

PAKDA NEWS

Pakistan Desalination Association (PakDA)

August/Septmeber 2005

Newsletter

CONTRACTS FOR 50 MGD RO DESALINATION PLANTS SIGNED

The City District Government Karachi (CDGK) has signed an agreement with a US company to set up \$340 million two seawater desalination plants in Karachi on March 28, 2005. The contract covers the installation of two desalination plants, having a capacity of 25 MGD each, one at Korangi and the other at Bin Qasim Seaport (PQA).

Brig Iftikhar Ahmed, Managing Director of the Karachi Water and Sewerage Board, and Mr Samiullah Khan, head of the California-Enviro Management (CEM) Inc. USA, signed the agreement at a ceremony held at a local hotel. US Consul-General at Karachi, Douglas C. Rohn, and the City Nazim, Niamatullah Khan, counter-signed the agreement.

The desalination plant would be made operational in 2007 and the water produced at the plants would cost the government Rs. 120 for 1,000 gallons (US\$ 0.528/m³).

Both the plants would be retained by the US firm for 25 years after which they would be handed over to the KWSB/ CDGK. The KWSB/CDGK could own the plants any time during the 25-year lease period on payment of the cost to be decided by the firm.

Under the proposed agreement, both the sides have agreed that extraordinary cost vis-a-vis operation and maintenance (O&M), specifically defined through the relevant clauses of the agreement, would be shared equally by the two parties.

The Overall Project Engineers and Managers for this project are Burns & McDonnell of Kansas City, MO a 102 years old global engineering firm specializing in water treatment, infrastructure

development and Power. CEM is finalizing arrangements for erection, commissioning and O&M. CEM will have their own local construction set up. Burns & McDonnell are doing the EPC and will be overall supervisors for CEM.

Majority of equity is from USA source (90% of the equity portion) and the debt portion will be from OPIC the Overseas Private Investment Corporation, a US Government agency for development projects investments. CEM has been working with OPIC on the project from the start in 2002. Some of the lending may come from Export - Import Bank of USA also.

MED PLANT PROJECT AWARDED TO ASTER

For design and construction of an MED Plant has been awarded to the Italian Company, ASTER. The client is Pakistan Atomic Energy Commission (PAEC) and its location will be near existing Karachi Nuclear Power Station (KANUPP).

In all, four companies submitted the technical and commercial bids namely:

1. SIDEM – France
2. Weir Westgarth – UK
3. ASTER – Italy
4. Saline Water Specialists – Italy

All companies have consortium with local desalination companies. ASTER agreed to manufacture the whole plant locally at Taxila Heavy Complex, an industrial city near Islamabad and share design and manufacturing technology with Pakistan.

For all foreign companies, Pakistani companies are supporting logistics and other necessary work.

THREE-DAY NWFP-UET/ HEC DESALINATION SEMINAR

A three-day seminar was held at the NWFP University of Engineering and Technology Auditorium during June 6-8, 2005, which was jointly organized by the NWFP University of Engineering and Technology (NWFP-UET) and Pakistan's Higher Education Commission (HEC) based in Islamabad. The key speakers were Dr. Hisham El-Dossouky, the Chairman of Chemical Engineering Department, and Mr. Fayyaz Muddassir Mubeen, the President of PakDA and an IDA Director. From all over Pakistan around one hundred scientists, engineers, and Industrialists participated. Certificate Award Ceremony was also presided by Eng. Mubeen.

The three-day program provided in-depth information on design, construction, operation, maintenance, and the cost management of the Desalination technology. The four basic technologies that were emphasized upon were: Multi Stage Flash (MSF), Multi Effect Distillation (MED), Reverse Osmosis (RO), and Mechanical Vapor Compression (MVC). All components of these processes were discussed. A description of the design parameters was explained. Detailed case studies of major desalination plants inside and outside the country were also presented.

PAKDA PLANS INTERNATIONAL DESAL CONFERENCE IN 2006

PakDA plans to organize an international desalination conference in November 2006. The venue of the conference will be Islamabad. The conference is to focus on the latest developments in the desalination technology. The conference hopes to attract desalination professionals from all over world and particularly from the Middle East and Pakistan.

DANISH COMPANY NORDICOM TO INSTALL 24 MIGD DESAL PLANT

A Denmark based consortium, Nordi Communication Company (NORDICOM) has also negotiated with the local authorities in Karachi to install a desalination plant coupled with a hybrid power plant in the coastal area of Keamari Town at an accumulative cost of 120 million euros, disclosed the consortium representative. The design incorporates the best within the possibilities to place a state-of-the-art water plant into city's infrastructure and at the same time create a green spot or park in the city for recreational use. The plant would have the capacity of desalinating 24MGD of seawater and could be installed within six months. It said the site for the plant had been selected at the coastal belt of Karachi.

PAKDA PRESIDENT VISITS FUJAIRAH DESAL. COMPLEX

President PakDA visited the Fujairah Desalination complex. This is the largest RO desalination facility in the world. Doosan Heavy Industries has installed a hybrid desalination system; a 500MW thermal power station, a desalination plant based on distillation (280,000m³/d) and an RO desalination plant (170,000m³/d). The Fujairah plant became fully operational on 15 June 2004.

PAKDA & SINGAPORE WORLD CONGRESS

The final program of the Congress has been issued by the International Desalination Association (IDA). The prestigious event will be held at Swissotel Hotel, Singapore during September 11 to 16, 2005.

The PakDA is participating in the congress with full fervor. PakDA President will present four research papers (three oral and one poster). The association will also organize an exhibition booth showing the development of desalination in Pakistan.

EXPRESSIONS OF INTEREST (EOI) CALLED FOR 20 MIGD DESAL PLANT

Karachi Water and Sewerage Board (KWSB) has invited Expression of Interest (EOI) from Foreign/Local Firms/Consortium/Joint Ventures of repute for the establishment of 20 MGD Seawater Desalination Plants based on conventional /unconventional/alternate energy source at coastal sites or near water supply installations of KWSB either on BOT/BOOT/BOO or any other basis.

Firms/Consortium/Joint Ventures with track record in the field of construction / establishment Desalination Plants should indicate their interest in the project and provide full details to Chief Engineer (Projects), Karachi Water and Sewerage Board, Block D, Karsaz, King Faisal Road, Karachi, Pakistan

NORWEGIAN COMPANY PLANS WIND MILL DESALINATION

A Norwegian consortium has agreed to put 100 percent equity in the 'Wind power integrated desalination plant' in Sindh. They said that initially 80:20 ratio equity formula had been agreed, with 80 percent investment and guaranteed technology transfer by the Norwegian consortium and remaining 20 percent equity to be furnished by Sindh government in the form of providing land for the project. 100 percent investment would be raised by the consortium, as it has agreed to even buy land where the plant is to be set up.

Universidad De La Laguna, are the consultant to the project. The consultant firm has also carried out preliminary feasibility (basic proposal) for wind power integrated desalination plant. The cost of project runs in millions of euros, as envisaged in the basic proposal. However, final cost estimate is yet to be calculated. The worked out approximate figures show that desalinated water would be costing nine paisa per gallon. Norwegian

consortium offers very flexible and modular systems with all components made of high quality.

PAKDA PRESIDENT HONORED BY ARAB WATER ORGANIZATION

Eng. Fayyaz Muddassir Mubeen, President PakDA has been appointed as one of the directors of the renowned Arab Water Organization, Arab Healthy Water Associates (AHWA) which is based in Cairo, Egypt.

WELCOM ABOARD NEW PAKDA MEMBERS

The new PAKDA members are:

Alam Nawaz Khan Wardag (PIEAS- Islamabad)
Munawar Hussain (KANUPP - Karachi)
Muhammed Shoaib (Multan)
Inayat ur Rehman (NWFP UET-Peshawar)
Safiullah Jan Khalil (NWFP - UETPeshawar)
Syed Hussain Shah (NUST - Islambad)
Muhammad Akram (Afroz Textile, Karachi)
Husnain Haider (UET - Lahore)
Imdadullah Siddiqui (Sindh University, Jamshoro)
Ashique Ali Langah (Sindh EPA - Karachi)
Munir Ahmad Khan (PAEC – Islamabad)
Ayaz Muhammad (Lahore)
Shaukat Saeed (Islamabad)
Shabbir Hussain (Sialkot)
M. Shahzad Qurashi (Karachi)
Jehan Zeb Khan (NWFP - Peshawar)
M. Wasif Saeed (NWFP - Peshawar)
Kashif Mushir (Karachi)
Fazal Ahmed Siddique (Pakpattan)

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