

## 20.11 Government strategy

ADWEA has led the way in the region in private sector participation in the water industry, introducing the emirate's first IWPP in 1998. In the decade since 1998, 3.3 million m<sup>3</sup>/d of desalination capacity has been delivered via seven IWPPs, which are detailed in the figure below. The total value of these projects was approximately USD 13.4 billion.

Figure 20.x: Existing independent power and water projects (IWPPs) in Abu Dhabi

Project	Capacity	Value (billion USD)	Year of Financial Close	Structure	Debt (billion USD)	Tenor	Margin (bps above Libor)
Taweelah A2	227,000 m <sup>3</sup> /d 710 MW	0.8	1998	20-year PWPA	0.56	17	80 - 150
Taweelah A1	385,000 m <sup>3</sup> /d 1,350 MW	1.5	2000	20-year PWPA	1.02	19	110 - 145
Shuweihat	454,000 m <sup>3</sup> /d 1,500 MW	1.8	2001	20-year PWPA	1.28	20	110 - 145
Umm al-Nar	430,000 m <sup>3</sup> /d 1,550 MW	2.0	2003	20-year PWPA	1.39	20	100 - 165
Taweelah B	750,000 m <sup>3</sup> /d 2,000 MW	3.1	2005	20-year PWPA	2.17	20	115 - 170
Fujairah 1	454,000 m <sup>3</sup> /d 887 MW	1.5	2006	20-year PWPA	1.28	22	65 - 120
Fujairah 2	590,000 m <sup>3</sup> /d 2,000 MW	2.7	2007	20-year PWPA	2.14	23	65 - 110

The policy of introducing private sector participation has been replicated in the procurement of new wastewater-treatment capacity. Two major contracts, involving a cumulative capacity of 800,000 m<sup>3</sup>/d, were awarded by ADWEA in 2007-08, through its wholly owned subsidiary ADSSC, on a 25-year BOOT basis. In each case ADWEA holds 60% of the project company, with the developer consortium owning the remaining 40%.

ADWEA is the only agency in the Emirates to have tackled the challenge of reusing treated effluent from its wastewater treatment plants. The effluent has become a valuable commodity in supplying the city's extensive irrigation network. ADSSC's reuse master plan includes the target of 100% reuse of treated effluent by 2010 – close to three quarters is currently being used, almost entirely in irrigation.

Abu Dhabi has so far steered away from involving the private sector in water network management.

## 20.12 Current and future projects

### Al Raha Beach

The Al Raha Beach mega project is a mixed commercial, residential and leisure development in an area lying between Umm Al Nar and Abu Dhabi International Airport, with 120,000 residents along an 11 km stretch.

Figure 20.x: Al Raha Beach mega project details

<b>Developer</b>	Aldar Properties
<b>Companies involved</b>	Tebodin (consultant-engineer) Maunsell is advising on utility services
<b>Completion date</b>	2018
<b>Cost</b>	USD 14.7 billion
<b>Estimated population equivalent 2011</b>	60,000
<b>Estimated population equivalent 2016</b>	100,000
<b>Estimated water services contract value in 2016</b>	USD 16.6 million
<b>Contact names</b>	Ronald Barrott, CEO, Aldar Christopher Wilkinson, Maunsell Consultancy
<b>Contact details</b>	Aldar +971 2 696 4444 Maunsell +971 2 501 7501
<b>Website</b>	www.alrahabeach.com

### Reem Island

Reem Island is a residential, commercial and business project on a natural island 600 metres off Abu Dhabi island. The island has an area of 6.5 million m<sup>2</sup> and has 100,000 residents.

Figure 20.x: Reem Island mega project details

<b>Developer</b>	Tamouh Investments (City of Lights, Marina Square and others), Sorouh (Shams Abu Dhabi) and Reem Investments (Najmat Abu Dhabi)
<b>Completion date</b>	2012
<b>Cost</b>	USD 30 billion
<b>Estimated population equivalent 2011</b>	84,000
<b>Estimated population equivalent 2016</b>	120,000
<b>Estimated water services contract value in 2016</b>	USD19.9 million
<b>Contact names</b>	Joe Ong, CEO, Tamouh Mounir Haidar, CEO, Sorouh Ibrahim Belselah, CEO, Reem Investments
<b>Contact details</b>	Tamouh 00971 2 644 2218 Sorouh 00971 2 444 0006 Reem Investments 00971 2 644 4455
<b>Website</b>	www.reemisland.com

### Lulu Island

Content not included in sample.

Saadiyat Island

Content not included in sample.

Yas Island

20.12.1 All Other Current and Future Projects



Content not included in sample.

## 20.13 Predictions and forecast

### 20.13.1 Predictions

ADWEC's forecasts indicate that although the growth in water demand will continue, the annual rate of increase will decline from its peak of 6.61% in 2010 to 0.91% in 2029. The average year-on-year increase in the period to 2030 is predicted to be 2.63%. The forecasts also indicate that new IWPP capacity will be required from 2012/13 in order to avoid a significant deficit in water supply. It is likely that the Shuweihat 3 IWPP will be successfully commissioned in that timeframe and will make up for any shortfall. However, new plans for IWPP capacity can be expected within the next 1-2 years.

With a decade of experience of private sector participation, Abu Dhabi is likely to look to extend the involvement of private operators in their networks.

Abu Dhabi's rulers are undertaking initiatives, such as Masdar, to improve the emirate's environmental credentials. If these plans continue to enjoy political and financial support then alternative technologies such as solar or wind power are likely to gain a foothold in the desalination market in Abu Dhabi.

### 20.13.2 Forecast

Content not included in sample.

Sample

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