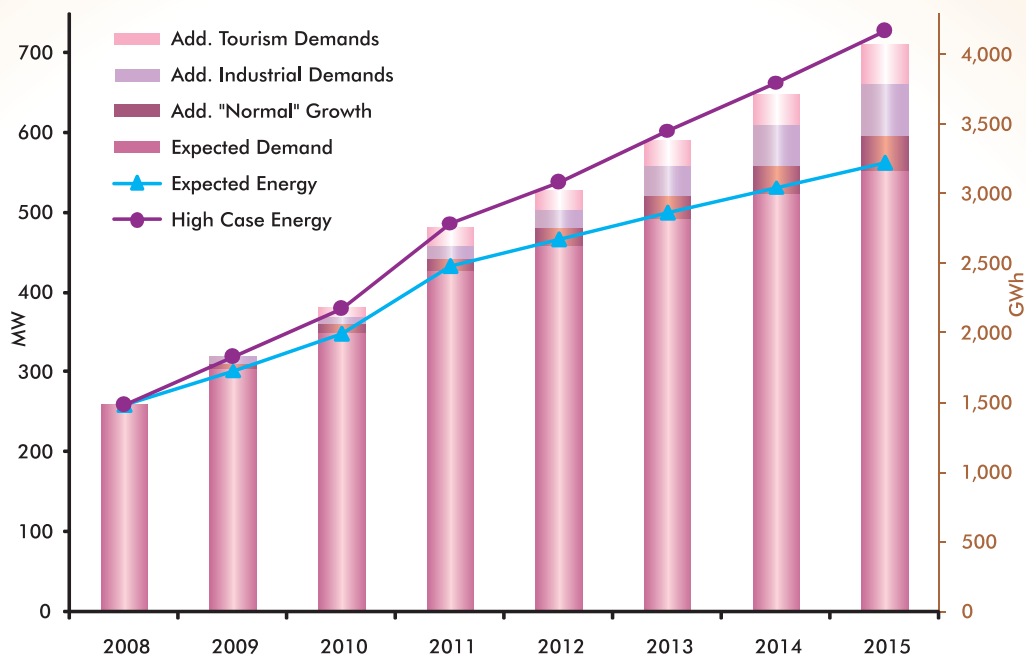
The 2008 demand was less than that forecast in the previous 7-Year Statement. Taking this lower base into consideration, and the prevailing economic conditions affecting the likely investments in industry and tourism, the forecast demand for the period has been reduced and this is reflected in the data presented in Figure 15.

"High Case" Demand

As for the MIS, a "high case" demand projection has been developed for the Salalah System, reflecting a plausible scenario of higher than expected growth. In the case of the Salalah System, this scenario is seen as potentially adding an additional 158 MW of peak demand by 2015, as shown in Figure 16. This higher growth is primarily driven by a more rapid growth in the Salalah Free Zone and projects in the tourism sector.



Figure 16: "High Case" Power and Energy Demand – Salalah System



	2008	2009	2010	2011	2012	2013	2014	2015	Average annual growth
Demand (MW), including:	260	320	380	480	527	591	649	710	15.4%
Expected Demand	260	305	349	427	458	492	523	552	11.4%
Add. "Normal" Growth		7	12	17	23	30	37	45	
Add. New Industrial Projects		9	9	16	22	37	50	64	
Add. New Tourism Projects		0	10	21	24	33	39	48	
Change from 2008 Statement	-62	-80	-128	-78	-89	-63	-31	n.a.	
Energy (GWh)	1482	1827	2176	2793	3084	3458	3803	4168	15.9%

Exports to Interconnected Systems

It has been decided to establish an interconnect between the Salalah System and the PDO power system (via a 132 kV link between Thumrait and Harweel). This is scheduled for completion by 2010.

In addition to providing reliability benefits (through the sharing of generation reserves), this interconnect could provide the opportunity for the "commercial" export of power to the PDO system, which would potentially add to the firm demand to be served by generation resources in the Salalah System.

Until an agreement for "commercial exports" has been finalised, the current demand projections (presented above) include the native power demands and capacity of the Salalah System only.



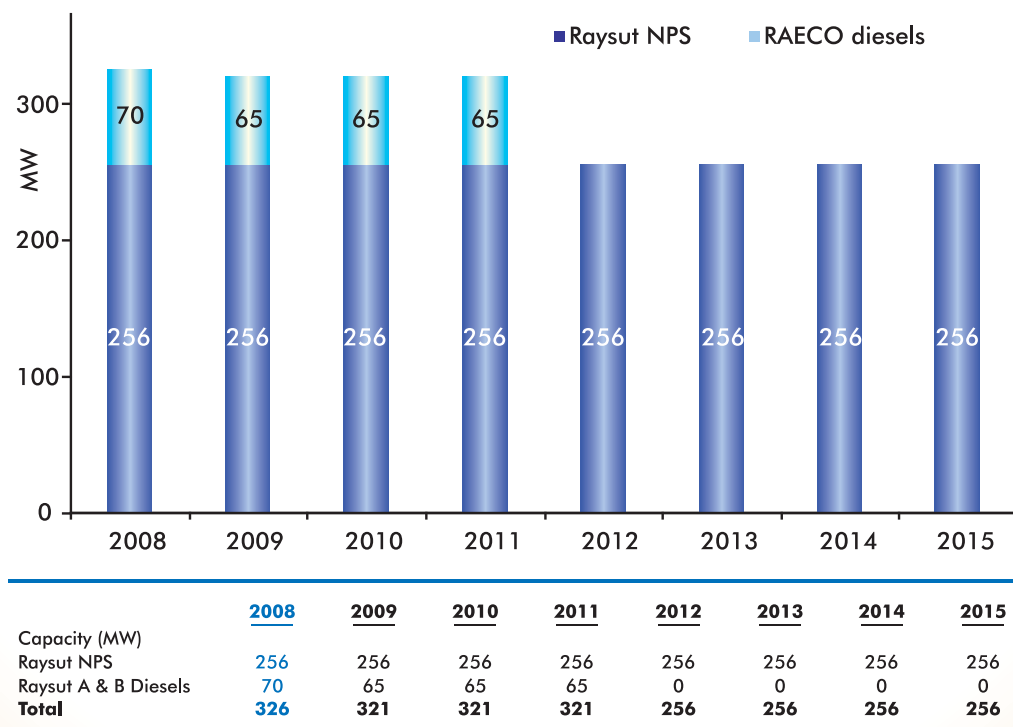
2.2 POWER GENERATION RESOURCES

Power generation capacity in the Salalah System currently includes the gas-fired new power station (NPS) at Raysut, owned and operated by DPC, and the diesel-fired Raysut A&B stations, owned and operated by RAEC.

The NPS comprises six gas turbine units installed in 2003, together with two older gas turbine units acquired from the Government and re-commissioned during 2007. The combined capacity of these units is 256 MW. The Raysut A&B stations comprise a total of 14 diesel engines, with a combined capacity of around 65 MW reduced from 70 MW in earlier years. This capacity is expected to remain available to the system until 2011.

A summary of these resources (rated at 35°C ambient, corresponding to peak summer conditions in Salalah) is provided in Figure 17.

Figure 17: Generation Capacity – Salalah System



2.3 ADDITIONAL POWER GENERATION REQUIREMENTS

As for the MIS, OPWP is required to ensure the adequacy of generation resources to meet future power demands in the Salalah System and, further, to ensure that electricity customers in the Salalah System receive services generally of equivalent quality as those received by customers in the MIS.



This requires, as a minimum, that sufficient capacity is installed on the Salalah System to cover each year's expected peak demand and that the 24 hour LOLH criterion stipulated by the Authority for Electricity Regulation, Oman in respect of the MIS be similarly complied with in the Salalah System.

Based on the demand projection and generation capacities identified above, LOLH excesses (above the 24 hour limit) are expected in every year from 2009, as shown in Figure 18.

Figure 18: Potential Generation Shortfall and LOLH – Salalah System

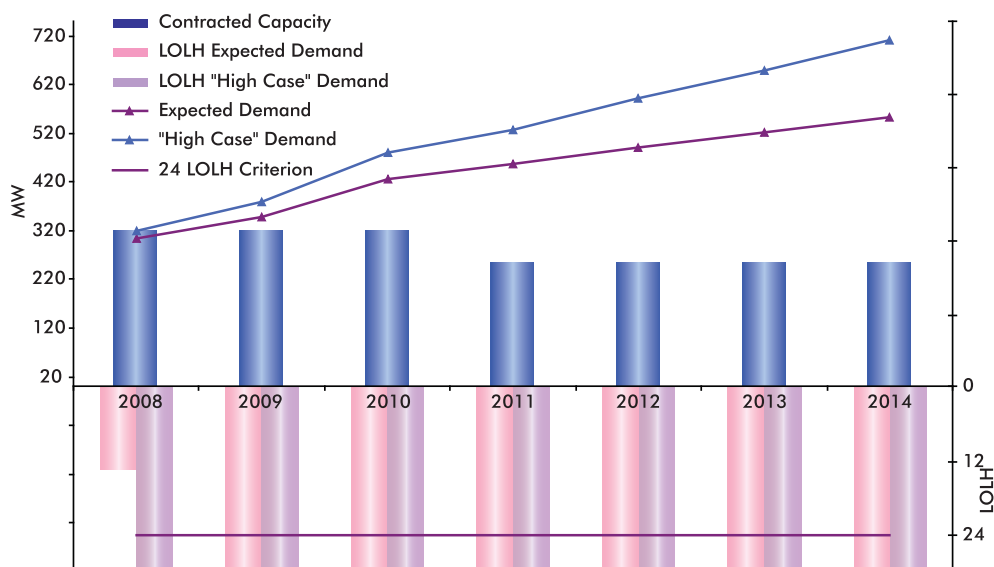
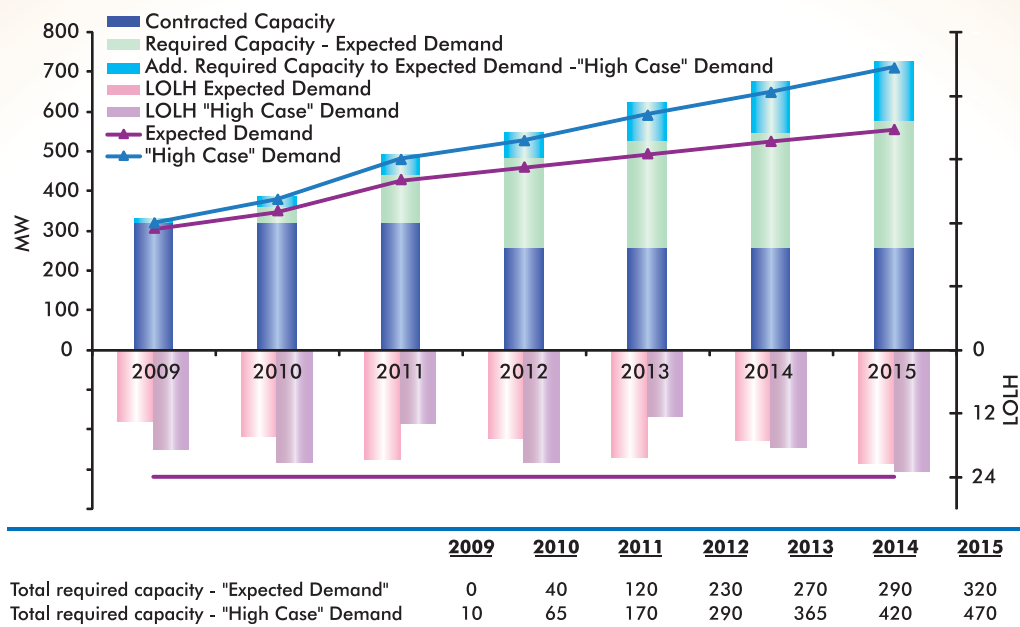


Figure 18 illustrates the need for OPWP to contract for additional generation resources for the Salalah System. OPWP has calculated that it will need to contract for a minimum of around 320 MW of firm on-peak generation by 2015, and a further 150 MW in the "high case" demand scenario. The annual build up of these requirements is shown in Figure 19.



Figure 19: Additional Generation Required – Salalah System



Based on the similar requirements identified in the 2007-2013 7-Year Statement, OPWP launched a competition during 2007 for the procurement of 370-430 MW of power generation capacity (plus desalinated water) via a new green-field project, referred to as the "Salalah IWPP". Proposals were received for this project from three bidders in the second quarter of 2008. The commercial agreements are expected to be concluded with the successful bidder during the first half of 2009. The project is expected to be commissioned in phases with around 200 MW available in the peak season of 2011 and the full capacity available in early 2012.

Details of OPWP's strategy in respect of additional resource needs (including prior to the full availability of the Salalah IWPP in 2012) are provided in section 2.8 below.

2.4 DEMAND FOR DESALINATED WATER

The responsible water department in the Dhofar region, the Directorate General of Water in the Office of the Minister of State & Governor of Dhofar, has provided projections for total potable water demand in the Salalah area (including the Wilayats of Salalah, Taqa and Mirbat) from 2009 to 2012.

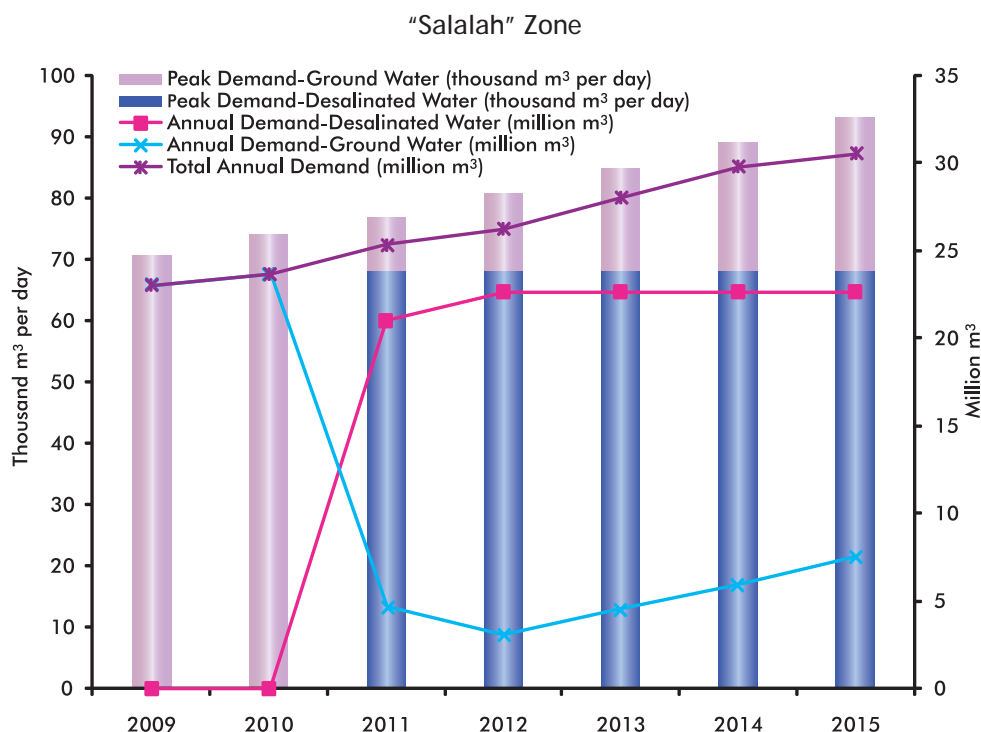
These projections show an annual demand of 23.4 million m³ in 2009 rising to 26.8 million m³ by 2012, at an average annual growth rate of around 5%. At this growth rate, the demand may be expected to reach 30.8 million m³ by 2015. Based on these annual demands, OPWP has estimated that the "peak demand" for water will increase from around 70,000 m³ per day in 2009 to around 93,000 m³ per day in 2015.



The water department has also advised OPWP of a requirement for 68,000 m³ per day (15 MIGD) of desalination capacity, and has indicated that any water requirements not met by this capacity would be covered by local groundwater resources.

The expected demands for water (total and desalinated) are summarized in Figure 20, this shows the significant reduction in groundwater demand following the start-up of the Salalah IWPP in 2012.

Figure 20: Expected Water Demand – Salalah System



	2009	2010	2011	2012	2013	2014	2015
Peak Demand (thousand m³ per day)							
Total Water	70	74	77	81	85	89	93
Desalinated Water	-	-	68	68	68	68	68
Difference to be met by ground water resources	70	74	9	13	17	21	25
Total Annual Demand (million m³ per year)							
Total Water	23.4	24.5	25.5	26.8	28.1	29.5	30.8
Desalinated Water	-	-	20.8	23.6	23.6	23.6	23.6
Difference to be met by ground water resources	23.4	24.5	4.7	3.2	4.5	5.9	7.2



2.5 WATER DESALINATION RESOURCES

There is presently no desalination capacity in the Salalah area, water demands have to be met entirely from local groundwater resources.

The Salalah IWPP project currently under bidding (see 2.3 above) will provide 68,000 m³ per day (15 MIGD) of new desalination capacity, from mid 2011.

2.6 ADDITIONAL WATER DESALINATION REQUIREMENTS

The water department has indicated that, within the current planning horizon, available groundwater resources are expected to be sufficient to cover the difference between total water demands and the output of the Salalah IWPP.

Accordingly, no additional desalination capacity requirements are foreseen in the period up to 2015.

2.7 OPPORTUNITY FOR COMBINING POWER GENERATION AND WATER DESALINATION

The decision to combine the procurement of power generation and desalination capacity in the Salalah IWPP was based on anticipated benefits in terms of:

- sharing of common infrastructure, in particular sea-water intake and outfall facilities, required by both power generation and water desalination;
- potential techno-economic advantages from combined power generation and desalination processes; and
- general economies of scale in development, financing and construction costs.

It is believed that these benefits will result in the most economical procurement of the 370-430 MW of power generation and 68,000 m³ per day (15 MIGD) of desalination capacity to be provided by the Salalah IWPP.

In respect of the additional power requirements identified in advance of the Salalah IWPP, there are not seen to be any practicable opportunities for co-procurement of desalinated water.

And with no additional desalination requirements foreseen for the time being beyond those covered by the Salalah IWPP, the opportunities for benefiting from co-procurement in relation to any additional power procured for 2012-2015 (to meet "high case" demands) may be limited. This matter will be reviewed however in future planning and prior to finalizing any procurement strategy in respect of 2012-2015.



2.8 PROCUREMENT STRATEGY FOR POWER GENERATION AND WATER DESALINATION

As described in 2.3 above, a procurement process for the Salalah IWPP, which will provide 370-430 MW of power generation and 68,000 m³ per day (15 MIGD) of desalination capacity is presently ongoing.

However, based on the requirements identified in section 2.3 above, further additional power generation is required, in the 2009-2010 period and also potentially (in the “high case” demand scenario) in the 2012-2015 period. OPWP’s present assessment in relation to the procurement of these requirements is summarized below.

2009 Requirement: 0-10 MW

OPWP has requested proposals from RAEC for the provision of short-term temporary generation during summer 2009, based on diesel engine rental. A final decision on the exact amount of capacity required will be made in the first quarter of 2009.

2010 Requirement: 40-65 MW

The following options are currently being pursued and/or considered by OPWP:

- fast-track completion of interconnect with PDO system, tapping surplus generation resources available in the PDO system and/or the MIS (potential capacity – around 100 MW); and
- temporary generation based on gas or diesel engine rental; and
- enhancement of the capacity of the Raysut NPS gas turbines by DPC.

OPWP expects to finalize its strategy in respect of the above by mid-2009.

2011 Requirement: 120-170 MW

As noted above, subject to the finalisation of agreements, the Salalah IWPP is expected to provide up to around 200 MW of “early power” in 2011. In the event of any delays in the availability of early power, the interconnection with PDO will be available and any additional power requirements would likely to be met by temporary generation based on gas or diesel fuel.

2014-2015 Requirement: 0-100 MW

The requirement in this period will depend on the exact amount of capacity procured via the Salalah IWPP and the demand scenario that materializes. Based on the current (“high case”) demand projections, the maximum potential requirements during this period range from 50 MW in 2014 to 100 MW by 2015.



As for the MIS, OPWP's medium to longer term procurement strategy will combine the need to secure required capacity with the aim of improving fuel efficiency.

One possible option being considered is the conversion of the Raysut NPS gas turbines to combined-cycle configuration. If implemented, this option could both improve fuel efficiency and provide up to around 100 MW of additional capacity within the 2014-2015 timeframe, deferring the need for any other new capacity.

There are also some possibilities for the development of renewable energy resources (in particular wind power) in the Salalah area, which may be pursued for the 2014-2015 timeframe. This could significantly reduce fuel consumption, though it is uncertain to what extent any such resources would provide firm generation, and reduce the requirement for traditional generation capacity.

All medium and longer term options will be studied in the context of the interconnected Salalah-PDO-MIS system, seeking to maximize the benefits of interconnection.

OPWP will provide an update of the anticipated requirements and its procurement strategy in respect of the 2014-2015 period in the next 7-Year Statement.

2.9 FUEL REQUIREMENTS FOR POWER GENERATION AND WATER DESALINATION

The primary fuel resources for the Salalah System are currently natural gas, supplied by pipeline to the Raysut NPS by the Ministry of Oil & Gas, and petroleum diesel delivered by road tankers to the Raysut A&B stations. The total fuel consumption for power generation in 2008 was around 17.62 million GJ, comprising 17.60 million GJ (or around 1.32 million Sm³ per day) of gas and 0.02 million GJ (or 0.6 million litres) of diesel.

Both gas and diesel consumption are expected to increase during the 2009-2011 period with rising power demand, with the exact quantities depending on the demand scenario and the specific generation options pursued in respect of the additional requirements identified in section 2.8. For the expected demand (and with additional generation partly on gas and partly on diesel during 2009-2011), total fuel consumption is expected to reach 29.7 million GJ in 2011, with gas consumption of 29.5 million GJ (2.2 million Sm³ per day) and diesel consumption of 0.3 million GJ (8 million litres). In the "high case" demand scenario, the total fuel consumption could be expected to reach 33.5 million GJ in 2011, with gas consumption of 33.0 million GJ (2.5 million Sm³ per day) and diesel consumption of 0.4 million GJ (13 million litres).

From 2011 with the anticipated commissioning of "early power" from the Salalah IWPP on gas, the projected diesel consumption falls from 0.7 million GJ (19 million litres) in 2010 to 0.3 million GJ (8 million litres) in 2011 in the expected case and 1.1 million GJ (30 million litres) in 2010 to 0.4 million GJ (8 million litres) in 2011 in the "high case" demand.

Following the full commissioning of the Salalah IWPP in early 2012, all generation in the



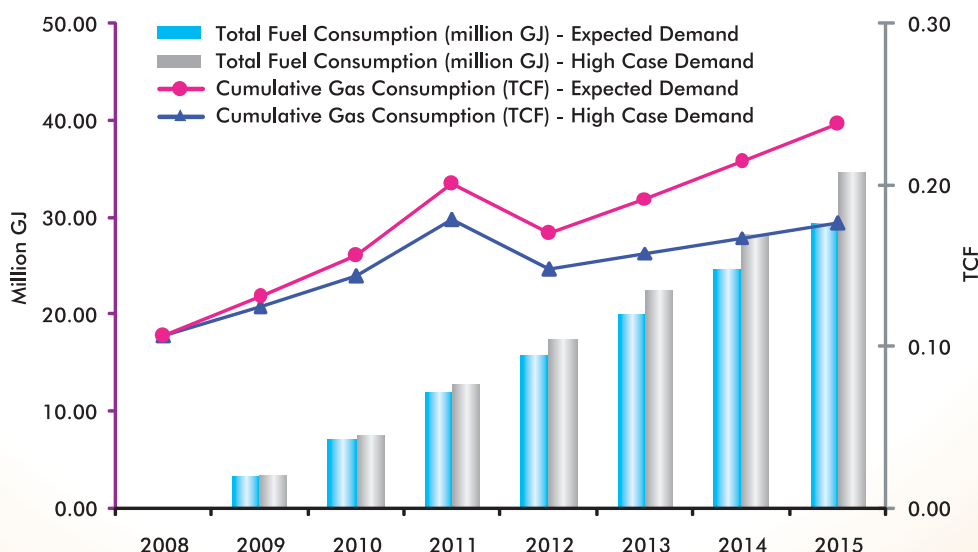
Salalah System is expected to be gas-fuelled through to 2015. However, with the utilization of fuel efficient, combined-cycle gas turbine (CCGT) technology, once fully commissioned the Salalah IWPP is expected to initially reduce gas consumption, as well as total fuel consumption, in the Salalah System (as the Salalah IWPP generation will displace a significant amount of generation from the relatively less fuel-efficient open-cycle gas turbine (OCGT) Raysut NPS).

In the expected demand scenario, for example, gas consumption is reduced by some 4.9 million GJ, from 29.5 million GJ (2.21 million Sm³ per day) in 2011 to 24.6 million GJ (1.84 million Sm³ per day) in 2012 (whilst the corresponding total fuel consumption is reduced by a further 0.2 million GJ), notwithstanding the year over year demand growth as well as the introduction of desalination.

With continuing demand growth from 2013 to 2015, the fuel requirements start rising again and are projected to reach 29.4 million GJ (2.20 million Sm³ per day) by 2015 for the expected demand, or 39.6 million GJ (2.96 million Sm³ per day) in the "high case" demand scenario. These amounts may be reduced to some extent if either of the fuel-saving options mentioned above (conversion of Raysut NPS, renewable resources) were to be implemented in the 2013-2015 timeframe. In all cases, though, around 0.2 TCF of gas will be required for the 7-year period from 2009 to 2015.

The projected annual fuel requirements, for the expected and "high case" demand scenarios, are shown in detail in Figure 21.

Figure 21: Fuel Requirements – Salalah System





	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
<i>For Expected Demand</i>								
Energy (GWh)	1,469	1,733	1,996	2,481	2,676	2,868	3,049	3,225
Water (million m ³)	-	-	-	20.8	23.6	23.6	23.6	23.6
Total Fuel Consumption (million GJ)	17.62	20.7	24.0	29.7	24.6	26.3	27.9	29.4
Gas Consumption (million GJ)	17.60	20.3	23.3	29.5	24.6	26.3	27.9	29.4
Gas Consumption (million Sm ³ per day)	1.33	1.52	1.74	2.21	1.84	1.97	2.09	2.20
Diesel Consumption (million GJ)	0.02	0.4	0.7	0.3	-	-	-	-
Cumulative Gas Consumption (TCF)	-	0.02	0.04	0.07	0.09	0.12	0.15	0.18
Diesel Consumption (million litres)	0.6	13	19	8	-	-	-	-
<i>For "High Case" demand</i>								
Energy (GWh)	1,469	1,827	2,176	2,793	3,084	3,458	3,803	4,168
Water (million m ³)	-	-	-	20.8	23.6	23.6	23.6	23.6
Total Fuel Consumption (million GJ)	17.62	21.8	26.1	33.5	28.3	31.9	35.8	39.6
Gas Consumption (million GJ)	17.60	21.2	25.0	33.0	28.3	31.9	35.8	39.6
Gas Consumption (million Sm ³ per day)	1.33	1.58	1.87	2.47	2.12	2.39	2.68	2.96
Diesel Consumption (million GJ)	0.02	0.7	1.1	0.4	-	-	-	-
Cumulative Gas Consumption (TCF)	-	0.02	0.04	0.08	0.10	0.14	0.17	0.21
Diesel Consumption (million litres)	0.6	19	30	13	-	-	-	-



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