# POWERSERV



Power Plants Services Company S.A.E.



#### Introduction

**Power Plants services Company S.A.E. (PowerServ)** is a Joint Stock Company established in 2011 to provide electromechanical services for Power Plants, Electrical Substations, Energy, Oil & Gas and Petrochemical projects.

**PowerServ** prides itself on its relatively medium size, allowing a near and dedicated service to each client, hence ensuring that every project assigned to PowerServ is accomplished to the highest possible proficiency level.

**PowerServ** founders enjoy a very strong knowledge of the Egyptian Generation and Transmission in Egypt. We have an extensive experience in the Operation and Maintenance of EEHC's affiliated power production & transmission companies. This experience helps PowerServ to better serve the Egyptian power sector.

#### **Scope of Services & Products:**

**PowerServ** provides its installation, operation and maintenance services for mechanical and electrical equipment and systems within:

- Power generating plants.
- Networks substations.
- Oil & Gas & Petrochemical upstream facilities.
- Renewable energy systems.

While providing our services to meet client requirements, we always focus on highest safety standards, quality procedures, reporting tools and project management techniques.





### 1. <u>Detailed Description Of Services:</u>

#### 1.1. Mechanical Services

Install, test, repair and recondition most types of mechanical process systems including:

- Gas turbines.
- Boiler components.
- Process piping.
- Valves.
- Pumps.
- Motors.
- Piping.
- Tanks, and vessels
- Fans and blowers.
- Compressors.
- Gear boxes
- Fire protection systems
- Pneumatic fittings / cylinders
- Valves / pumps / seals
- Insulation / lubricants and coating
- Heat exchangers
- Steel structure
- Sand blast & painting activities

#### 1.2. Electrical Services

Install and start up electrical equipment as but not limited to

- Electrical substations AIS and GIS including circuit breakers, disconnecting switches current and voltage transformers.
- MV and LV Switchgears.
- Power transformers.
- Generator circuit breaker and isolated phase bus duct.
- UPS, DC chargers and battery system.
- Protection relay panels and systems.
- Cable trays and raceway systems
- Cable pulling and termination for MV, LV and control cables.







- Protection relays setting and testing.
- Electrical systems testing.

#### 1.3. Instrumentation Services

Install and startup instrumentation devices and all related equipment as but not limited to

- Field instrumentation (Temp. Transmitters, Pressure Indicator, Pressure Transmitter.
   Pressure Switch, Flow Transmitter, Level Transmitter.......Etc.
- Instruments tubing and hook-ups.
- Instrument manifolds and control Valve.
- Mimic and annunciation panels
- Control systems, PLCs and DCS.
- Marshalling panels, FDF and GRF vibration monitoring systems.
- CEMS (Continuous Emission Monitoring system).
- Local panels (Junction Boxes. Instrument Cabinet, Junction Box, Local Instrument Rack, Local Pull Box.....Etc.)
- Erection of I&C Cables, Thermocouple Cable, laying and termination of cables.
- Calibration of the field instrumentation.
- Loop checking.

#### 1.4. Mobile Instrumentation Calibration Lab Services

Our calibration laboratory includes the following calibration equipment:

- Portable pressure calibrator (GE-Druck DPI-610)
- Digital Test Gauge (GE-Druck DPI 104)
- Hydraulic Hand Pump (GE-Druck PV212)
- Pneumatic Press. and Vacuum Pump (GE-Druck PV211)
- Pressure calibration kit (Omega DPG4000)
- Dry Block Temperature Calibrator (GE-Druck DBC 650TC)
- Loop Calibrator (GE-Druck UPS-III)
- AMS Trex<sup>™</sup> Device Communicator
- Field Communicator Heart Emerson 375
- Precision Multifunction Process Calibrator (Fluke 726)
- Temperature Hitester (Hioki 3442)
- DC Signal Source (Hioki SS7012)

The calibration laboratory equipment are maintained and kept with its records of calibration from standard accreditation labs, it can be mobilized to our client's site at upon request.





#### 1.5. QA/QC Testing and Inspection Services

We are offering a wide range of testing, analysis and inspection services for power generating and O&G projects. Our provided services range from standard Non Destructive Testing to complete inspection programs and specialized inspection techniques.



PowerServ inspectors are certified as a minimum requirement and all personnel will be regularly trained by our all-round certified level III inspector.

Our quality assurance / inspection programs whether a testing, analysis, QA/QC, NDT, boiler inspection, welding inspection services at vendor's facility or on-site construction include:

- Supplier quality surveillance / expediting services.
- Complete turnover documentation compilation and review.
- Provide QA/QC inspectors, welding inspectors for the project.
- Structural fabrication, installation welding Inspection.
- Process piping fabrication and installation Inspection.
- Welding procedure qualification review.
- Weld inspection Level 2 & Level 3 personnel.
- Vendor fabrication inspection.
- Vendor quality surveillance.
- Visual inspection of process piping systems line check, skids, pressure vessels, tanks, and structurals.
- · Hydro testing witnessing & sign off.
- Magnetic Particle and Dye Penetrant Testing.



## 2. Previous Experiences:

Client	Year	Project	Scope Details
Kelvion FZE	2019	District Cooling Plant, New Capital	Installation and commissioning of cooling towers at ACUD
Egyptian Marketing Consultants (EMC)	2019	West Assuit 1500 MW Conversion PP	Installing, Commissioning and Start Up New Hydrogen Generating Plant
Egyptian Marketing Consultants (EMC) / EDEPC	2018	Abu Sultan Power Plant (4x150)MW	Mechanical and Electrical construction for Feed Water Pumps Replacement in Unit two
Alexandria National Refinery petroleum Company (ANRPC)	2108	Steam blow out for the CCR	Engineering, procurement of material construction of steam blow lines, blow out through silencer with ENPPI
Egyptian Marketing Consultants (EMC)	2018	Abu Qir Steam Power Plant (4x150MW) – Unit 2	Mechanical and Electrical construction for Feed Water Pumps Replacement with all related piping
Egyptian Marketing Consultants (EMC)	2017	Sidi Krir combined cycle Power Plant (750MW)	Installing, Commissioning and Start Up New Hydrogen Generating Plant with Ca- pacity 15 Nm³/h
Egyptian Marketing Consultants (EMC)	2017	Attaka Power Plant (2x150+2X320)MW	Erection of Special self cleaning Filter with Replacement of the related lines
Egyptian Marketing Consultants (EMC)	2017	Abu Qir Steam Power Plant (1300MW) – Unit 7	Mechanical and Electrical construction for 2 KSB Feed Water Pumps 1,000 Ton each Replacement with all related piping
Egyptian Marketing Consultants (EMC)	2016	Abu Qir Steam Power Plant (4x150MW) – Unit 4	Mechanical and Electrical construction for Feed Water Pumps Replacement with all related piping
GE Power Gas Power Systems	2016	Sharm Elshiekh Power Plant (6xLM6000 Gas Turbine) – Unit 4	Gearbox Maintenance and Replacement Activities
OFMECO Pressure Components	2016	Ain Sokhna Super Critical Power Plant (2X650) MW	Deaerator Thermal Design Improvement, High Pressure Heater Inspection Unit 1& 2
OFMECO Pressure Components	2016	Ain Sokhna Super Critical Power Plant (2X650) MW	High Pressure Heaters Inspection & Repair Unit 1
Egyptian Marketing Consultants (EMC)	2015	ETHYDCO Ethylene Pro- ject – Alexandria	Supplying Insulation Material & SS Spools
Egyptian Marketing Consultants (EMC)	2015	Assuit El-Waledia Steam Power Plant 2x320MW	Detail Engineering, Installing, Commissioning and Start Up New Hydrogen Generating Plant with Capacity 10-15 Nm³/h



Client	Year	Project	Scope Details
GE Power Gas Power Systems	2015	Hurghada Power Plant (6xLM6000 Gas Turbine) – Unit 6	Gearbox Maintenance and Replacement Activities
TBEA Shenyang Transformer Group Co., LTD	2015	Giza North Power Plant CP-113 Combined Cycle Power Plants 2250MW	Designing, Supplying and Installing Transformer Radiator Support
Hassan Allam Construction	2015	14 Gas Turbine LM6000 at three sites Hurgada, Sharm Elshiekh and port said	Installing , testing and pre commissioning of Qty. (14) Gas turbine LM6000 complete power block
Egyptian Marketing Consultants (EMC) / EDEPC	2015	Abu Sultan Power Plant (4x150)MW	Mechanical and Electrical construction for Feed Water Pumps Replacement in Unit Four.
Egyptian Marketing Consultants (EMC) / WDEPC	2014 - 2015	Abu Qir Power Plant / Unit Five 300 MW	Conducting the Dismantling, Supplying, Installation and Pressure Test Activities for High Pressure Heaters no. 6 & 7
Egyptian Marketing Consultants (EMC) / EDEPC	2014 - 2015	Auon Mousa Steam Power Plant (2x350)MW / / Unit Two	Conducting the Dismantling, Supplying, Installation and Pressure Test Activities for High Pressure Heater no. 6 Coils
Egyptian Marketing Consultants (EMC) / EDEPC	2014	Abu Sultan Power Plant (4x150)MW	Mechanical and Electrical construction for Feed Water Pumps Replacement in Unit One
TTC/TPSC	2014	Sidi Krir Combined Cycle Power Plant 750MW / CP- 118	Dismantling, Supplying and Installing Five spools in WS system
Egyptian Marketing Consultants (EMC)	2013	Attaka Power Plant (2x150+2X320)MW	Erection two (2) Self Cleaning Filters on Closed Cooling Heat Exchangers and Supplying the Mechanical Items
Egyptian Electricity Transmission Company EETC / Upper Egypt Electricity UEE	2013	Supplying Fire Fighting Equipments to Upper Egypt Electricity - Aswan Networks Sector Buildings	Supplying Fire Fighting Extinguishers and Out Doors Fire Hose Cabinets
Abu Zaabal Fertilizers and Chemicals Company (AZFC)	2013	Unit Seven 15 MW Steam Turbine Generator	Conducting the Operation and Preventive/ Corrective Maintenance
East Delta Electricity Production Company (EDEPC)	2013	Attaka Power Plant (2x150+2X320)MW	Supply and Install Charging Headers for 250 Bar H2 Cylinders in H2 Generation Unit
TBEA Shenyang Transformer Group Co., LTD	2013	Giza North Power Plant CP-113 & Banah Power Plant CP-113 Combined Cycle Power Plants 1500MW	Supplying Mechanical and Electrical items



Client	Year	Project	Scope Details
YoungJin Electrical & Instrumentation Co., Ltd	2012	Ain Sokhna Power Plant CP-105 (2X650)MW	Erection, Commissioning and Start –Up for Instrument and Electrical work in Boiler # 1,2
Suez Steel Factory	2012 / 2013	Suez Steel Factory	Supplying Electrical and Mechanical items
SEPCO III	2012 / 2013	Giza North Power Plant Combined Cycle Power Plant 1500MW	Supplying Mechanical and Electrical items
SEPCO III	2012 / 2013	Banha Power Plant Combined Cycle Power Plant	Supplying Mechanical and Electrical items
Egyptian Marketing Consultants (EMC)	2012	Abu Qir Power Plant (2x650)MW	Supplying all Mechanical and Electrical items required for H2 Unit Erection
YoungJin Electrical & Instrumentation Co., Ltd	2012	Ain Sokhna Power Plant (2X650)MW	Supplying mechanical item and Scaffolds tools for Boiler #1,2
Egyptian Marketing Consultants (EMC) / EDEPC	2012	Abu Sultan Power Plant (4x150)MW	Mechanical and Electrical construction for Feed Water Pumps Replacement in Unit three
TTC/TPSC	2012	Sidi Krir Combined Cycle Power Plant 750MW / CP- 118	Supplying Mechanical and Electrical items
Egyptian Marketing Consultants (EMC) / EDEPC	2012	Auon Mosa Power Plant (4x350)MW	Supplying all Mechanical and Electrical items for H2 unit replacing
Egyptian Marketing Consult- ants (EMC) / EDEPC	2012	Abu Sultan Power Plant (4x150)MW	Erection, Commissioning and Start –Up for new Hydrogen plant
Egyptian Marketing Consultants (EMC) / EDEPC	2012	Attaka Power Plant (2x150+2X320)MW	Erection, Commissioning and Start –Up for new Hydrogen plant
Tourah Cement Factory	2011	Tourah Cement Factory	Electrical work for replacing Packing Plant no. 3
ASA Automation	2011	Closed water cycle- Tourah Cement Plant	Supplying instruments fitting



## 3. **General Information:**

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