



ETC Solutions

Passion Builds The Future







CEO'S MESSAGE



At ETC Solutions, we take great responsibility and pride in our commitment to provide erection, testing and commissioning services in a highly professional and best possible way. Our services are a direct reflection of our individual expertise, intellect, personalities and professional capabilities.

We believe in building strong relationship with the client by offering expertise that goes beyond “state of the practice” including innovative solutions and producing exceptional outcomes keeping in view the project timeline stated by the client.

We believe in professionalism with core values of fairness, integrity, accountability and social responsibility. The core values reflect how we interact with our clients and our colleagues. We hold each other accountable for creating a company we can all be proud to work at.

We have only one vision and objective: to ensure our client's mission objectives are achieved with the highest level of capability and assurance, and at the lowest possible cost.

Our long-term vision is to serve the country by incorporating best engineering design and methods in the field of construction, erection, testing and commissioning.

NIAZ AHMED ABBASI

Chief Executive Officer

ETC Solutions (Private) Limited



WHO ARE WE?

The ETC Solutions (Pvt.) Ltd. was established by its founding partners with the aim to set one window solution for provisioning construction, erection, testing & commissioning services to the power and Industrial sector in full conformance to international standards and codes. We are committed and determined to deliver innovative services and solutions to our clients to accomplish their goals on time and within budget.

MISSION STATEMENT

Our mission is to reduce the cost of project with smart working without compromising the quality.

Like any other commercial organization, earnings are important to us but at the same time, we also believe that profits are a corollary of serving society well, by fulfilling our Mission. ETC Solutions believes that its mission supersedes its profits.

CORE VALUES

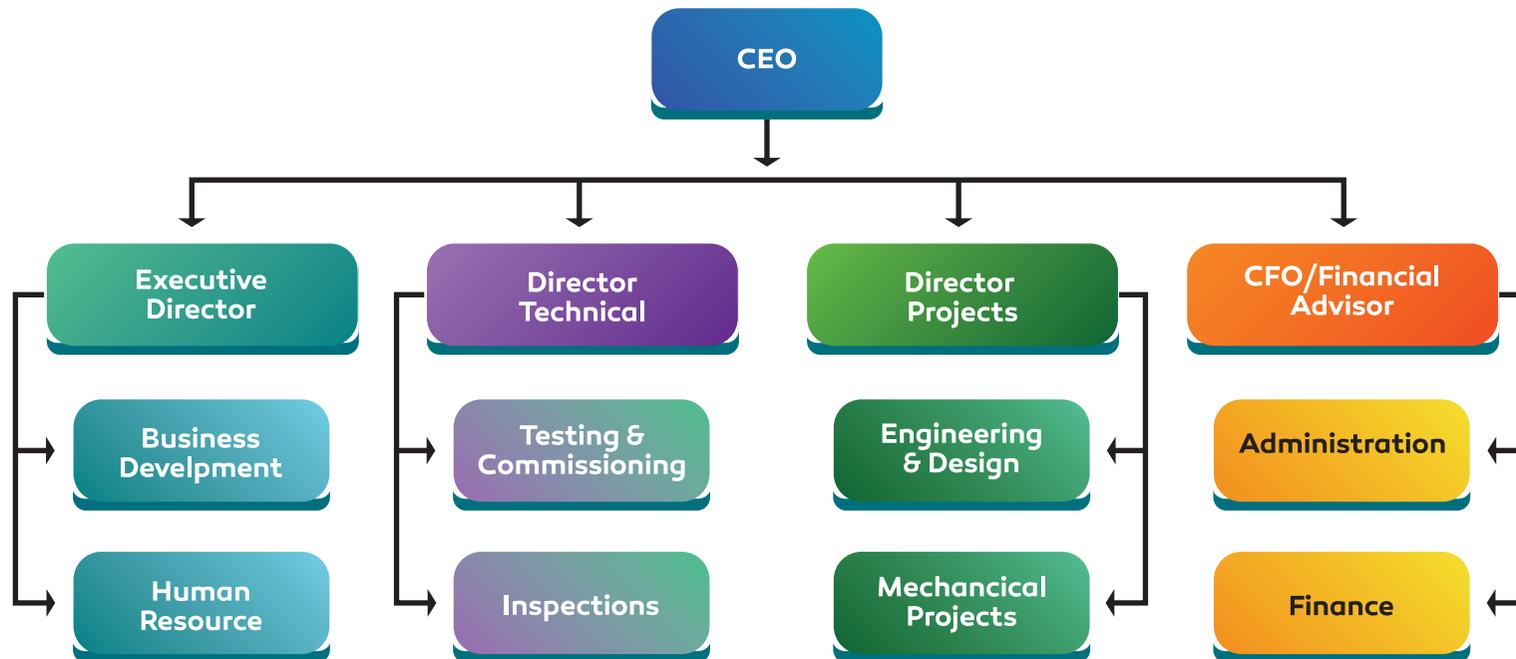
These values serve as the beacon light and a compass for our business..

- Integrity
- Fairness
- Social Responsibility
- Innovative Strength
- Accountability
- Customer Satisfaction

These values guide us to achieve our goals.



ORGANIZATIONAL STRUCTURE





POWER ENGINEERING CONCERN IS NOW ETC SOLUTIONS



COMBINED STRENGTH FOR TOMORROW'S SOLUTIONS

Innovation, quality and competence – that is what the names ETC Solutions and PEC stand for. ETC Solutions have acquired 100% Shares of PEC. Now we are expressing work through our common brand.

ONE NAME – ONE BRAND – ONE COMPANY

We present the common strength in ETC Solutions. With passion for the highest engineering expertise, we are carrying out the visions of our clients in future-oriented projects. The two companies have pooled their resources and expertise and continued to operate under the ETC Solutions' brand.

With the acquisition of PEC in 2020, ETC Solutions consolidated its position as one of the most important engineering players for energy, construction and infrastructure projects in Pakistan. Our experienced team and resources, allowing us to provide high-quality engineering, Construction, Testing and Commissioning services to our private and public clients, no matter where their projects are.

Power Engineering Concern is a private owned company in the Islamic Republic of Pakistan, professionally specialized in multidiscipline engineering, fabrication, erection, installation, commissioning, maintenance and operation of Power Generation Plants and Chemical Process Plants.

Since 1993, PEC has under taken the installation work of different IPP (Independent Power Plants) with quality workforce, supervisory skill and engineering expertise to the entire satisfaction of the clients.

Over the span of 25 years, Power Engineering Concern has been rendering services of supervisor, skilled, semiskilled and unskilled manpower for plant maintenance and general work on regular yearly contract basis.

PEC is known to Client's due to its capability to deliver the professional services through its traditional working principles, vast experience backed by strong project management, engineering, quality orientation, time targeting and quick mobility skill in the field of Power Generation Plants, Chemical Process Plants and industrial installations.

THE SUCCESS STORY OF PEC

2x210MW Units 5 & 6
Thermal Power Plant,
Muzaffar Garh,
Pakistan

AES Lalpir 2x362MW
Thermal Power Plant,
Muzaffar Garh,
Pakistan

Saba Power 136MW
Thermal Power Plant,
Farooq Abad,
Pakistan

28MW 4xLM6000
HRSG, K-Electric,
Karachi,
Pakistan

**1993
1994**

**1994
1996**

**1996
1997**

**1997
1998**

**1998
1999**

**2007
2009**

**2014
2016**

HUBCO 4x223MW
Thermal Power Plant,
HUB, Baluchistan
Pakistan

Rousch 424 MW
Gas Turbines Combined
Cycle Power Plant, Pir
Abdul Hakim, Pakistan

220MW 4xLM6000
Gas Turbines, K-Electric,
Karachi,
Pakistan



CAN WE HELP YOU?

When you embark on a construction project in this day and age — regardless of whether that project is big or small — you can find yourself burdened with an overwhelming sense of responsibility.

- Can I stay within budget and still get the quality of workmanship I need?
- How will my decision today have an impact on tomorrow?
- Am I achieving the right balance between energy efficiency and financial viability?
- How can I do it in the best possible way and in-line with the proven success stories?

It doesn't seem to matter how much progress we make, the demands to produce more with less and to achieve the lowest possible carbon footprint are ever increasing. These pressures can make planning a nerve-racking task, let alone a full-scale project execution.

ETC Solutions provides top notch energy engineering and management services to enable rapid development of efficient, cost-effective, reliable, and environment-friendly energy/construction projects. Our customized technical solutions and services are dedicated to investment firms, energy groups, industries, financial institutions and public sector organizations involved in the development of power generation, power transmission and industrial projects.

Our Services include:

DESIGN & ENGINEERING	POWER SYSTEM / TRANSMISSION LINE TESTING	TRANSFORMER & HV SWITCHGEAR TESTING	OIL FILTRATION & TREATMENT
GENERATION EQUIPMENT TESTING	MAINTENANCE, REPAIR & RETROFITS SOLUTIONS/TESTING	CALIBRATION EQUIPMENT TESTING	FIBER OPTIC CABLES TESTING
COMMISSIONING / TEST & START-UP SERVICES	CIVIL & CONSTRUCTION	MEP DESIGN & CONSTRUCTION	ACCEPTANCE TESTING (SAT & FAT)
TECHNICAL TRAINING	END OF WARRANTY INSPECTION (EOWI)	CONDITION MONITORING OF GENERATOR, TRANSFORMER & SWITCHGEAR	ASSET MANAGEMENT

We provide one window solution for all kind of engineering, Testing & Commissioning services starting from engineering studies and conceptual design till final completion, commissioning and O&M service during operational phase of the plant sets us apart from the other firms operating in Pakistan.

SERVICES

CONSTRUCTION/ERECTION/INSTALLATION & MAINTENANCE WORKS

To fulfill the clients requirement ETC Solutions is fully capable to deliver the professional services through its traditional working principles, vast experience backed by strong project management, engineering, quality orientation, time targeting and quick mobility skill in the field of Power Generation Plants, Chemical Process Plants and industrial installations. Including but not limited to the following:

■ Power Generation

- Thermal
- Diesel Sets
- Gas Turbine & Steam Turbines
- Hydel
- HRSG's and all types Boilers

■ Oil Refineries And Petro Chemicals

■ Fertilizers Plants

■ Alloy Piping System

- High Pressure
- Low Pressure

■ Equipment

- Pumps
- Tanks And Vessels
- Compressors

■ Heavy Storage Facilities

- Fuel Oil, Gas, Water And Chemical

■ Instrumentation, Electric Installation And Calibration

■ Auxiliary System Installation

■ Hot And Cold Insulation And Cladding

■ Refractory

■ Glinting

■ Assistance In Maintenance And Operation

■ Annual Outage

- General Maintenance
- Preventive & corrective maintenance
- Minor / Major Overhauls
- Retrofits

■ Surface Treatment

- Sand Blasting
- Painting
- Chemical Coating





SERVICES

TESTING & COMMISSIONING SERVICES FOR ELECTRICAL POWER GENERATION AND TRANSMISSION SYSTEM

With key experience in the testing & commissioning of Switchgears, Power Transformers, Protection and Control Systems, Substation HV/EHV Equipment of GIS & AIS and Generation Equipment; ETC is committed to provide unmatched professional service to its clients. Our Commissioning Engineers understand the big picture and are capable of commissioning Greenfield and Brownfield projects as well as challenging retrofits being cut into a live station. Their knowledge of transmission, distribution, and generation systems enables them to develop and execute plans that work under the customer's tight outage schedules and requirements. Our Commissioning Engineers are exceptionally good in developing and executing the testing plans and performing the final in-service checks when bringing the equipment online for the first time. Our field service professionals are experienced working in the utility and industrial environment with safety being their primary priority during all activities. Our team continuously reviews and revises their safety program to ensure safe work conditions for personnel and equipment. We provide qualitative and highly reliable testing, commissioning, maintenance and troubleshooting services for electrical systems up to 500kV. Our services include but are not limited to;

- Testing of, busbars and transformer along with their primary stability
- Testing of 132kV, 220kV, 500kV AIS & GIS
- Testing of Medium Voltage Switchgears
- Providing testing Engineers along with Calibrated world-class test equipment, on a project hire basis.
- Protection and switchgear upgrade modification





PRIMARY EQUIPMENT TESTING

- Power Transformer and Auto Transformer
- AIS & GIS Switchgear equipment
 - Current Transformers
 - Voltage Transformers
 - Coupling Capacitor
 - Line Traps
 - Circuit Breakers
 - Switching Devices
 - HV/MV Power Cable
 - Surge Arrestors
 - Grounding Measurements

SECONDARY EQUIPMENT TESTING

- Protection Relay setting Calculations
- Testing of Protection Relays of all types and makes
- Testing & Commissioning of control & relay panels
- Test & calibration of Energy Meters
- Testing & calibration of smart metering system
- Testing & calibration of measuring & metering system
- End to End testing of automation system

PLANT AUXILIARY SYSTEM TESTING

- AC/DC Chargers and UPS
- AC/DC LV Distribution Panels/Systems
- Auxiliary Transformer and RMUs
- Station Batteries

SERVICES

TELECOM SYSTEM/SCADA & PLC TESTING

- Testing & commissioning of RTU/SCADA System
- Point to Point testing / verification of signals & analogue measurements.
- PLC/SDH Panels
- End to End Testing

We provide one window solution for all kind of engineering, Testing & Commissioning services starting from engineering studies and conceptual design till final completion, commissioning and O&M service during operational phase of the plant sets us apart from the other firms operating in Pakistan.

MAINTENANCE SOLUTIONS FOR ELECTRICAL CONTROL AND DISTRIBUTION SYSTEMS

Electrical control and distribution systems are generally complex and expensive assets that need to be effectively maintained so they operate at optimum performance over their serviceable life. To allow your facility to run smoothly, your business or company's electrical infrastructure depends on a reliable internal power delivery and distribution system. ETC Operation & Maintenance team is providing comprehensive maintenance solutions & operations services and most successful electrical strategies that you can take advantage of.

Our experienced team manages the provision of electrical infrastructure for complex transmission and distribution upgrades and renewals. We are qualified to work with network and asset owners to deliver the full suite of services for electrical work programs. With our on-site expertise and highly skilled workforce, our services are delivered through a discipline approach where accountability and responsibilities are clearly defined to deliver value-adding services to our clients. ETC also offer testing expertise during Annual Preventive maintenance. Our capabilities include.

- Protection panels with numerous protection schemes, control systems and loose relays (Distance, Differential, Over current, DOC, DEF, EF, Synchro check, A/R, AVR, B/B, B/F etc.
- Medium switchgear with different voltage levels.
- Dry and oil immersed Auxiliary transformers (TTR, Winding resistance, Oil BD, DGA and insulation test)
- Auxiliary Systems, AC, DC, DC chargers, ATS and UPS, DC earth fault trouble shooting
- Diesel generators operation and maintenance

TESTING & COMMISSIONING SERVICES FOR ELECTRICAL POWER GENERATION SYSTEMS

Our commitment to provide the accurate solutions to the clients has always been our paramount concern. ETC offers testing and commissioning services for various types of power generation systems like gas, diesel, steam, and combined cycle units. Our services include.

- Testing of rotors, stator and exciter systems.
- Testing of generator protection systems, AVR and Synchronizing control panels.
- Testing & calibration of Instruments and control.
- Verification of I/O of DCS
- Maintenance and major overhauling and rehabilitation service

DESIGN & ENGINEERING

ETC Solutions (Pvt.) Ltd. operates as a prime contractor and also as a reliable subcontractor on design and build contracts or build only contracts. The company has available, in-house experienced design team and fully equipped drafting facility.

HVAC AND MEP

We are covering all aspects of work in the area of Electrical & Mechanical installations of HVAC system, including Plumbing services and Building Management System (BMS). During this time Mechanical services have become specialists in planned preventative maintenance as well as Installations. Our success is based on the continuous commitment that services give to all our clients by continuously updating and developing our services, and importantly, in this time of rising costs - competitive pricing structure.



SERVICES

END OF WARRANTY INSPECTION

ETC Solutions can evaluate your power projects' risks in the most correct way and help you take low risk investment decision.

We offer End of Warranty Inspections and testing services for power plant to meet any of your specific requirements including but not limited to;

- Auditing the health of the power generation and balance of plant equipment prior to the end of the warranty.
- Documenting the condition of the equipment in terms of the influences of any sub-standard maintenance (latency), as well as any sub-standard material quality (serial defects)
- Identify any latent issues resulting in sub-optimal power generation over during the under-warranty operations
- Establish baseline conditions of the farm, for use in determining the root cause and propagation of problems/downtimes that may be experienced in future operations
- Empowering the Client in preparing and defending warranty claims as per the applicable EPC/O&M contract(s)

ETC Solutions, adopt as a principle of being a partner for their clients, understand their requirement and expectations in the best way, and then offer the most accurate and efficient solutions and recommendations to them.

INSTRUMENT & CONTROL SYSTEM SERVICES

ETC provide comprehensive and high-quality services like Engineering, Installation, Calibration, Testing, Commissioning and Maintenance of Process Control Instrument System for Refinery, Petrochemicals, Power Plants, Fertilizer and Chemical Plants, Food Processing and General Industries etc.

Our capability covers the modernization/ revamping and retro fitting of Instrumentation & Control System. List of instruments is as mentioned below but not limited to;

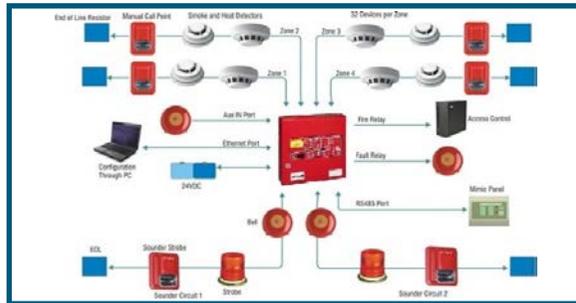
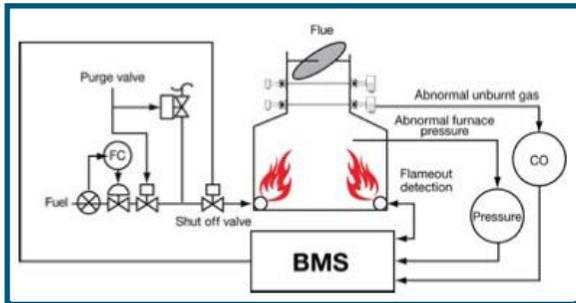
- Pressure Gauge
- Thermostat
- Pressure Transmitter
- Level Gauge
- pressure Controller
- Level Transmitter
- Pressure Control Valve
- Temperature Gauge
- Flow Indicator
- Temperature Transmitter
- Flow Transmitter
- Temperature Controller
- Flow Controller
- Temperature Control Valve



TECHNICAL SUPPORT SERVICES:

We provide the technical support to the following Control System;

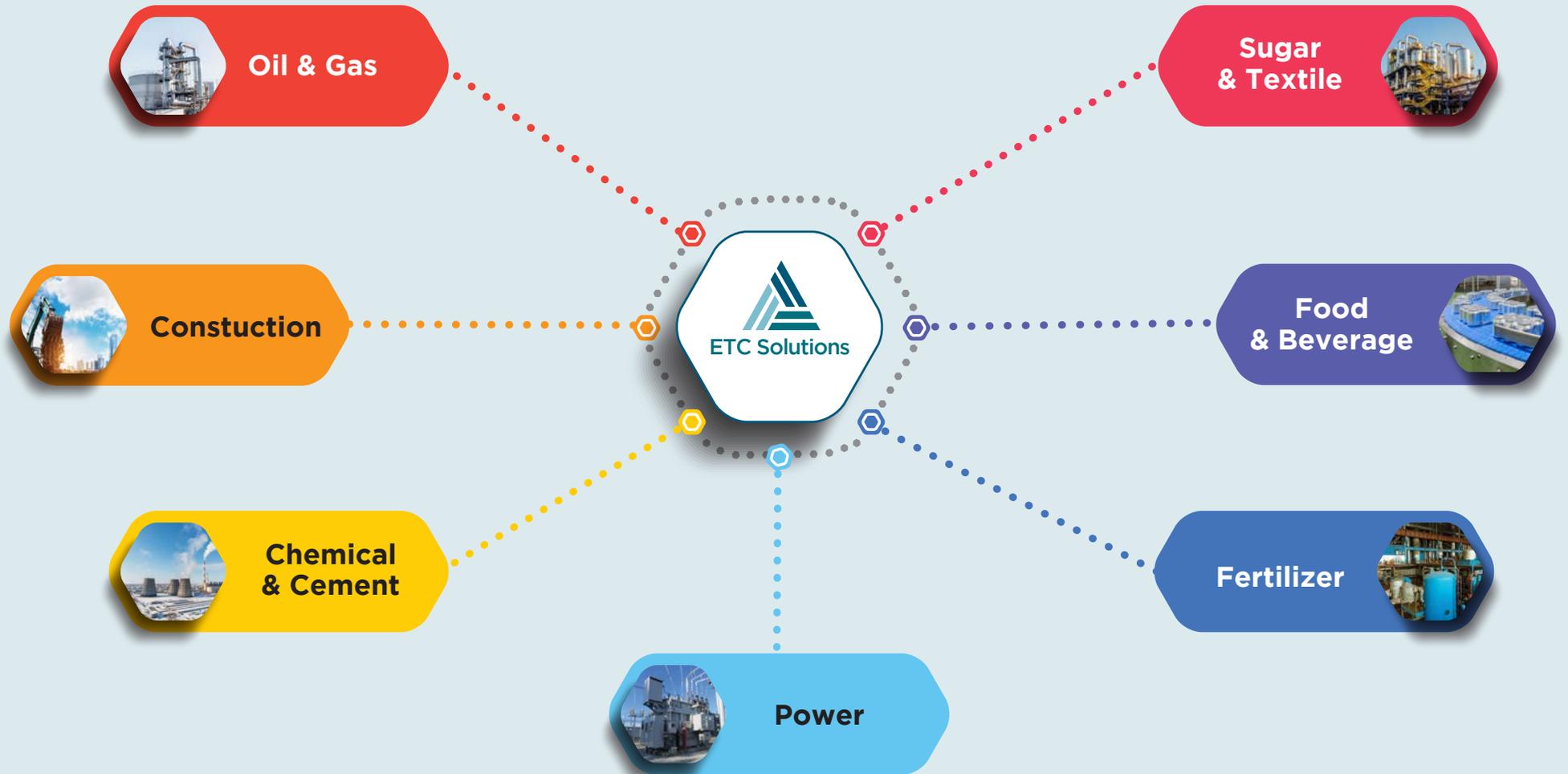
- Gas measurement Systems and Custody Meter Transfer Equipment's including Orifice Meters, Flow Computers and Online Gas Chromatograph.
- DCS Systems, Yokagawa, Delta V and ABB Systems,
- PLC System, Allen Bradley SLC/PLC, Siemens and Schneider Modicon.
- SCADA & Emergency Shut Down Systems.
- Burner Management System.
- Vibration monitors & detection System including Bentley Nevada.
- Fire & Gas Systems.



We provide the additional support services for your Asset Management.

- Incident reporting and investigation.
- Hazard Identification and Risk Assessment
- Tap Root Analysis for root cause identification and incidents investigations.
- HAZOP & SIL Studies.
- Process Safety Management.
- Asset Integrity Management.
- Managing audits of plants including plant safety, asset integrity management & reliability,
- Inventory Planning and Contract Management.
- Team Building & Coaching.

BUSINESS SECTORS



TESTING EQUIPMENTS

- OMICRON 256 Plus
- CPC100
- Primary Injection up to 2000A
- Sverker 750
- TTR Tester
- Megger 10KV
- DC Hi-Pot

- Oil Break down voltage Tester
- Clamp Meters
- Digital Multimeters
- Energy Analyzer
- Earth Resistance measuring instrument
- Electrical & Mechanical tool kits for technicians



CONSTRUCTION EXPERIENCE

We have a proven track record of mechanical fabrication and erection of structure, turbine hall, boiler and boiler modules, pipe racks, piping and tanks. Installation of gas turbines and generator and rendering of services for commissioning.

KESC 28 MW 4xLM6000 HRSG



Client: KESC LTD
Project: KESC 28MW
4xLM6000 HRSG
Collaboration: IEG,
SLOVAKIA
Year: 2014- 2016

Complete mechanical fabrication and erection of structure, turbine hall, boiler and boiler modules, pipe racks, piping and tanks. Installation of gas turbines and generator. Rendering of services for commissioning.

220 MW 4xLM6000 GAS TURBINES



Client: KESC LTD
Project: 220 MW
4xLM6000 Gas
turbines
Collaboration: METKA,
GREECE
Year: 2007- 2009

Complete mechanical fabrication and erection of structure, turbine hall, boiler and boiler modules, pipe racks, piping and tanks. Installation of gas turbines and generator. Rendering of services for commissioning.

134 MW TPS SABA POWER PLANT



Client: KESC LTD
Project: 134 MW TPS
Saba Power Plant
Year: 2002

Rehabilitation of KESC's Boiler 210 MW unit-3, Bin Qasim Thermal Power Station, including Refractory, Insulation and Cladding work.

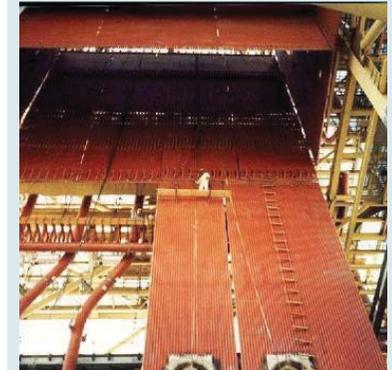
136 MW THERMAL POWER PLANT - SABA POWER



Client: El Paso Coastal
Technology International
Inc, USA
Project: 136 MW Thermal
Power Plant
Year: 1999

Fabrication and Installation of plant structural, piping non-pressure and pressure parts. Rendering services of supervisory skilled, semiskilled and non-skilled manpower for
1. Plant maintenance, general work on regular yearly basis.
2. Maintenance and overhauling of steam Turbine, generator, BOP and Boilers jet pressure cleaning on annual outage.

HUBCO 4x323 MW THERMAL POWER PLANTA



Client: HUBCO
Project: HUBCO 4x323
MW Thermal Power
Plant
Collaboration: Interna-
tional Power- U.K
Year: 1996

Rendering Services of supervisor, skilled, semi-skilled and unskilled manpower for plant maintenance and general work on regular yearly contract basis. Maintenance and overhauling of steam turbine and generators on annual outage.

EXPERIENCE

We have a proven track-record of providing industry-leading technical advisory services by working with lead developers and team.

We have served clients achieving their major project milestones by providing due diligence of proposed plants.

Our dedicated team has comprehensive knowledge of Plant technology, investors and balance of plant, designing systems to overcome site constraints through consideration of topography, resource, planning requirements and suitable component integration.



Client: Getz Pharma
Location: Karachi – Pakistan
Capacity: 132kV GIS Grid Station
Services: 1. Testing & Commissioning
2. O & M Contractor
Duration: 2019-Ongoing

Contracted by Getz Pharma to provide Services of O&M Contractor for 132kV GIS Grid Station, prior to energization of grid, ETC Solutions has successfully completed the testing and commissioning activities as a sub-contractor of PEL.



Client: Oursun Solar (Pvt) Ltd
Location: Gharo, Sindh – Pakistan
Capacity: 50 MW
Services: Independent Engineer
Duration: 2018-2019

Contracted by Oursun Solar (Pvt.) Ltd to provide Independent Services for SPP, the service includes but not limited to:

- Inspection/witness of pre-commissioning tests of seller Interconnection facilities
- Inspection/witness of commissioning of seller interconnection facilities
- Inspection/witness of commissioning tests of the complex
- Inspection/witness of commissioning (Reliability Run Test) of Complex as per EPA



Client: Sindh Nooriabad Power Company – Phase II Private Limited
Location: Nooriabad – Pakistan
Services: Relay setting & testing of OC/EF Relays
Duration: 2019

Contracted by SNPCII to provide the following services:

- Review existing relay setting
- Proposed revised setting in lieu of abnormal trips
- testing of OC/EF relays at revised setting and trip test (07 Nos.)

EXPERIENCE



Client: Amreli Steel Limited

Location: Dhabeji – Pakistan

Capacity: 14 MW Extension Project

Services: Consultancy Services of 14MW Extension Project of M/s Amreli Steel Ltd with K-Electric

Duration: 2019

Contracted by Amreli Steel Ltd to provide the following consultancy services:

- Project development / Base Design
- Detail Design review/vetting
- Construction Management & Supervision
- Commissioning, Performance and Acceptance Testing



Client: F&M (Private) Limited

Location: Karachi, – Pakistan

Services: Technical Services & Due Diligence for 03 Nos. 132/11kV, 63MVA Power Transformers

Duration: 2018

Contracted by F&M to provide the following services:

- Review of existing test results & maintenance record of 03 Nos. 132/11kV, 63MVA Power Transformers
- Recommendation for Maintenance / corrective plan for durability & better performance of each transformer
- Tests conducted to substantiating the current condition of the power transformers
- Transformer Turn Ratio (TTR)
- DC winding resistance
- Capacitance and Dissipation Factor (C&DF)

Di-electric of Oil for Main Tank and OLTC

- Insulation Resistance



Client: Naveena Steel Mills Limited

Location: Karachi – Pakistan

Capacity: 132kV Grid Station

Services: Site Supervision

Duration: 2019-2020

Contracted by Naveena Steel Mills Limited to provide site supervision activities for its grid station. The service includes but not limited to:

- Supervise entire construction and erection works including testing commissioning and energization of the grid.
- Monitor the project schedule and assist NSML in the follow up of the schedule and point out any delays/slip from the schedule.
- Certify Contractor's running bills as per agreed milestone payment.
- Co-ordinate with KE during the construction phase.
- Review and finalize the test procedures and test protocols submitted by the contractor.
- Witness the commissioning tests including the metering and protection system by the contractor.



**AMRELI
STEELS**

Client: Amreli Steel Limited

Location: Dhabeji – Pakistan

Services: Incorporation of Distance Feature on P543 relay as Backup protection at Amreli and Dhabeji Grid

Duration: 2018

Contracted by Amreli Steel Ltd to provide the following services:

- Engineering & Design of distance protection scheme for Amreli Steel & remote end grid Dhabeji at KE Premises
- Preparation of Drawing of Amreli and Dhabeji grids
- Relay setting calculations of Amreli and Dhabeji grids
- Testing & Commissioning of relays at Amreli and Dhabeji ends



**Hawa Energy
(Private) Limited**

Client: Hawa Energy Private Limited

Location: Jhimpir, Sindh – Pakistan

Capacity: 49.735 MW Wind Power Plant

Services: End of Warranty Inspection for EBoP

Duration: 2020 ~ Contd.

Contracted by Hawa Energy Private Limited to provide the End of Warranty Inspection for EBoP with the following objectives;

- To audit the health of the balance of plant equipment prior to the end of the warranty.
- To document the condition of the equipment in terms of the influences of any sub-standard maintenance (latency), as well as any sub-standard material quality (serial defects)
- Identify any latent issues resulting in sub-optimal power generation over during the under-warranty operations
- Establish baseline conditions of the farm, for use in determining the root cause and propagation of problems/downtimes that may be experienced in future operations.
- To empower the Client in preparing and defending warranty claims as per the applicable EPC/O&M contract(s)

**JHIMPIR
POWER**

Client: Jhimpir Power Limited

Location: Jhimpir, Sindh – Pakistan

Capacity: 49.7 MW Wind Power Plant

Services: End of Warranty Inspection for EBoP

Duration: 2020 ~ Contd.

Contracted by Jhimpir Power limited to provide the End of Warranty Inspection for EBoP with the following objectives;

- To audit the health of the balance of plant equipment prior to the end of the warranty.
- To document the condition of the equipment in terms of the influences of any sub-standard maintenance (latency), as well as any sub-standard material quality (serial defects)
- Identify any latent issues resulting in sub-optimal power generation over during the under-warranty operations
- Establish baseline conditions of the farm, for use in determining the root cause and propagation of problems/downtimes that may be experienced in future operations.
- To empower the Client in preparing and defending warranty claims as per the applicable EPC/O&M contract(s)



CLIENTELE



MEET THE TEAM



NIAZ AHMED ABBASI

CHIEF EXECUTIVE OFFICER

With more than 29 years of experience, Mr. Niaz Ahmed Abbasi has been appointed as Chief Executive Officer of ETC Solutions (Pvt) Ltd. He has a wide-ranging exposure and experience in Projects' Planning, Construction and testing & commissioning. Before joining ETC Solutions (Pvt.) Ltd, he has served in various organizations including Water & Power Development Authority (WAPDA), Kingdom of Saudi Arabia (KSA), K-Electric (formerly KESC) and OMS (Pvt), Ltd.

Mr. Abbasi is a distinction holder in Bachelor of Electrical Engineering from Mehran University of Engineering and Technology (MUET). Mr. Abbasi has very good knowledge and experience in the testing, commissioning and protection of power projects since he has worked as technical advisor to Chief Operating Officers (Transmission & Grids) KESC. Mr. Abbasi made valuable contributions in planning and execution of multiple power projects under NTDC and K-Electric.

As CEO of ETC Solutions, he is leading and managing the overall vision of the company and provides strategic direction to achieve company's goals.



AMER RAUF
Executive Director

With more than 28 years of experience, Mr. Amer Rauf is founding Director of ETC Solutions (Pvt) Ltd. He has a wide-ranging exposure and experience in Projects' Evaluation, Execution, EPC, Development and Financing. Before joining ETC Solutions (Pvt.) Ltd, he has served in various organizations including Water & Power Development Authority (WAPDA), SAUDCONSULT - Kingdom of Saudi Arabia, Descon Engineering Ltd and OMS (Pvt.) Ltd.

He is a distinction holder in B.Sc. Electrical Engineering from University of Engineering & Technology (UET), Taxila. He has very good knowledge and experience in the private power since he has worked as Head of EPC at DESCON Engineering Ltd. Mr. Rauf made valuable contributions in planning and execution of multiple Wind Power Projects under RE Policy 2006.



HASSAN MANSOOR
CFO / Financial Advisor

Proven 18 years of progressive and diverse F&A accomplishment experience of private and public corporations, Mr. Hassan Mansoor is appointed as Financial Advisor/CFO of ETC Solutions (Private) Limited. He has wide-ranging experience of financial audit, administrative, risk management and operational strategy.

Mr. Mansoor has served in various organizations including Ernst & Young, Arshad Raheem & Co., Ashraf Group of Industries, OMS (Private) Limited and ETC Solutions (Private) Limited. As Financial Advisor/CFO of ETC Solutions (Private) Limited, he is providing strategic recommendations to the CEO/president and members of the executive management board and handling the processes for financial forecasting and budgets to achieve company's ultimate goals.



SIRAJ HUSSAIN KHUWAJA
Director Technical

With more than 30 years of experience, Mr. Siraj Hussain Khawaja is appointed as Director Technical of ETC Solutions (Pvt) Ltd. He has a wide-ranging exposure and experience in Projects' Management, Execution, O&M and specialized in I&C. Before joining ETC Solutions (Pvt.) Ltd, he has served in various organizations including Water & Power Development Authority (WAPDA), Siemens Alpharetta-GA-USA, Saudi Electricity Company (SEC) - Kingdom of Saudi Arabia and OMS (Pvt.) Ltd.

Mr. Siraj is a distinction holder in B.E Electrical Engineering and has very good knowledge and experience of CCPP & IPP Projects.



FAHAD MAHBOOB
Director Projects

17 years of broad-based experience as professional engineer in project development, Engineering Designs and Consultancy, Project Management, Construction Management, Commissioning, Performance testing and Operation & Maintenance of Power Plants and Process Industry. He is a distinction holder in B.Sc. Chemical Engineering from Bahuddin Zakariya University Multan (NFC IET), Multan. His expertise in thermal, process and mechanical design of boilers and thermal power plants is of added value in expertise of ETC Solutions.

Mr. Fahad has served in various public and private sector organizations including Defense Production, Descon Engineering Ltd, OMS (Private) Limited and ETC Solutions (Private) Limited.

CODE OF CONDUCT



ETHICS CHARTER

Fairness, Integrity, Accountability and Social Responsibility are the core values at ETC Solutions Private Ltd. This Charter defines ETC's Objectives in this area and the corresponding rules of good conduct.



OUR OBJECTIVES

- To continue striving to provide the timely quality services to our clients and offer opportunities for success to all our clients, partners and subcontractors in a spirit of fair competition and mutually rewarding collaboration.
- To conduct business everywhere in the world with the highest standards of honesty, integrity and fairness.
- To put our staff as at the heart of our strategic development, and create conditions for the individual employees to reach their full potential.

OUR RULES OF GOOD CONDUCT

In carrying out their professional activities, the employees of ETC Solutions must thrive throughout Pakistan and the rest of the world to comply with the following rules of good conduct:

- Respecting the spirit and the letter of applicable laws.
- Not granting, directly or indirectly any kind of benefit to any person involved with business for the purposes of obtaining commercial favors.
- Avoiding conflict of interest between their roles in the Firm's business and their private interests particularly in their relations with clients, competitors and subcontractors. In this regard, our staff must refrain from offering or accepting gifts or invitations which would not be consistent with acceptable practices or applicable laws. They must also refrain from investing or acquiring interests with clients or competitors without the prior written consent of management.
- Protecting the confidentiality of the information to which they have access through their professional activities.
- Informing the Firm's Administration about any behavior which is not compliant with the rules set forth in this charter.



HEALTH & SAFETY POLICY

The most important aspect of our business is Safety. Whatever we do every day, every moment, we strive to work in a safe manner without compromising safety for expediency. It is our policy to set high standards of health & safety prior to commercial gain. The objective of this policy is to promote Good Health and an elevated level of Safety. At ETC Solutions, we will firmly adhere to the Safety Policy to protect ourselves, our customer, the environment, and the community in which we do business. We believe that excellence in the management of health and safety is an essential element within our overall business plan. The identification, assessment and control of health and safety risks are of equal importance to production and quality.

As a basic requirement, our all personnel learn and maintain a comprehensive knowledge of the Safety Rules. This is the responsibility of all our people to ensure that all contractors, who carry out any activities on site, fully understand and follow the safety policies and procedures. In ETC, we expect each person to be flexible and attempt to do "Whatever it takes" to be productive and innovative. However, this is not true when it comes to Safety.

Our avowed policy at ETC Solutions is to remain committed to health, safety, environment and quality prior to commercial gain. People are the greatest assets that we possess and are possessed with. We yearn to make the difference real by providing quality services from design review, construction management and operation and maintenance besides multitudes of other related jobs in the power sector.







ETC Solutions



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