Business Opportunities in Water Industry in Qatar

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PART I: Qatar and Its Water Industry
About State of Qatar

- Qatar is an arid region in the middle east with rainfall less than 130 mm
- It occupies 11,437 km² on a peninsula that extends approximately 160 km
- Qatar has only 2 seasons: Winter and Summer
Position of Qatar among Water Scarcity Countries

- Qatar is among the countries with physical water scarcity
- Qatar’s per capita water consumption is one of the highest in the world,
Qatar’s population as of 2008 is 1,480,000
Average 9% annual growth
Population is expected to increase by 82% by the year 2017 from 2008
Qatar Economy

- Qatar’s GDP per capita is about US$ 58,000, the highest among the Gulf Countries.

- Qatar’s reserves of natural gas exceed 25 trillion cubic meters, which is more than 15% of the world total reserves, third largest in the world.

We recommend you to visit this site:
http://www.investingqatar.com.qa
KAHRAMAA (Qatar General Electricity and Water Corporation)

Kahra from the word Kahraba (means “electricity”) & Maa from the word Mai (means “water”)

Established
Year 2000 (in accordance with Amiri Law No. 10.)

Mission

Our mission is to provide our customers with high quality electricity & water services, whilst creating value for our shareholders.

Objectives

1. Efficiently meet our obligation to supply Qatar’s need for electricity and water.
2. Operate on a commercial basis.
3. Comply with local and international health, safety, and environmental standards.
4. Maximize the employment of capable Qatari nationals and develop them to the competence level of employees in leading international companies.
Kahramaa’s Strategy in the Water Sector

- Increasing water storage reserve to 7 Days
- Maintaining 24H uninterrupted supply to customers
- Study and development of underground reservoirs
- Reduction of Water Losses
- Revisiting Qatar’s water infrastructure, especially underground pipes, on regular basis for timely refurbishment/replacement
- Studying/implementing alternative energy source for water production
  - Nuclear
  - Solar
Qatar Water Resources

Desalination of Seawater using Fossil Energy

- 5 existing Desalination Plants in Qatar with Total Production Capacity of 217 MIGD (987,000 cu.m/day)
- 2 Desalination Plants, RL C & RAF A1 (presently under construction) with combined capacity of 108 MIGD (490,000 cu.m/day) Total of 325 MIGD
- 80.6% MSFE and 19.4% MED

Undergroundwater

- The northern groundwater aquifer is the major source of groundwater in Qatar, estimated to contain 2,500 million cubic meters of freshwater. It’s mainly used for agriculture.
- 2 RO Plants with combined capacity of 1880 cu.m/day
- 8 Nos. of Standby Well field Stations

Desalinated water is around 99.9% of the total water produced while merely 0.10% is ground water.
PART II:
Growth of Water Sector in Qatar
Qatar’s Water Supply System

- 5 Nos of Desalination Plants
- 5400 km of Transmission and Distribution lines (DI Pipes)
- 290 Million Imperial Gallons (MIG) Reservoir Storage Capacity
- 22 Water Pumping Stations (RPS)
Historical Supply and Demand (2000-2008)

- 116% Increase in Supply (2008 vs 2000)
- 109% Increase in Demand (2008 vs 2000)

Average Annual Percentage (%) Increase in Supply = 10.3%
Average Annual Percentage (%) Increase in Demand = 9.9%
Historical Installed Reservoir Capacities (2000 – 2008)

- From 2000, after the establishment of KAHRAMAA, until 2008 the Reservoir capacity was increased from 199MIG to 290 MIG, representing 1.5 Days of daily average consumption.
- Also, the reservoir capacities at the Water Production Plants (IWPPs) had increased from 57 MIG to 202 MIG over the same period.

- Pipes installed before KM took over in 2000 was 2,226Km
PART III: Business Opportunities
Major Areas of Investment in Qatar Water Industry

- Latest Technologies for the management of Water Industry
- Water Production Facilities - Seawater Desalination Plants using MSF, MED & Seawater R.O. technologies.
- Feasibility Study on the alternative sources of energy (Solar and Nuclear Energy) for combined Water Production and Power Generation & implementation
- Water storage reservoirs to meet the strategy of 7 days storage
- New Water Pumping Stations to supply water to all areas in Qatar
- Expansion of Water Transmission and Distribution Networks
Current and Past Investment in Latest Technology

📍 Water SCADA System

- KAHRAMAA is in its way to implement a state of the art Supervisory Control and Data Acquisition (SCADA) system for the control and monitoring of the water system.

📍 Enterprise Resource Planning (ERP) System


📍 Water Loss Control Management

- District Flow Meter
- Advanced Metering information (AMI)
- Electronic Flow Meter Replacement & New Installation
- Replacement of Old Distribution Mains in Network
Investment on Additional Water Production Facilities

- Demand is expected to increase by 82% by year 2017 over 2009
- Supply is expected to increase by 60% by year 2017 over 2009
Investment on additional Water Production Facilities (Power and Water Plants)…..cont’d

- Investment in Power and Water Projects will be by Independent Water and Power Producers (IWPP) with long term purchase agreement.
- Present IWPPs enjoy good business environment.
- Additional 148 MIGD capacity is expected from 2013 -2017 for an investment of about 1.1 Billion US$.
Investment on Feasibility Study of Alternative Sources of Energy for Power Generation and Water Production

- Actively engaging in Seawater RO technology
  - Consultancy service for exploring SWRO process for desalination of water (Q4-2009)

- Harnessing the solar energy for power and water production

- Feasibility study on Nuclear Technology for Power and Water Production
Investment on Additional Water Storage Capacity

Additional 442 MIG Secondary Reservoirs and 1,902 Mega Reservoirs, capacity by end of 2015 to fulfill 7 Days Reserve

148 MIG capacity of reservoir will be installed at IWPP Plants from 2013 -2017
The project aims at securing potable water for all-over Qatar using 7-day storage reserve of 24hrs supply.

- Additional Secondary reservoirs with Total Capacity of 442 MIG (to fulfill 2 Days Reserve)
- Construction of Mega Reservoirs with 1,902 MIG Capacity (5 Days Reserve)

- The project aims at securing potable water for all-over Qatar using 7-day storage reserve of 24hrs supply.
Construction of New Water Pumping Stations

- Construction of New Water Pumping Stations for Secondary Reservoirs
- 5 Water Pumping Stations for Mega Reservoirs
Investment on Water Transmission and Distribution Networks expansion.

- Transmission and distribution pipelines ranging from 100 mm to 2800 mm with total estimated length of 4,486Km by 2015 in addition to current Total Length of 5,400 km.

![Graph showing planned investment on pipelaying (Cumulative Year 2010-2015 in Km).]
KM’s Capital Investment: Year 2000 to 2008

- KM Cumulative Annual Spending in US$ on Water Capital Investment that includes Transmission, Distribution, Reservoirs & Water Pumping Stations.
- The cost of Investment does not include IWPP cost of expansion.

KM’s Planned Total Capital Investment: Years 2010-2015

- Cumulative Annual Spending in US$ on Water Capital Investment that includes Transmission, Distribution, Reservoirs, Water Pumping Stations and the cost of Mega-Reservoirs’ Project.
- The cost of Investment does not include IPWP.

Forecast Planned Spending (Cumulative 2010-2015)
Overview of Finance/Investment (Water)

- 5.47 Billion US$ Major KM CAPEX Projects for Spending in Year 2009-2015 (7 Years)
- 0.66 Billion US$ Major KM CAPEX Projects Spent from Year 2000-2008 (9 years) w/o IWPP
- 1.1 Billion US$ IWPP Additional Water Production Facilities in Year 2013 to 2017 (5 Years)
PART III: Conclusion
Conclusions

Qatar is one of the fastest growing economies and the wealthiest countries in the world measured by GDP per capita. This has led to rapid development in the infrastructure of every sector of the society & industries.

The demand for water has been rapidly increasing in line with the unprecedented developments in the country and meeting the demand in time & supply water to all sectors is a challenge to KAHRAMAA.

Today an investor can benefit from the followings:

- The lowest tax in Qatar.
- Good business environment.
Conclusions

- Joining the new global initiatives on “green energy”, KM will endeavour to tap “renewable energy” from the abundant solar energy resources available in Qatar for the generation of electricity and water production.

- Qatar’s policy of allowing multi-national companies’ participation in the investment in Water industry is creating a culture of opportunity.

- We welcome firms who will contribute to the development and success of the water sector in Qatar and we will support them in achieving success.
Thank You.