Who We Are

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HISTORY OF COMMITMENT

Power Generation Engineering and Services Company “PGESCo” is a leading company in the Middle East and Africa offering integrated innovative engineering, procurement and construction management solutions.

For more than two decades, we have manifested proven capabilities by providing landmark projects for energy and industrial sectors in Egypt and the MENA region with focus on timely response, safety, value and quality deliverables.

From business planning up to operation and maintenance, PGESCo provides advanced integrated services to the governmental utilities, EPC contractors, independent and private developers using State-of-the-Art design and communication technology platforms.
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Our capabilities and proven experience for highly sophisticated, automated and integrated engineering services allow us to determine future today.

With fully automated services provided through our customized intelligent Three-Dimensional Model (3DM), we provide our Clients with the virtual reality of their projects at fingertips through our unique Plant Information Modeling (PIM).

**Our Core Proficiency**

**Management**
- Provide high quality management and safety standards to prevent accidents
- Establish complete integrated project services
- Adopt latest technologies to maximize resource efficiency

**Companionship**
- Maintain the highest standards of integrity, honesty, and loyalty to Clients
- Continually improve and share the best value added with stakeholders

**Know-how**
- Add new technologies to promote new business
- Undertake Innovative technology and solutions
- Incorporate IT system as the basic foundation for engineering

**Building Culture Dynamics**
People and system are not enough.
Building Culture Dynamics is essential for people and system success.
Our organization culture should establish the required incentives to integrate its dynamics for better business life and innovative environment.

**Speed**
Agility is not enough to cope with the market.
Speed is the new strategic direction.
Our tools, process and deliverables will challenge our rivals by prompt response.

**Creativity & Innovation**
Imagination is leading the innovation.
Hologram, virtual reality and augmented reality will not be only applied for our product but will be realized in organization, team formation & business communication.

**Capacity**
Our capacity is variable and easy to be magnified to cover wide spectrum of business lines by productivity, cellular level organization and pillars team.
Our capabilities and proven experience for highly sophisticated, automated and integrated engineering services allow us to determine future today.

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PGESCo offers technical services to support project planning and implementation that includes the following:

**Project Management Services**
- Establish work plans, schedules, budgets, and project procedures
- Support and implement the overall financial plan of the project
- Provide project cost and schedule control
- Provide project quality and safety program
- Establish and implement project status and reporting system
- Implement budget controls

**Studies**
- Feasibility studies and concept development
- Site studies and cost estimate
- Plant betterment studies
- Power plant re-powering studies
- Environmental studies including modeling and monitoring studies for the following:
  - Air quality/meteorological monitoring program
  - Air quality modeling analysis
  - Water and wastewater quality analysis (for the entire plant)
  - Environmental impact assessments and reports
- Power plants development studies

**Engineering Services**
- Engineering services and designs for civil, mechanical, electrical, control and communication systems.
  - The following activities are usually performed by PGESCo engineering:
    - Performance of Licensing procedures
    - Concept and preliminary engineering designs
    - Final detailed design for project components and systems
    - Preparation of technical specifications
- Preparation of tender documents
- Technical evaluation of bidding documents
- Design review
- Interface management among different suppliers and contractors
- Preparation, review, and release of quality assurance plans
- Training and technology transfer programs

**Civil /Structural/ Architecture**
- Analysis and design of complex structural systems and turbine pedestals
- Design of steel structures
- Design of reinforced concrete offshore/onshore water structures
- Design of reinforced concrete buildings and foundations
- Substations analysis and design
- Architecture engineering including: architecture details drawings, finishing schedules, and landscape
- Site engineering work including: site grading, storm drainage, roads, water tunnels pipes, cable, and pipe trenches
- Geotechnical investigation/studies/design
- Hydraulics survey/studies/design/modeling
- Topographic survey and underground detection

**Instrumentation and Control**
- Conceptual and detail design and control philosophy
- Process instruments specifications and datasheets
- Control systems design and specifications
- Control valves selection and sizing
- Process and instrumentation diagrams
- PLC/DCS sizing and I/Os list
- Logic Diagrams
- Graphic displays
- Control cable wiring, termination and loop diagrams
- Physical design including hook-up drawing, instrument location plans, etc.
- Analytical systems
- Continuous emission monitoring systems
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- Control cable wiring, termination and loop diagrams
- Physical design including hook-up drawing, instrument location plans, etc.
- Analytical systems
- Continuous emission monitoring systems
Control system factory and site acceptance test (FAT/SAT)
Instrumentation and control systems installation support
Instrumentation and control systems commissioning
Verification and validation of new and existing installations

**Plant Design**
- Layout design
- General arrangement
- 3D modeling: equipment modeling, interference checking, pipe support modeling, and piping modeling routing
- Isometric and composite piping drawings
- Critical piping and supports design
- Stress analysis

**Electrical Engineering**
- Electrical physical design including: raceway system, equipment arrangement, and cable routing
- Cable quantities calculations: raceway fill calculations, raceway quantities and weight calculations
- Electrical control systems including: schematic diagrams, and cable termination
- Design and system calculations including: power system calculations, electrical equipment sizing calculations, electrical load calculations, relay coordination setting studies, cable sizing and selection, and grounding network calculations
- Single and three line diagram

**Mechanical Discipline Activities**
- Power plant heat & mass balance conceptual design
- Preliminary design report
- Process piping and Instrument diagrams P&IDs
- Pipe list, valve list, equipment list and specialty list
- Detail systems design calculation including piping and mechanical equipment sizing
- Equipment sizing calculations and data sheets
- Equipment technical specifications
- Bidders technical evaluation report

**Mechanical Engineering Technical Specialists Includes:**
- Fired heat transfer equipment (Boiler/HRSG)
- Unfired heat transfer equipment (Deaerator/Feedwater Heaters/Heat Exchanger)
- Rotating equipment (Compressors/Pumps)
- Plant performance guarantee Test
- Firefighting/HVAC
- Water treatment group

**Construction Management Services**
- Planning and supervision of construction programs
- Quality control and Quality assurance programs
- Establish and implement safety and security programs
- Coordinate and supervise the receipt, storage, and issuance of all equipment and material for the project
- Establish test procedures for the project and provide engineering review, management and inspection for all field construction work, field surveys, tests, and laboratory services

**Start-up and Commissioning Management Services**
- Coordinate and manage plant start-up
- Establish performance and acceptance test procedures
- Provide initial operation management and advisory services to assist operation staff
- Supervise performance testing and review of test results

**Procurement Services**
- Establish contract commercial terms and conditions and evaluation criteria
- Prepare and issue tender documents
- Commercial evaluation of tender documents
- Expediting
- Traffic and Logistics
- Equipment and material inspection
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Environment
Heat and mass balance

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VII - WATER SOLUTIONS
VII - DESALINATION AND WATER TREATMENT FACILITIES
New Cairo West project includes water/waste water treatment systems to serve the power plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through plant pump house where supply pumps and raw water screens are located. The water/waste water treatment installed in New Cairo West project includes:

**Intake Design**
- Open intake

**Chlorination System**
- Chlorine Gas feed system
  - 3 x 1300 kg cl₂/h

**Raw Water Pretreatment System**
- Ultra filtration
  - 2 x 3000 m³/day

**Demineralization System**
- Reverse Osmosis + Electrodeionization (EDI)
  - 2 x 1560 m³/day

**Waste water treatment system**
- Oil separation / clarification /
  - 1440 m³/day
  - filtration / pH adjustment

**Potable water treatment**
- UF + activated carbon filtration + chlorination
  - 100 m³/day

**Owner:** Cairo electricity Production Company  
**Location:** Giza, Egypt  
**Date of Award:** 2018  
**Project Contractual Duration:** 32 months  
**Scope:** Engineering Procurement and Construction Management  
**Status:** Ongoing
NEW CAIRO WEST WATER TREATMENT FACILITIES

New Cairo West project includes water/waste water treatment systems to serve the power plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through plant pump house where supply pumps and raw water screens are located. The water/waste water treatment installed in New Cairo West project includes:

**Intake Design**
Open intake

**Chlorination System**
Chlorine Gas feed system
3 x 1300 kg Cl₂/h

**Raw Water Pretreatment System**
Ultra filtration
2 x 3000 m³/day

**Demineralization System**
Reverse Osmosis + Electrodeionization (EDI)
2 x 1560 m³/day

**Waste water treatment system**
Oil separation / clarification / filtration / pH adjustment
1440 m³/day

**Potable water treatment**
UF + activated carbon filtration + chlorination
100 m³/day

---

**Owner:** Cairo electricity Production Company  
**Location:** Giza, Egypt  
**Date of Award:** 2018  
**Project Contractual Duration:** 32 months  
**Scope:** Engineering Procurement and Construction Management  
**Status:** Ongoing
NEW ASSIUT WATER TREATMENT FACILITIES

New Assiut project includes water/waste water treatment systems to serve the power plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through plant pump house where supply pumps and raw water screens are located. The water/waste water treatment installed in New Cairo West project includes:

**Owner:** Upper Egypt electricity Production Company  
**Location:** Assiut, Egypt  
**Date of Award:** 2018  
**Project Contractual Duration:** 32 months  
**Scope:** Engineering Procurement and Construction Management  
**Status:** Ongoing

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Intake Design</strong></td>
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</tr>
<tr>
<td><strong>Chlorination System</strong></td>
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<td>Reverse Osmosis + Electrodeionization (EDI)</td>
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<tr>
<td><strong>Condensate polishing System</strong></td>
<td>Externally Regenerated Mixed Beds</td>
<td>3 x 900 m³/h</td>
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<tr>
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**Owner:** Upper Egypt electricity Production Company  
**Location:** Assiut, Egypt  
**Date of Award:** 2018  
**Project Contractual Duration:** 32 months  
**Scope:** Engineering Procurement and Construction Management  
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**South Helwan Water Treatment Facilities**

South Helwan power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens are located. The water/waste water treatment installed in South Helwan power project includes:

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<td>Chlorination System</td>
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<td>Demineralization System</td>
<td>Reverse Osmosis + mixed bed demineralizer</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Externally Regenerated Mixed Beds</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
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<tr>
<td>Potable water treatment</td>
<td>UF + activated carbon filtration + chlorination</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended aeration</td>
</tr>
</tbody>
</table>

**Owner:** Upper Egypt Electricity Production company  
**Location:** South Helwan, Egypt  
**Date of Award:** November 2015  
**Project Contractual Duration:** 26 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed
SOUTH HELWAN WATER TREATMENT FACILITIES

South Helwan power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens are located. The water/waste water treatment installed in South Helwan power project includes:

**Intake Design**
- Open intake

**Chlorination System**
- Chlorine Gas feed system
  - 3 x 1300 kg cl₂/h

**Raw Water Pretreatment System**
- Ultra filtration (UF)
  - 3 x 2400 m³/day

**Demineralization System**
- Reverse Osmosis + mixed bed demineralizer
  - 3 x 1200 m³/day

**Condensate polisher System**
- Externally Regenerated Mixed Beds
  - 3 x 900 m³/h

**Waste water treatment system**
- Oil separation / clarification / filtration / pH adjustment
  - 1920 m³/day

**Potable water treatment**
- UF + activated carbon filtration+ chlorination
  - 100 m³/day

**Sewage treatment plant**
- Extended aeration
  - 100 m³/day

---

**Owner:** Upper Egypt Electricity Production company  
**Location:** South Helwan, Egypt  
**Date of Award:** November 2015  
**Project Contractual Duration:** 26 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** On Going
NEW CAPITAL WATER TREATMENT FACILITIES

New Capital power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for HRSG feed as well as various power plant users. City water is supplied via pipe line to feed the water treatment system. The water/waste water treatment installed in New Capital power project includes:

**Pretreatment System**
- Ultra filtration (UF)
  - 3 x 1800 m³/day

**Desalination System**
- reverse Osmosis (RO) system
  - 3 x 1200 m³/day

**Demineralization System**
- Electro Deionization
  - 3 x 960 m³/day

**Waste water treatment system**
- Oil separation / clarification / filtration / pH adjustment
  - 2 x 480 m³/day

**Sewage treatment plant**
- Extended aeration STP
  - 2 x 100 m³/day
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**Owner:** Cairo Electricity Production company  
**Client:** ORASCOM CONSTRUCTION  
**Location:** New Capital, Egypt  
**Date of Award:** August 2015  
**Scope:** Detailed Engineering, Procurement Support, and Design Review  
**Status:** On-going

<table>
<thead>
<tr>
<th>System</th>
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<td>Pretreatment System</td>
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Burullus power project includes desalination and water/waste water treatment systems to serve the plant
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<td>Chlorination System</td>
<td>On-site Hypochlorite Generation 3 x 40kg/hr Cl₂</td>
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<td>Pretreatment System</td>
<td>Ultra filtration (UF) 3 x 2760 m³/day</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Double Pass reverse Osmosis (RO) system with energy recovery system 3 x 1,000 m³/day</td>
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<td>Oil separation / clarification / filtration / pH adjustment 2 x 480 m³/day</td>
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<tr>
<td>Potable water treatment</td>
<td>Activated carbon filters/remineralization filters 2 x 100 m³/day</td>
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<td>Sewage treatment plant</td>
<td>Extended aeration STP 2 x 100 m³/day</td>
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</table>

**Owner:** Middle Delta Electricity Production company

**Client:** ORASCOM CONSTRUCTION

**Location:** Mediterranean sea, Egypt

**Date of Award:** August 2015

**Scope:** Detailed Engineering, Procurement Support, and Design Review

**Status:** On-going
Burullus Desalination and Water Treatment Facilities

Burullus power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for HRSG feed as well as various power plant users. Sea water from Mediterranean Sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in Burullus power project includes:

**Intake Design**
- Open intake

**Chlorination System**
- On-site Hypochlorite Generation
  - $3 \times 40$ kg/hr Cl$_2$

**Pretreatment System**
- Ultra filtration (UF)
  - $3 \times 2760$ m$^3$/day

**Desalination System**
- Double Pass reverse Osmosis (RO) system with energy recovery system
  - $3 \times 1,000$ m$^3$/day

**Demineralization System**
- Electro deionization
  - $3 \times 960$ m$^3$/day

**Waste water treatment system**
- Oil separation / clarification / filtration / pH adjustment
  - $2 \times 480$ m$^3$/day

**Potable water treatment**
- Activated carbon filters/remineralization filters
  - $2 \times 100$ m$^3$/day

**Sewage treatment plant**
- Extended aeration STP
  - $2 \times 100$ m$^3$/day

**Owner:** Middle Delta Electricity Production company

**Client:** ORASCOM CONSTRUCTION

**Location:** Mediterranean sea, Egypt

**Date of Award:** August 2015

**Scope:** Detailed Engineering, Procurement Support, and Design Review

**Status:** On-going
**Owner:** Middle Delta Electricity Production company  
**Location:** Middle Delta, Egypt  
**Date of Award:** July 2012  
**Project Contractual Duration:** 19 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** On Going

Banha power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Banha power project includes:

<table>
<thead>
<tr>
<th>Component</th>
<th>Details and Capacities</th>
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<tbody>
<tr>
<td>Intake Design</td>
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<tr>
<td>Chlorination System</td>
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<tr>
<td>Sewage treatment plant</td>
<td>Packaged Type - Extended aeration</td>
</tr>
</tbody>
</table>
**Owner:** Middle Delta Electricity Production company  
**Location:** Middle Delta, Egypt  
**Date of Award:** July 2012  
**Project Contractual Duration:** 19 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** On Going

Banha power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Banha power project includes:

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intake Design</td>
<td>Open intake</td>
<td></td>
</tr>
<tr>
<td>Chlorination System</td>
<td>Hypochlorite Solution injection system</td>
<td></td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification + Ultra filtration (UF)</td>
<td>2280 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier / anion / mixed bed deionizer</td>
<td>3 x 1800 m³/day</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>2400 m³/day</td>
</tr>
<tr>
<td>Potable water treatment</td>
<td>UF + Activated carbon filtration + chlorination</td>
<td>100 m³/day</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Packaged Type - Extended aeration</td>
<td>100 m³/day</td>
</tr>
</tbody>
</table>
**GIZA NORTH WATER TREATMENT FACILITIES**

Giza North power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Giza North power project includes:

<table>
<thead>
<tr>
<th>Intake Design</th>
<th>Open intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>Chlorine Gas feed system 3 x 1200 kg Cl₂/h</td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification + Ultra filtration (UF) 3 x 2520 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier / anion / mixed bed deionizer 3 x 2040 m³/day</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment 5280 m³/day</td>
</tr>
<tr>
<td>Potable water treatment</td>
<td>UF + activated carbon filtration + chlorination 80 m³/day</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended aeration 80 m³/day</td>
</tr>
</tbody>
</table>

**Owner:** Cairo Electricity Production Company

**Location:** Giza, Egypt

**Date of Award:** March 2013

**Project Contractual Duration:** 17 Month

**Scope:** Engineering, Procurement, and Construction Management Services

**Status:** Completed
Giza North power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Giza North power project includes:

**Owner:** Cairo Electricity Production Company  
**Location:** Giza, Egypt  
**Date of Award:** March 2013  
**Project Contractual Duration:** 17 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intake Design</td>
<td>Open intake</td>
<td></td>
</tr>
<tr>
<td>Chlorination System</td>
<td>Chlorine Gas feed system</td>
<td>3 x 1200 kg Cl₂/h</td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification + Ultra filtration (UF)</td>
<td>3 x 2520 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier / anion / mixed bed deionizer</td>
<td>3 x 2040 m³/day</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>5280 m³/day</td>
</tr>
<tr>
<td>Potable water treatment</td>
<td>UF + activated carbon filtration + chlorination</td>
<td>80 m³/day</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended aeration</td>
<td>80 m³/day</td>
</tr>
</tbody>
</table>
Owner: Cairo Electricity Production Company
Location: Cairo, Egypt
Date of Award: June 2008
Project Contractual Duration: 17 Month
Scope: Engineering, Procurement, and Construction Management Services
Status: Completed

Cairo West power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Cairo West power project includes:

<table>
<thead>
<tr>
<th>Intake Design</th>
<th>Open intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>Hypochlorite Solution injection system</td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification / Multi Media Filtration</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier / anion / mixed bed deionizer</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Externally Regenerated Mixed Beds</td>
</tr>
</tbody>
</table>
CAIRO WEST WATER TREATMENT FACILITIES

Cairo West power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Cairo West power project includes:

**Intake Design**
- Open intake

**Chlorination System**
- Hypochlorite Solution injection system

**Raw Water Pretreatment System**
- Clarification / Multi Media Filtration

**Demineralization System**
- Cation / degasifier / anion / mixed bed deionizer

**Condensate polisher System**
- Externally Regenerated Mixed Beds

---

**Owner:** Cairo Electricity Production Company  
**Location:** Cairo, Egypt  
**Date of Award:** June 2008  
**Project Contractual Duration:** 17 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed
Sidi Krir power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Mediterranean Sea is supplied via intake structure to feed the existing desalination plant and water/wastewater treatment system through power plant pump house where supply pumps and sea water screens are located. The desalination and water/waste water treatment installed in Sidi Krir power project includes:

<table>
<thead>
<tr>
<th>Intake Design</th>
<th>Open intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>On site hypochlorite generation 2 x 250 kg/hr</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>mixed bed deionizer 2 x 1560 m3/day</td>
</tr>
</tbody>
</table>
**Owner:** West Delta Electricity Production company  
**Location:** North Coast, Egypt  
**Date of Award:** June 2008  
**Project Contractual Duration:** 17 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed

Sidi Krir power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Mediterranean Sea is supplied via intake structure to feed the existing desalination plant and water/wastewater treatment system through power plant pump house where supply pumps and sea water screens are located. The desalination and water/waste water treatment installed in Sidi Krir power project includes:

<table>
<thead>
<tr>
<th>Intake Design</th>
<th>Open intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>On site hypochlorite generation</td>
</tr>
<tr>
<td></td>
<td>2 x 250 kg/hr</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>mixed bed deionizer</td>
</tr>
<tr>
<td></td>
<td>2 x 1560 m³/day</td>
</tr>
</tbody>
</table>
**EL TEBBIN WATER TREATMENT FACILITIES**

El Tebbin power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Al Tebbin power project includes:

**Owner:** Cairo Electricity Production Company  
**Location:** Cairo, Egypt  
**Date of Award:** October 2007  
**Project Contractual Duration:** 24 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed

<table>
<thead>
<tr>
<th><strong>Intake Design</strong></th>
<th><strong>Open intake</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chlorination System</strong></td>
<td>Hypochlorite Solution injection system</td>
<td></td>
</tr>
<tr>
<td><strong>Raw Water Pretreatment System</strong></td>
<td>Clarification / Multi Media Filtration</td>
<td>2 x 2400 m³/day</td>
</tr>
<tr>
<td><strong>Demineralization System</strong></td>
<td>Cation / degasifier /anion / mixed bed deionizer</td>
<td>2 x 1200 m³/day</td>
</tr>
<tr>
<td><strong>Condensate polisher System</strong></td>
<td>Externally Regenerated Mixed Beds</td>
<td>2 x 435.6 m³/h</td>
</tr>
<tr>
<td><strong>Waste water treatment system</strong></td>
<td>Oil separation</td>
<td>1 x 80 m³/h and 1 x 25 m³/h</td>
</tr>
</tbody>
</table>
EL TEBBIN WATER TREATMENT FACILITIES

El Tebbin power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Al Tebbin power project includes:

**Owner:** Cairo Electricity Production Company

**Location:** Cairo, Egypt

**Date of Award:** October 2007

**Project Contractual Duration:** 24 Month

**Scope:** Engineering, Procurement, and Construction Management Services

**Status:** Completed

---

<table>
<thead>
<tr>
<th>Intake Design</th>
<th>Open intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>Hypochlorite Solution injection system</td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification / Multi Media Filtration</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier / anion / mixed bed deionizer</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Externally Regenerated Mixed Beds</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation</td>
</tr>
</tbody>
</table>
Kureimat power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The desalination and water/waste water treatment installed in El Kureimat power project includes:

**Intake Design**
- Open intake

**Chlorination System**
- Hypochlorite Solution injection system

**Raw Water Pretreatment System**
- Clarification / Multi Media Filtration

**Demineralization System**
- Cation / degasifier / anion / mixed bed deionizer

**Waste water treatment system**
- Oil separation / clarification / filtration / pH adjustment
- WW 2 x 1440 m³/day
- Oil Sep 100 m³/h

**Potable water treatment**
- Activated carbon filtration+ chlorination
- 20 m³/h

---

**Owner:** Upper Egypt Electricity Production Company  
**Location:** Upper Egypt  
**Date of Award:** February 2006  
**Project Contractual Duration:** 18 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed
Kureimat power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The desalination and water/waste water treatment installed in El Kureimat power project includes:

- **Intake Design**
  - Open intake

- **Chlorination System**
  - Hypochlorite Solution injection system

- **Raw Water Pretreatment System**
  - Clarification / Multi Media Filtration
  - 3 x 2400 m³/day

- **Demineralization System**
  - Cation / degasifier / anion / mixed bed deionizer
  - 3 x 1500 m³/day

- **Waste water treatment system**
  - Oil separation / clarification / filtration / pH adjustment
  - WW 2 x 1440 m³/day
  - Oil Sep 100 m³/h

- **Potable water treatment**
  - Activated carbon filtration + chlorination
  - 20 m³/h

**Owner:** Upper Egypt Electricity Production Company  
**Location:** Upper Egypt  
**Date of Award:** February 2006  
**Project Contractual Duration:** 18 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed
Talkha power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. River water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Talkha power project includes:

<table>
<thead>
<tr>
<th>Intake Design</th>
<th>Open intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>Hypochlorite Solution injection system</td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification / Multi Media Filtration 2 x 2800 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier / anion / mixed bed deionizer 2 x 2160 m³/day</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment 2 x 580 m³/day</td>
</tr>
</tbody>
</table>

Owner: Middle Delta Electricity Production Company  
Location: Middle Delta, Egypt  
Date of Award: September 2005  
Project Contractual Duration: 18 Month  
Scope: Engineering, Procurement, and Construction Management Services  
Status: Completed
**TALKHA WATER TREATMENT FACILITIES**

Talkha power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. River water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Talkha power project includes:

<table>
<thead>
<tr>
<th>Intake Design</th>
<th>Open intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>Hypochlorite Solution injection system</td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification / Multi Media Filtration</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier / anion / mixed bed deionizer</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
</tr>
</tbody>
</table>

**Owner**: Middle Delta Electricity Production Company  
**Location**: Middle Delta, Egypt  
**Date of Award**: September 2005  
**Project Contractual Duration**: 18 Month  
**Scope**: Engineering, Procurement, and Construction Management Services  
**Status**: Completed
**Owner:** Middle Delta Electricity Production Company  
**Location:** Middle Delta, Egypt  
**Date of Award:** January 2004  
**Project Contractual Duration:** 14 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed

Nubaria power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. River water from Nubaria canal is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The desalination and water/waste water treatment installed in Nubaria power project includes:

<table>
<thead>
<tr>
<th>Intake Design</th>
<th>Open intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>Hypochlorite Solution injection system</td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification / Multi Media Filtration</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier / anion / mixed bed deionizer</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
</tr>
<tr>
<td>Potable water treatment</td>
<td>Activated carbon filters and disinfection with sodium hypochlorite dosing</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended Diffused Aeration system</td>
</tr>
</tbody>
</table>
### NUBARIA WATER TREATMENT FACILITIES

Nubaria power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. River water from Nubaria canal is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The desalination and water/waste water treatment installed in Nubaria power project includes:

**Intake Design**
- Open intake

**Chlorination System**
- Hypochlorite Solution injection system

**Raw Water Pretreatment System**
- Clarification / Multi Media Filtration
- 3 x 2016 m³/day

**Demineralization System**
- Cation / degasifier / anion / mixed bed deionizer
- 3 x 1500 m³/day

**Waste water treatment system**
- Oil separation / clarification / filtration / pH adjustment
- 2 x 1440 m³/day

**Potable water treatment**
- Activated carbon filters and disinfection with sodium hypochlorite dosing
- 400 m³/day

**Sewage treatment plant**
- Extended Diffused Aeration system
- 2 x 022m³/day
CAIRO NORTH WATER TREATMENT FACILITIES

Cairo North power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. River water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Cairo North power project includes:

**Intake Design**
- Open intake

**Chlorination System**
- Hypochlorite Solution injection system

**Raw Water Pretreatment System**
- Clarification / Multi Media Filtration / Sludge Dewatering
- 2 x 1680 m³/day

**Demineralization System**
- Cation / degasifier / anion / mixed bed deionizer
- 2 x 1680 m³/day

**Waste water treatment system**
- API Oil separation / DAF oil separation
- 2400 m³/day

**Owner:** Cairo Electricity Production Company

**Location:** Cairo, Egypt

**Date of Award:** December 2002

**Project Contractual Duration:** 18 Month

**Scope:** Engineering, Procurement, and Construction Management Services

**Status:** Completed
Cairo North power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. River water from Nile River is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The water/waste water treatment installed in Cairo North power project includes:

<table>
<thead>
<tr>
<th>Intake Design</th>
<th>Open intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>Hypochlorite Solution injection system</td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification / Multi Media Filtration / Sludge Dewatering</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier / anion / mixed bed deionizer</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>API Oil separation / DAF oil separation</td>
</tr>
</tbody>
</table>

**Owner:** Cairo Electricity Production Company  
**Location:** Cairo, Egypt  
**Date of Award:** December 2002  
**Project Contractual Duration:** 18 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed
**AL ATF WATER TREATMENT FACILITIES**

Al Atf power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. River water from Nile River Rosetta Branch is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The desalination and water/waste water treatment installed in Al Atf power project includes:

- **Intake Design**: Open intake
- **Chlorination System**: Hypochlorite Solution injection system
- **Raw Water Pretreatment System**: Clarification / Multi Media Filtration
  
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intake Design</td>
<td>Open intake</td>
<td></td>
</tr>
<tr>
<td>Chlorination System</td>
<td>Hypochlorite Solution injection system</td>
<td></td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification / Multi Media Filtration</td>
<td>2 x 80 m³/hr</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier /anion / mixed bed deionizer</td>
<td>2 x 1300 m³/day</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>2 x 840 m³/day</td>
</tr>
</tbody>
</table>

**Owner**: Middle Delta Electricity Production Company  
**Location**: Middle Delta, Egypt  
**Date of Award**: June 2008  
**Project Contractual Duration**: 17 Month  
**Scope**: Engineering, Procurement, and Construction Management Services  
**Status**: Completed
AL ATF WATER TREATMENT FACILITIES

Al Atf power project includes water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. River water from Nile River Rosetta Branch is supplied via intake structure to feed the water treatment system through power plant pump house where supply pumps and raw water screens is located. The desalination and water/waste water treatment installed in Al Atf power project includes:

**Owner:** Middle Delta Electricity Production Company

**Location:** Middle Delta, Egypt

**Date of Award:** June 2008

**Project Contractual Duration:** 17 Month

**Scope:** Engineering, Procurement, and Construction Management Services

**Status:** Completed

<table>
<thead>
<tr>
<th>Intake Design</th>
<th>Open intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>Hypochlorite Solution injection system</td>
</tr>
<tr>
<td>Raw Water Pretreatment System</td>
<td>Clarification / Multi Media Filtration 2 x 80 m³/hr</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Cation / degasifier / anion / mixed bed deionizer 2 x 1300 m³/day</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment 2 x 840 m³/day</td>
</tr>
</tbody>
</table>
NEW WEST DAMIETTA DESALINATION AND WATER TREATMENT FACILITIES - FAST TRACK

New West Damietta Fast Track power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Ground Water is supplied via deep well field to feed the desalination and water treatment systems. The desalination and water/waste water treatment installed in West Damietta power project includes:

**Owner:** East Delta Electricity Production Company  
**Client:** Orascom Construction  
**Location:** Damietta, Egypt  
**Date of Award:** November 2014  
**Project Contractual Duration:** 5 Month  
**Scope:** Detailed Engineering, Procurement Support, and Design Review  
**Status:** Completed

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretreatment System</td>
<td>Ultra filtration modules (UF)</td>
<td>3 x 3250 m³/day</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Double pass reverse osmosis (brackish water)</td>
<td>3 x 2400 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Electro deionization System</td>
<td>3 x 1800 m³/day</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Pre-coat filters</td>
<td>2 x 600 m³/h On-going</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>2400 m³/day</td>
</tr>
<tr>
<td>Potable water treatment</td>
<td>UF + RO + Activated carbon + Chlorination</td>
<td>100 m³/day</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended aeration</td>
<td>100 m³/day</td>
</tr>
</tbody>
</table>
NEW WEST DAMIETTA DESALINATION AND WATER TREATMENT FACILITIES - FAST TRACK

New West Damietta Fast Track power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Ground Water is supplied via deep well field to feed the desalination and water treatment systems. The desalination and water/waste water treatment installed in West Damietta power project includes:

**Owner:** East Delta Electricity Production Company  
**Client:** Orascom Construction  
**Location:** Damietta, Egypt  
**Date of Award:** November 2014  
**Project Contractual Duration:** 5 Month  
**Scope:** Detailed Engineering, Procurement Support, and Design Review  
**Status:** Completed

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretreatment System</td>
<td>Ultra filtration modules (UF)</td>
<td>3 x 3250 m³/day</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Double pass reverse osmosis (brackish water)</td>
<td>3 x 2400 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Electro deionization System</td>
<td>3 x 1800 m³/day</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Pre-coat filters</td>
<td>2 x 600 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>2400 m³/day</td>
</tr>
<tr>
<td>Potable water treatment</td>
<td>UF + RO + Activated carbon + Chlorination</td>
<td>100 m³/day</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended aeration</td>
<td>100 m³/day</td>
</tr>
</tbody>
</table>
NEW ASSIUT DESALINATION AND WATER TREATMENT FACILITIES - FAST TRACK

New Assiut Fast Track power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Ground Water is supplied via deep well field to feed the desalination and water treatment systems. The desalination and water/waste water treatment installed in West Damietta power project includes:

<table>
<thead>
<tr>
<th>Pretreatment System</th>
<th>Ultra filtration modules (UF)</th>
<th>4 x 5040 m³/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desalination System</td>
<td>Double pass reverse osmosis (brackish water)</td>
<td>(12,000 m³/day)</td>
</tr>
<tr>
<td></td>
<td>5 x 2400 m³/day</td>
<td></td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Electro deionization System</td>
<td>4 x 2400 m³/day</td>
</tr>
<tr>
<td></td>
<td>(12,000 m³/day)</td>
<td></td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Pre-coat filters</td>
<td>2 x 600 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>1920 m³/day</td>
</tr>
<tr>
<td>Potable water treatment</td>
<td>UF + RO + activated carbon+ chlorination</td>
<td>100 m³/day</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended aeration</td>
<td>100 m³/day</td>
</tr>
</tbody>
</table>

**Owner:** Upper Egypt Electricity Production Company  
**Client:** Orascom Construction  
**Location:** Assiut, Egypt  
**Date of Award:** November 2014  
**Project Contractual Duration:** 4 Month  
**Scope:** Detailed Engineering, Procurement Support, and Design Review  
**Status:** Completed
NEW ASSIUT DESALINATION AND WATER TREATMENT FACILITIES - FAST TRACK

New Assiut Fast Track power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Ground Water is supplied via deep well field to feed the desalination and water treatment systems. The desalination and water/waste water treatment installed in West Damietta power project includes:

**Owner:** Upper Egypt Electricity Production Company  
**Client:** Orascom Construction  
**Location:** Assiut, Egypt  
**Date of Award:** November 2014  
**Project Contractual Duration:** 4 Month  
**Scope:** Detailed Engineering, Procurement Support, and Design Review  
**Status:** Completed

<table>
<thead>
<tr>
<th>Pretreatment System</th>
<th>Ultra filtration modules (UF)</th>
<th>4 x 5040 m³/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desalination System</td>
<td>Double pass reverse osmosis</td>
<td>(12,000 m³/day)</td>
</tr>
<tr>
<td></td>
<td>(brackish water)</td>
<td>5 x 2400 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Electro deionization System</td>
<td>4 x 2400 m³/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(12,000 m³/day)</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Pre-coat filters</td>
<td>2 x 600 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>1920 m³/day</td>
</tr>
<tr>
<td>Potable water treatment</td>
<td>UF + RO + activated carbon+ chlorination</td>
<td>100 m³/day</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended aeration</td>
<td>100 m³/day</td>
</tr>
</tbody>
</table>
Suez power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Red sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in Suez power project includes:

**Owner:** East Delta Electricity Production Company

**Location:** Suez, Egypt

**Date of Award:** October 2012

**Project Contractual Duration:** 18 Month

**Scope:** Engineering, Procurement, and Construction Management Services

**Status:** Completed

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>On site hypochlorite generation system</td>
<td>2 x 300 kg cl/h</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Multi Effect Distillation with Thermal Vapor compression (MED-TVC)</td>
<td>6,000 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Mixed bed deionizer</td>
<td>3 x 1080 m³/day</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Externally Regenerated Mixed Beds</td>
<td>2 x 900 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>2400 m³/h</td>
</tr>
</tbody>
</table>
SUEZ DESALINATION AND WATER TREATMENT FACILITIES

Suez power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Red sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in Suez power project includes:

Owner: East Delta Electricity Production Company
Location: Suez, Egypt
Date of Award: October 2012
Project Contractual Duration: 18 Month
Scope: Engineering, Procurement, and Construction Management Services
Status: Completed

Chlorination System
- On site hypochlorite generation system
- 2 x 300 kg cl₂/h

Desalination System
- Multi Effect Distillation with Thermal Vapor compression (MED-TVC)
- 6,000 m³/day

Demineralization System
- Mixed bed deionizer
- 3 x 1080 m³/day

Condensate polisher System
-Externally Regenerated Mixed Beds
- 2 x 900 m³/h

Waste water treatment system
- Oil separation / clarification / filtration / pH adjustment
- 2400 m³/h
**West Damietta Desalination and Water Treatment Facilities**

West Damietta power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Ground Water is supplied via deep well field to feed the desalination and water treatment systems. The desalination and water/waste water treatment installed in West Damietta power project includes:

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretreatment System</td>
<td>Ultra filtration modules (UF)</td>
<td>2 x 2880 m³/day</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Double pass reverse osmosis (brackish water)</td>
<td>2 x 1560 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Mixed bed deionizer</td>
<td>2 x 1560 m³/day</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Pre-coat filters</td>
<td>2 x 600 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>1200 m³/day</td>
</tr>
</tbody>
</table>

**Owner:** East Delta Electricity Production Company  
**Location:** Damietta, Egypt  
**Date of Award:** March 2011  
**Project Contractual Duration:** 12 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed
West Damietta power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Ground Water is supplied via deep well field to feed the desalination and water treatment systems. The desalination and water/waste water treatment installed in West Damietta power project includes:

**Owner:** East Delta Electricity Production Company  
**Location:** Damietta, Egypt  
**Date of Award:** March 2011  
**Project Contractual Duration:** 12 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretreatment System</td>
<td>Ultra filtration modules (UF)</td>
<td>2 x 2880 m³/day</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Double pass reverse osmosis (brackish water)</td>
<td>2 x 1560 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Mixed bed deionizer</td>
<td>2 x 1560 m³/day</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Pre-coat filters</td>
<td>2 x 600 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>1200 m³/day</td>
</tr>
</tbody>
</table>
Owner: East Delta Electricity Production Company

Location: Sinai, Egypt

Date of Award: June 2010

Project Contractual Duration: 29 Month

Scope: Engineering, Procurement, and Construction Management Services

Status: Completed

El Ain El Sokhna power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Red sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in El Ain El Sokhna power project includes:

- **Chlorination System**: On-site Hypochlorite generation system, 3 x 450 kg Cl₂/h
- **Desalination System**: Multi Effect Distillation with Thermal Vapor compression (MED-TVC), 8,000 m³/day
- **Demineralization System**: Mixed bed deionizer, 1800 m³/day
- **Condensate polisher System**: Externally Regenerated Mixed Beds, 6 x 760 m³/h
- **Waste water treatment system**: Oil separation / clarification / filtration / pH adjustment, 1440 m³/day
- **Sewage treatment plant**: Extended aeration, 2040 m³/day
Owner: East Delta Electricity Production Company
Location: Sinai, Egypt
Date of Award: June 2010
Project Contractual Duration: 29 Month
Scope: Engineering, Procurement, and Construction Management Services
Status: Completed

El Ain El Sokhna power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Red sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in El Ain El Sokhna power project includes:

- Chlorination System
  - On-site Hypochlorite generation system
  - 3 x 450 kg Cl₂/h

- Desalination System
  - Multi Effect Distillation with Thermal Vapor compression (MED-TVC)
  - 8,000 m³/day

- Demineralization System
  - Mixed bed deionizer
  - 1800 m³/day

- Condensate polisher System
  - Externally Regenerated Mixed Beds
  - 6 x 760 m³/h

- Waste water treatment system
  - Oil separation / clarification / filtration / pH adjustment
  - 1440 m³/day

- Sewage treatment plant
  - Extended aeration
  - 2040 m³/day
ABU QIR DESALINATION AND WATER TREATMENT FACILITIES

Abu Qir power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Mediterranean sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in Abu Qir power project includes:

- **Chlorination System**: On-site Hypochlorite generation system 2 x 500 kg Cl₂/h
- **Desalination System**: Multi Effect Distillation with Thermal Vapor compression (MED-TVC) 10,000 m³/day
- **Demineralization System**: Mixed bed deionizer 2 x 3000 m³/day
- **Condensate polisher System**: Externally Regenerated Mixed Beds 2 x 880 m³/h
- **Waste water treatment system**: Oil separation / clarification / filtration / pH adjustment 240 m³/day
- **Sewage treatment plant**: Extended Aeration 200 m³/day

**Owner**: West Delta Electricity Production Company

**Location**: Alexandria, Egypt

**Date of Award**: September 2009

**Project Contractual Duration**: 23 Month

**Scope**: Engineering, Procurement, and Construction Management Services

**Status**: Completed
ABU QIR DESALINATION AND WATER TREATMENT FACILITIES

Abu Qir power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Mediterranean sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in Abu Qir power project includes:

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>On-site Hypochlorite generation system</td>
<td>2 x 500 kg Cl₂/h</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Multi Effect Distillation with Thermal Vapor compression (MED-TVC)</td>
<td>10,000 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Mixed bed deionizer</td>
<td>2 x 3000 m³/day</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Externally Regenerated Mixed Beds</td>
<td>2 x 880 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>240 m³/day</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended Aeration</td>
<td>200 m³/day</td>
</tr>
</tbody>
</table>

Owner: West Delta Electricity Production Company
Location: Alexandria, Egypt
Date of Award: September 2009
Project Contractual Duration: 23 Month
Scope: Engineering, Procurement, and Construction Management Services
Status: Completed
AL SHABAB DESALINATION AND WATER TREATMENT FACILITIES

Al Shabab power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Ground Water is supplied via deep well field to feed the desalination and water treatment systems. The desalination and water/waste water treatment installed in Al Shabab power project includes:

**Owner:** East Delta Electricity Production Company

**Location:** Ismailia, Egypt

**Date of Award:** October 2011

**Project Contractual Duration:** 10 Month

**Scope:** Engineering, Procurement, and Construction Management Services

**Status:** Completed

### Systems and Capacities

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretreatment System</td>
<td>Ultra filtration modules (UF)</td>
<td>3 x 3500 m³/day</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Double pass reverse osmosis (brackish water)</td>
<td>2 x 3750 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Mixed bed deionizer</td>
<td>2 x 3120 m³/day</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Pre-coat filters</td>
<td>4 x 600 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>1200 m³/day</td>
</tr>
<tr>
<td>Potable water treatment</td>
<td>UF + RO + Activated carbon + Chlorination</td>
<td>120 m³/day</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended aeration</td>
<td>120 m³/day</td>
</tr>
</tbody>
</table>
AL SHABAB DESALINATION AND WATER TREATMENT FACILITIES

Al Shabab power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Ground Water is supplied via deep well field to feed the desalination and water treatment systems. The desalination and water/waste water treatment installed in Al Shabab power project includes:

**Owner:** East Delta Electricity Production Company  
**Location:** Ismailia, Egypt  
**Date of Award:** October 2011  
**Project Contractual Duration:** 10 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretreatment System</td>
<td>Ultra filtration modules (UF)</td>
<td>3 x 3500 m³/day</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Double pass reverse osmosis (brackish water)</td>
<td>2 x 3750 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Mixed bed deionizer</td>
<td>2 x 3120 m³/day</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Pre-coat filters</td>
<td>4 x 600 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / clarification / filtration / pH adjustment</td>
<td>1200 m³/day</td>
</tr>
<tr>
<td>Potable water treatment</td>
<td>UF + RO + Activated carbon + Chlorination</td>
<td>120 m³/day</td>
</tr>
<tr>
<td>Sewage treatment plant</td>
<td>Extended aeration</td>
<td>120 m³/day</td>
</tr>
</tbody>
</table>
Ayoun Moussa power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Red sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in Ayoun Moussa power project includes:

<table>
<thead>
<tr>
<th>System</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>On-Site Hypochlorite Generation System 3 x 110 kg/hr Cl₂</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Multi Effect distillation (MED) 2 x 5000 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Mixed bed deionizer 3 x 1500 m³/day</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Externally Regenerated Mixed Beds 3 x 522 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / DAF system 2400 m³/day</td>
</tr>
</tbody>
</table>

**Owner:** East Delta Electricity Production Company  
**Location:** Sinai, Egypt  
**Date of Award:** May 1996  
**Project Contractual Duration:** 35 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed
Owner: East Delta Electricity Production Company
Location: Sinai, Egypt
Date of Award: May 1996
Project Contractual Duration: 35 Month
Scope: Engineering, Procurement, and Construction Management Services
Status: Completed

Ayoun Moussa power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Red sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in Ayoun Moussa power project includes:

<table>
<thead>
<tr>
<th>System</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>On-Site Hypochlorite Generation System</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Multi Effect distillation (MED)</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Mixed bed deionizer</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Externally Regenerated Mixed Beds</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / DAF system</td>
</tr>
</tbody>
</table>
SIDI KRIR 1 & 2 DESALINATION AND WATER TREATMENT FACILITIES

SIDI KRIR 1 & 2 power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Mediterranean Sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in Sidi Krir power project includes:

**Owner:** West Delta Electricity Production Company  
**Location:** North Coast, Egypt  
**Date of Award:** April 1996  
**Project Contractual Duration:** 26 Month  
**Scope:** Engineering, Procurement, and Construction Management Services  
**Status:** Completed

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorination System</td>
<td>On-Site Hypochlorite Generation System</td>
<td>3 x 110 kg/hr Cl₂</td>
</tr>
<tr>
<td>Desalination System</td>
<td>Multi stage flash distillation (MSF)</td>
<td>2 x 5000 m³/day</td>
</tr>
<tr>
<td>Demineralization System</td>
<td>Mixed bed deionizer</td>
<td>3 x 1500 m³/day</td>
</tr>
<tr>
<td>Condensate polisher System</td>
<td>Externally Regenerated Mixed Beds</td>
<td>3 x 522 m³/h</td>
</tr>
<tr>
<td>Waste water treatment system</td>
<td>Oil separation / DAF system</td>
<td>2400 m³/day</td>
</tr>
</tbody>
</table>
SIDI KRIR 1 & 2 power project includes desalination and water/waste water treatment systems to serve the plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Sea water from Mediterranean Sea is supplied via intake structure to feed the desalination system through power plant pump house where supply pumps and sea water screens is located. The desalination and water/waste water treatment installed in Sidi Krir power project includes:

**Chlorination System**
- On-Site Hypochlorite Generation System
- 3 x 110 kg/hr Cl₂

**Desalination System**
- Multi stage flash distillation (MSF)
- 2 x 5000 m³/day

**Deminerlization System**
- Mixed bed deionizer
- 3 x 1500 m³/day

**Condensate polisher System**
- Externally Regenerated Mixed Beds
- 3 x 522 m³/h

**Waste water treatment system**
- Oil separation / DAF system
- 2400 m³/day

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**Owner**: West Delta Electricity Production Company  
**Location**: North Coast, Egypt  
**Date of Award**: April 1996  
**Project Contractual Duration**: 26 Month  
**Scope**: Engineering, Procurement, and Construction Management Services  
**Status**: Completed
BAIJI, IRAQ WATER TREATMENT FACILITIES

New Assiut project includes water/waste water treatment systems to serve the power plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through plant pump house where supply pumps and raw water screens are located. The water/waste water treatment installed in New Cairo West project includes:

**Intake Design**
- Open intake

**Raw Water Pretreatment System**
- Sedimentation Tank + Clarifiers double stages multimedia filtration
- Demineralization System
  - Reverse Osmosis + Electrodeionization (EDI)
- Potable water treatment
  - Oil separation / clarification / filtration / pH adjustment
- Potable water treatment
  - activated carbon filtration + chlorination
  - Sewage treatment plant
  - Extended aeration activated sludge

**Production Data**
- 12960 m³/day
- 6912 m³/day
- 2880 m³/day
- 100 m³/day

**Project Details**
- **Owner:** Orascom Construction
- **Location:** Baji, Salahdeed, Iraq
- **Date of Award:** 2012
- **Project Contractual Duration:** 24 months
- **Scope:** Engineering Procurement and Construction Management
- **Status:** Completed
BAIJI, IRAQ WATER TREATMENT FACILITIES

New Assiut project includes water/waste water treatment systems to serve the power plant water demand of high purity demineralized water required for boiler feed as well as various power plant users. Raw water from Nile River is supplied via intake structure to feed the water treatment system through plant pump house where supply pumps and raw water screens are located. The water/waste water treatment installed in New Cairo West project includes:

- **Intake Design**
  - Open intake

- **Raw Water Pretreatment System**
  - Sedimentation Tank + Clarifiers double stages multimedia filtration
  - 12960 m³/day

- **Demineralization System**
  - Reverse Osmosis + Electrodeionization (EDI)
  - 6912 m³/day

- **Potable water treatment**
  - Oil separation / clarification / filtration / pH adjustment
  - 2880 m³/day

- **Potable water treatment**
  - activated carbon filtration + chlorination
  - 100 m³/day

- **Sewage treatment plant**
  - Extended aeration activated sludge
  - 100 m³/day

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**Owner:** Orascom Construction  
**Location:** Baiji, Salaheldeen, Iraq  
**Date of Award:** 2012  
**Project Contractual Duration:** 24 months  
**Scope:** Engineering Procurement and Construction Management  
**Status:** Completed
**LIBYA**

**ZAWIA DESALINATION PROJECT (80,000 M³/DAY)**  
Completed 2010

PGESCo scope included design review, site supervision and project management of Zawia Sea Water Desalination Project. The scope also included plant equipment material inspection and performance testing as well as training and technology transfer to GPCOEWG (General People’s Committee of Electricity, Water and Gas).

**DERNA SEA WATER DESALINATION PROJECT (40,000 M³/DAY)**  
Completed 2010

PGESCo scope included design review, site supervision and project management of Derna Sea Water Desalination Project. The scope also included plant equipment material inspection and performance testing as well as training and technology transfer to GPCOEWG (General People’s Committee of Electricity, Water and Gas).

**SOUZA SEA WATER DESALINATION PROJECT (40,000 M³/DAY)**  
Completed 2010

PGESCo scope included design review, site supervision and project management of Sousa Sea Water Desalination Project. The scope also included plant equipment material inspection and performance testing as well as training and technology transfer to GPCOEWG (General People’s Committee of Electricity, Water and Gas).

**ABU TRABA SEA WATER DESALINATION PROJECT (40,000 M³/DAY)**  
Completed 2007

PGESCo scope included design review, site supervision and project management of Abu Traba Sea Water Desalination Plant. The scope also included plant equipment material inspection and performance testing as well as training and technology transfer to GPCOEWG (General People’s Committee of Electricity, Water and Gas).  
The project capacity is 2 X 20,000 M³/DAY using MED (Multiple Effect Distillation) units.
**LIBYA**

**ZAWIA DESALINATION PROJECT (80,000 M³/DAY)**
Completed 2010

PGESCo scope included design review, site supervision and project management of Zawia Sea Water Desalination Project. The scope also included plant equipment material inspection and performance testing as well as training and technology transfer to GPCOEWG (General People's Committee of Electricity, Water and Gas).

**DERNA SEA WATER DESALINATION PROJECT (40,000 M³/DAY)**
Completed 2010

PGESCo scope included design review, site supervision and project management of Derna Sea Water Desalination Project. The scope also included plant equipment material inspection and performance testing as well as training and technology transfer to GPCOEWG (General People's Committee of Electricity, Water and Gas).

**SOUSA SEA WATER DESALINATION PROJECT (40,000 M³/DAY)**
Completed 2010

PGESCo scope included design review, site supervision and project management of Sousa Sea Water Desalination Project. The scope also included plant equipment material inspection and performance testing as well as training and technology transfer to GPCOEWG (General People's Committee of Electricity, Water and Gas).

**ABU TRABA SEA WATER DESALINATION PROJECT (40,000 M³/DAY)**
Completed 2007

PGESCo scope included design review, site supervision and project management of Abu Traba Sea Water Desalination Plant. The scope also included plant equipment material inspection and performance testing as well as training and technology transfer to GPCOEWG (General People's Committee of Electricity, Water and Gas).

The project capacity is 2 X 20,000 M³/DAY using MED (Multiple Effect Distillation) units.
VIII- Intake / Discharge Water Structures
VIII - OFFSHORE INTAKE BASIN
Concrete Velocity Cap
El Ain EL Sokhna Project
Red Sea, Egypt
Offshore velocity cap intake structure, fully designed and modeled
Concrete Velocity Cap
El Ain EL Sokhna Project
Red Sea, Egypt
Offshore velocity cap intake structure, fully designed and modeled
Concrete Discharge
El AIN EL Sokhna Project
Red Sea, Egypt

Design of the structure and protections with modeling
Concrete Discharge
El AIN EL Sokhna Project
Red Sea, Egypt

Design of the structure and protections with modeling
Concrete Pump House
El Ain EL Sokhna Project
Red Sea, Egypt
Full design, details, modeling and electro mechanical works
Concrete Pump House
El Ain EL Sokhna Project
Red Sea, Egypt
Full design, details, modeling and electro mechanical works
Intake Basin
EL Tebbin Project, EGYPT
Debris and weeds mitigation system
Intake Basin
EL Tebbin Project, EGYPT
Debris and weeds mitigation system
Kureimat III Project, EGYPT
Full design, details and modeling of concrete intake structure on the Nile River
Kureimat III Project, EGYPT
Full design, details and modeling of concrete intake structure on the Nile River
Intake Basin
Suez Project, Red sea, EGYPT
Full design, details and modeling.
Natural stones and concrete intake basin.
Intake Basin
Suez Project, Red sea, EGYPT
Full design, details and modeling. Natural stones and concrete intake basin.
Intake Basin
Abu Qir Project, Mediterranean Sea, EGYPT
Full design, details and modeling.
natural stones, concrete and piping intake basin.
Intake Basin
Abu Qir Project, Mediterranean Sea, EGYPT
Full design, details and modeling, natural stones, concrete and piping intake basin.