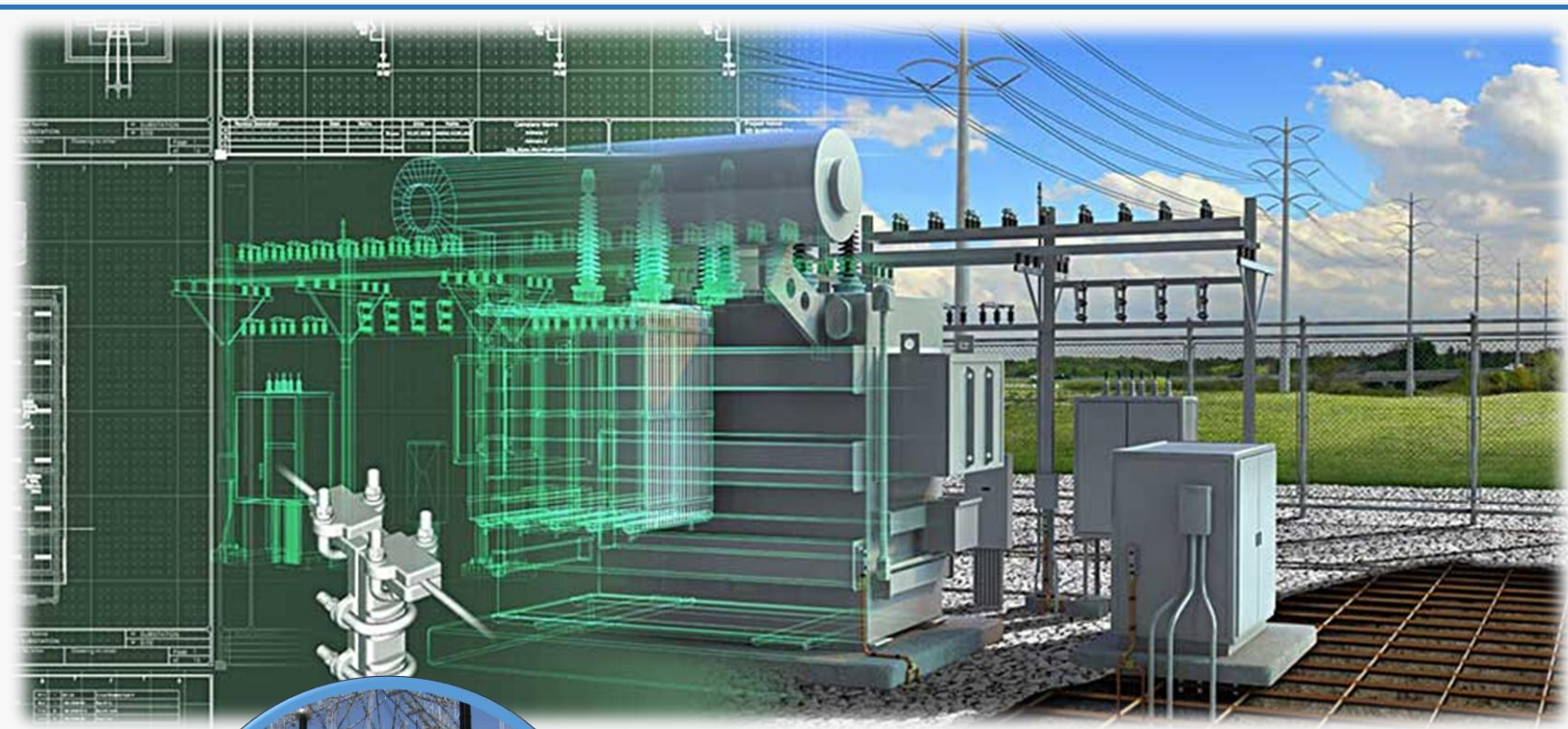


# Detailed Engineering Services



*Powering Yesterday, Today & Tomorrow*

# WHO WE ARE?

POWER-tek has over two and half decades of successful business history in power system engineering and smart grid projects. For over 275+ customers in four continents and over 20 countries, POWER-tek has successfully delivered power system engineering solutions. POWER-tek customers include large independent system operators, transmission companies, distribution companies, oil and gas companies, government agencies, commercial banks, international development agencies, construction and consulting companies, large industries, and power project developers. Over 75% annual revenue for past many years from repeat customers proves strong customers trust for POWER-tek.

**25**  
Years of Customer Satisfaction

Projects Delivery in  
**4**  
Continents

**275+**  
Customers Worldwide

**75%**  
Revenue from Repeat Customers

## Representative Projects



Facility management consultant for MFF second power transmission enhancement investment program/Constructing new transmission lines, extending and augmenting existing substations, installing shunt reactor and replacing protection equipment at 11 grid stations

**Asian Development Bank/National Transmission & Despatch Company**



Saba project site visit and operations review/ Detailed engineering review of substation and machines performance and standards comparisons

**Stone & Webster Management Consultants Inc. (Now Shaw Group USA) /EXIM Bank USA**



Tripping Analysis, Failure Analysis and New Relay Settings for 115kV King Fahad Industrial Port Jubail Substation SCECO/ Relay Settings for 110kV Yanbu Substation SCECO West

**ABB Services Company, Saudi Arabia**



Detailed design for connecting gas/thermal power plant SCADA system with power plant control functions/Relay settings of plant substation

**Liberty Power Ltd/Tenaga Nasional Generation, Sdn Bhd, Malaysia**



Relay settings update after transformer replacement, coordination curves development, fault level simulations and motor starting studies

**Gulf Salt Power Company, Saudi Arabia**



Substation design review, Specification development/Energy meter testing and energy accounting system, system losses analysis, harmonic analysis and filter design

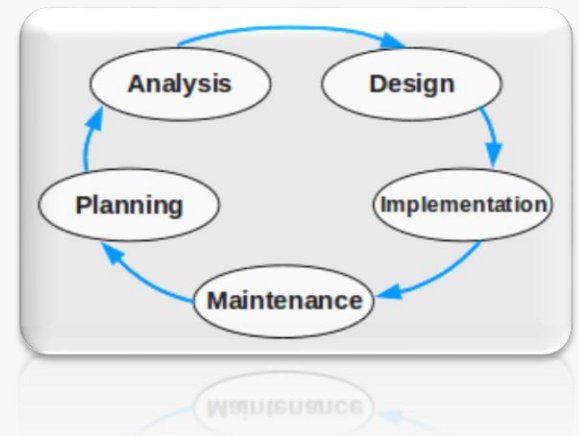
**Sitara Chemicals Industries Ltd.**

# POWER-tek's GLOBAL REACH



## OUR SERVICES:

A combination of strong analytical expertise and life time hands on practical field experience of power systems is differentiating aspect of POWER-tek services. These services cover various aspects of power systems engineering that include planning, analysis, design & engineering, preparation of bid documents & bid evaluation, contract award and project management. POWER-tek has established a reputation for quality and innovative approaches in the following areas, where it has successfully provided services globally in the past 24 years:



## ENGINEERING AND DESIGN SERVICES

- New substations
- Extension, Up-gradation and retrofit of all kinds for transmission and distribution substations
  - Site selection, physical layout, complete electrical design and procurement services for substations from LV to EHV
  - Physical and equipment layout design
  - Specialized services, earthing, lightning design
  - Protective relaying design and relay programming
  - Metering system design and testing
  - Capacitor VAR requirements and capacitor bank design
  - SCADA and communications design, integration and testing

## CONSULTING SERVICES

- Design and specification review
- Design and construction specification preparation
- Bid evaluation and manufacturer evaluation
- Project plan and control
- Contract administration
- Factory inspection, witnessing of acceptance tests
- Cost estimation, risk assessment and reliability analysis
- On site testing and commissioning services
- Quality and cost control

# OUR SAMPLE VALUABLE CUSTOMERS/*solutions Provided for*

 USA <a href="http://www.pjm.com">www.pjm.com</a>	 USA <a href="http://www.spp.org">www.spp.org</a>	 Canada <a href="http://www.ieso.ca">www.ieso.ca</a>	 Saudi Arabia <a href="http://www.gccia.com.sa">www.gccia.com.sa</a>	 USA <a href="http://www.tva.gov">www.tva.gov</a>
 Canada <a href="http://www.bchydro.com">www.bchydro.com</a>	 Canada <a href="http://www.hydraoone.com">www.hydraoone.com</a>	 USA <a href="http://www.gatrans.com">www.gatrans.com</a>	 USA <a href="http://caec.coop">caec.coop</a>	 USA <a href="http://www.cooperativeenergy.com">www.cooperativeenergy.com</a>
 Saudi Arabia <a href="http://www.se.com.sa">www.se.com.sa</a>	 South Korea <a href="http://www.kepco.co.kr">www.kepco.co.kr</a>	 Pakistan <a href="http://www.ntdc.com.pk">www.ntdc.com.pk</a>	 Malaysia <a href="http://www.tnb.com.my">www.tnb.com.my</a>	 USA <a href="http://www.aep.com">www.aep.com</a>
 USA <a href="http://www.dominionenergy.com">www.dominionenergy.com</a>	 USA <a href="http://www.firstenergycorp.com">www.firstenergycorp.com</a>	 USA <a href="http://www.amecfw.com">www.amecfw.com</a>	 USA <a href="http://www.peco.com">www.peco.com</a>	 USA <a href="http://www.firstenergycorp.com">www.firstenergycorp.com</a>
 USA <a href="http://www.comed.com">www.comed.com</a>	 USA <a href="http://www.firstenergycorp.com">www.firstenergycorp.com</a>	 USA <a href="http://www.dpandl.com">www.dpandl.com</a>	 USA <a href="http://www.firstenergycorp.com">www.firstenergycorp.com</a>	 USA <a href="http://www.bge.com">www.bge.com</a>
 USA <a href="http://www.pseg.com">www.pseg.com</a>	 USA <a href="http://www.atcllc.com">www.atcllc.com</a>	 USA <a href="http://www.firstenergycorp.com">www.firstenergycorp.com</a>	 USA <a href="http://www.duke-energy.com">www.duke-energy.com</a>	 USA <a href="http://www.pplelectric.com">www.pplelectric.com</a>
 USA <a href="http://www.oge.com">www.oge.com</a>	 USA <a href="http://www.nppd.com">www.nppd.com</a>	 USA <a href="http://www.westarenergy.com">www.westarenergy.com</a>	 USA <a href="http://www.wfec.com">www.wfec.com</a>	 Abu Dhabi <a href="http://www.adwea.com">www.adwea.com</a>
 Oman <a href="http://www.omanpwp.com">www.omanpwp.com</a>	 Qatar <a href="http://www.km.com.qa">www.km.com.qa</a>	 Kuwait <a href="http://www.mew.gov.af">www.mew.gov.af</a>	 USA <a href="http://www.usaid.gov">www.usaid.gov</a>	 USA <a href="http://www.ansaldoenergia.com">www.ansaldoenergia.com</a>
 Canada <a href="http://www.energy.gov.on.ca">www.energy.gov.on.ca</a>	 Pakistan <a href="http://www.pepco.gov.pk">www.pepco.gov.pk</a>	 USA <a href="http://www.shawgrouppltd.com">www.shawgrouppltd.com</a>	 Germany <a href="http://www.siemens.com">www.siemens.com</a>	 Switzerland <a href="http://www.abb.com">www.abb.com</a>
 Pakistan <a href="http://www.privatisation.gov.pk">www.privatisation.gov.pk</a>	 USA <a href="http://www.tetrattech.com">www.tetrattech.com</a>	 Canada <a href="http://www.hatch.com">www.hatch.com</a>	 Germany <a href="http://www.lahmeyer.de">www.lahmeyer.de</a>	 USA <a href="http://www.s&amp;w.com">www.s&amp;w.com</a>