



## ABENGOA WATER

3<sup>rd</sup> High Level Seminar in Environmental Sustainable Cities

Siemp Reap, Cambodia

March 2012

# ABENGOA

## Overview

Abengoa (MCE: ABG) is an international company that applies innovative technology solutions for sustainable development in the energy and environment sectors, generating electricity from the sun, producing biofuels, desalinating sea water and recycling industrial waste

### Sectors

#### Energy

76 %



20 MW CSP Tower (Seville, Spain)

- Power transmission
- Solar
- Cogeneration
- Biofuels

#### Environment

24 %

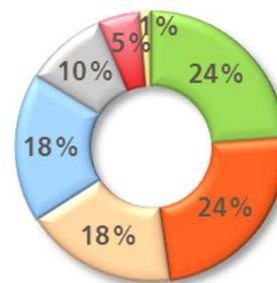


200,000 m<sup>3</sup>/day desalination plant. (Honnaine, Algeria)

- Desalination
- Industrial waste recycling

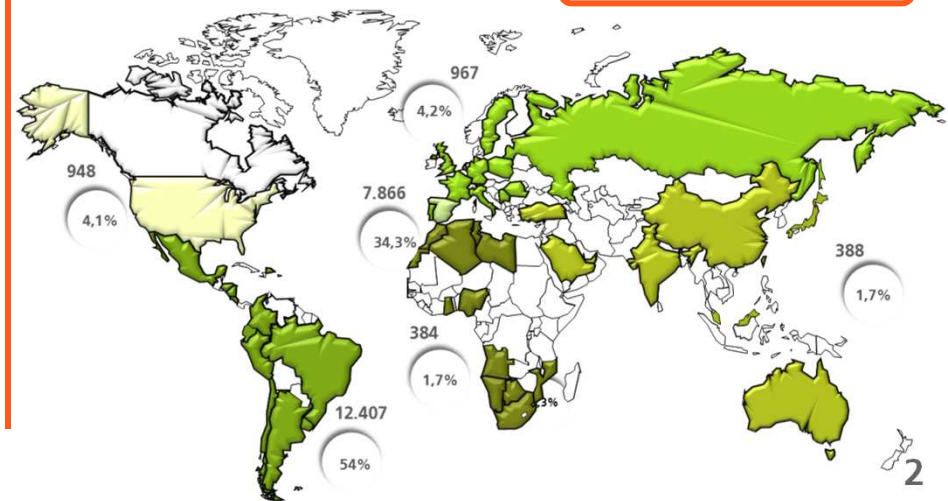
### Geographies

#### Revenues (%)



#### Personnel

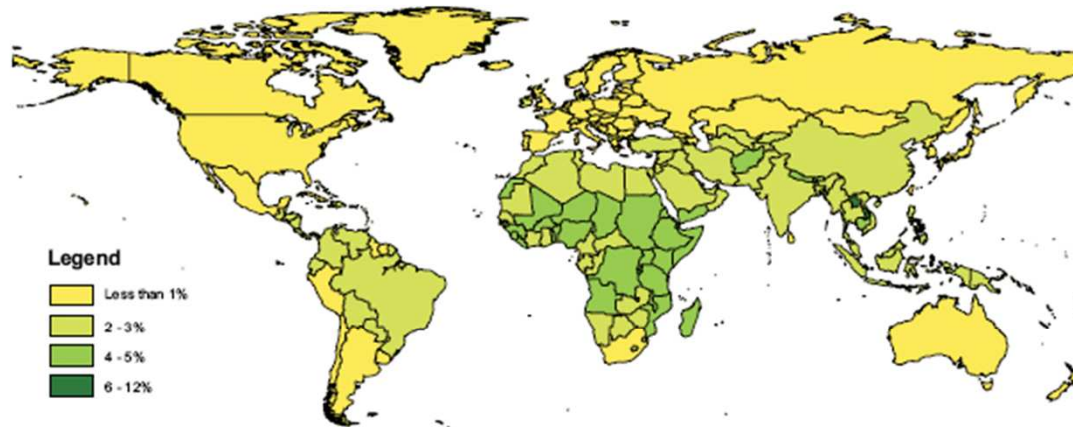
A total of 22,960 people



Note: figures as at September 2011.

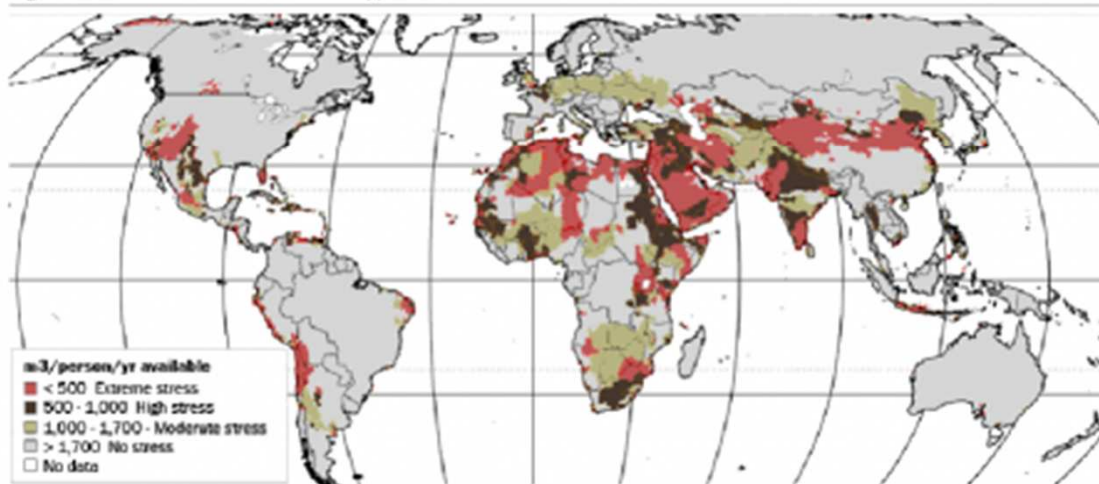
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Figure 1.6 Global annual urban population growth, 2010-2015



Source: UN, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2007 Revision (medium variant).

Figure 2.2 World Water Availability, 2025



Source: Centre for Environmental Systems Research, University of Kassel

**Water Scarcity worldwide and a significant increase in urban population highlight the necessity for new sources of water to provided drinking water to the Cities, in the coastal areas the most effective solution is desalination..**

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## Concessions

**Abengoa Water mission is the Development & Promotion of Water Treatment Plant under Concession. Abengoa has a strong experience in concession of desalination plants, with currently 6 projects in DBOOT in the world.**

**Skikda  
(Algeria)**

**Chennai  
(India)**

**Honaine  
(Algeria)**

**Qingdao  
(China)**

**Ténès  
(Algeria)**

**Nungua  
(Accra)**

■ 100,000 m <sup>3</sup> /d	■ 100,000 m <sup>3</sup> /d	■ 200,000 m <sup>3</sup> /d	■ 100,000 m <sup>3</sup> /d	■ 200,000 m <sup>3</sup> /d	■ 60,000 m <sup>3</sup> /d
■ SWRO	■ SWRO	■ SWRO	■ SWRO	■ SWRO	■ SWRO
■ Algeria	■ India	■ Algeria	■ China	■ Algeria	■ Ghana

**Abengoa Water develops projects that gives the required security to the financial investors and equity partners, with Abengoa ensuring the technical risk. EPC and O&M contractors are Abengoa's companies. The client (off taker) shall guarantee the demand and commercial risks.**



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## Relevant cases:

- Chennai Desalination Plant (India)
- Qingdao Desalination Plant (China)

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## Chennai (India)

What does make this project feasible?

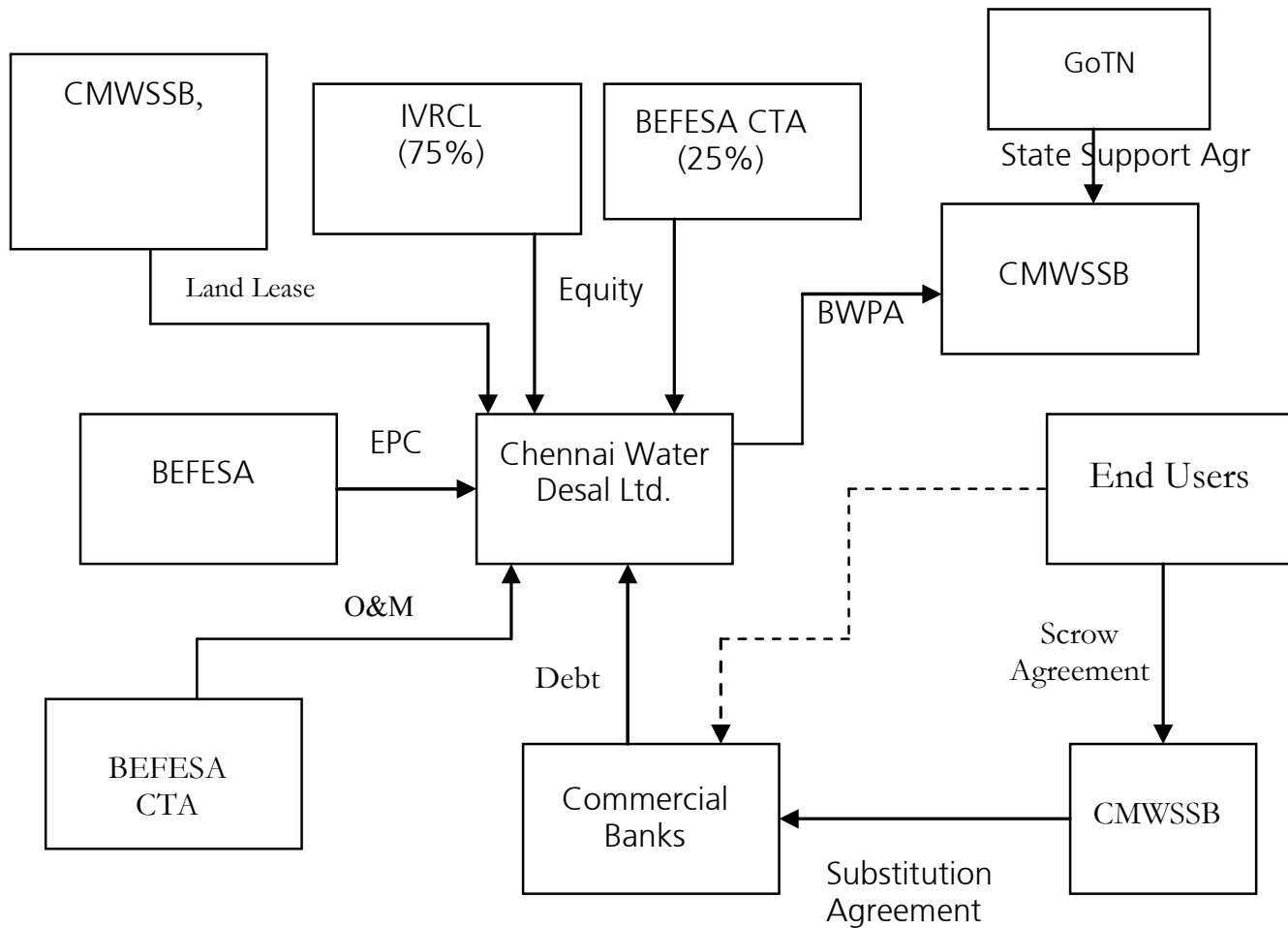
- Water Purchase Agreement with Chennai Municipal Water Company (Chennai Metropolitan Water SSB) to supply water to Chennai City
- Equity provided by Abengoa and Local Partner
- Municipality provides a scrow accounts with the end users payments that secures the revenues of the project
- State Support Agreement of the Government of Tamil Nadul
- Finance with Indian Banks familiar with the State Risk
- Technical Risk assumed by Abengoa.



**Desalination plant 100 MLD Drinking Water. BOT .**  
**Inversión: 107,7 Eur**  
**EPC: 82,2m Euros**  
**O&M period: 25 years**  
**Tarifa: 46,49 INR/m3**  
**Plant in Operation since July 2010**

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## Scheme of companies and contracts that support the project: CMWSSB role



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## Qingdao (China)

- Client & Co-Developer: Qingdao Municipal Engineering and Public Utility Bureau

**Desalination Plant 100 MLD drinking water BOT**

**Investement: 135 M Eur**

**EPC: 102,5 M Eur**

**O&M period: 25 years**

**Tariff: 4,57 RMB/m3 (without electricity)**

**Project under Construction: Commisioning Summers 2012**

### Qingdao. General Data

- 2° commercial port in the North of China. Shanding Province with 730 km coast line-
- Municipality includes 7 districts, with a total number of 7,4 mill. Inhabitants in 10.654 km2.
- Urban area with 2,6 mill. Inhabitants with 40km of coast line.



### Qingdao Water Tariff

a. residence, including schools, army and social welfare institutions: **RMB 2.5**

b. restaurants/hotels: **RMB 3.1** (standard)/RMB3.6 (within 50% higher than standard)/RMB4.2 (over 50% higher than standard)

c. enterprises and government bodies and institution: **RMB 3.2** (standard)/RMB3.7 (within 50% higher than standard)/RMB4.3 (over 50% higher than standard)

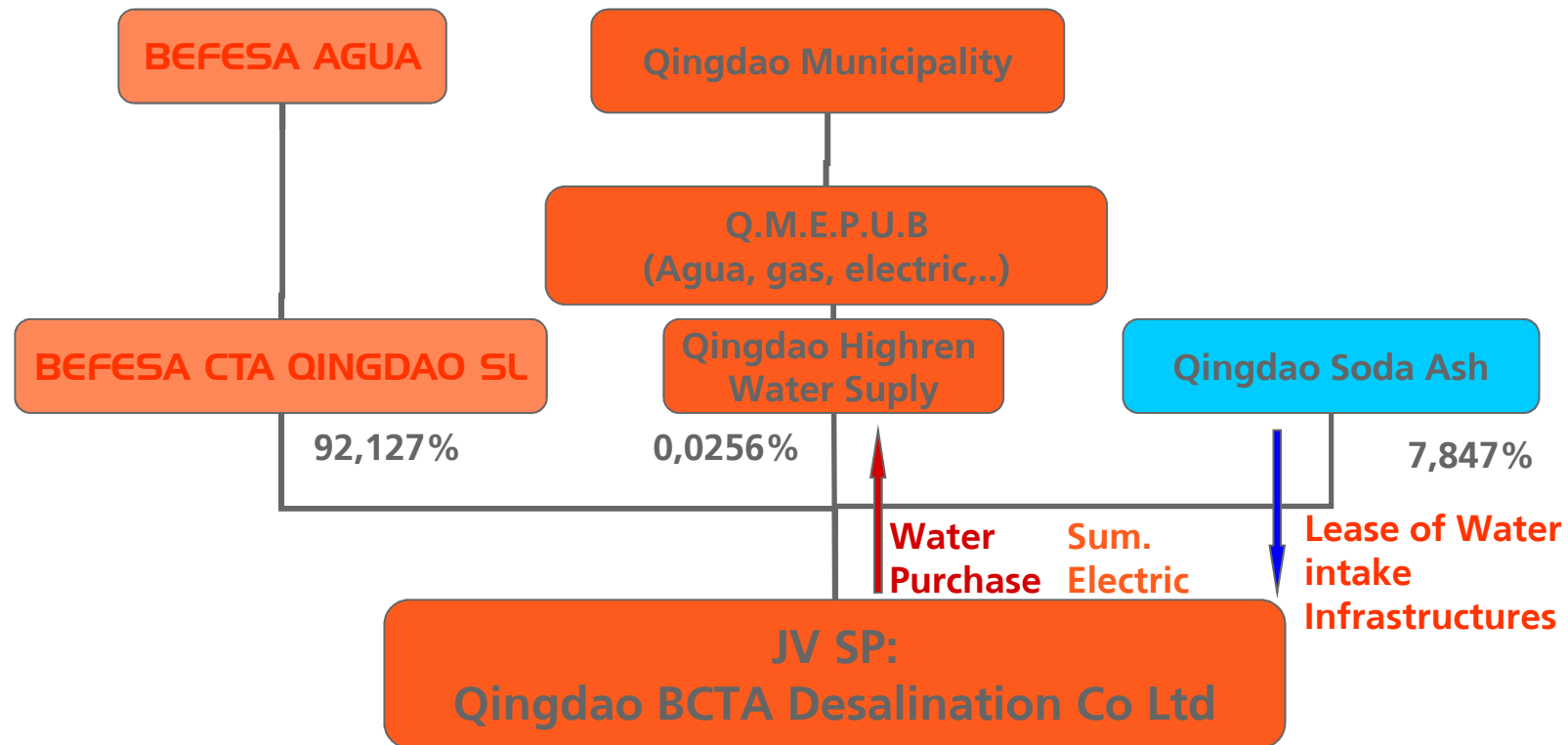
Average 2010: **RMB 7 (0,65 Eur aprox)**



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What does make this project feasible?

- Befesa Quingdao-> main equity provider (92% in the SPV)
- Highren Share (Quingdao Municipality) -> capital 100.000 RMB (minimum share in the SPV )
- Qingdao Soda ->Transfer of the Land and Lease of the Intake Works (8% in the SPV)
- Electricity Provided (and paid) by Quingdado Municipality
- Finance with Chinese Banks that are familiar with the Municipality Commercial Risks
- Full support of the Municipality



**Thank you**

