



# **Company Experience Reference List (1992-2017)**

Year	Category	Sub-Category	Job description	Client's Name	End User	Industry	Country	Duration (Months)	Remarks
2017	Services	Field services	NPCP AS-Built loop diagrams	Khalda	Khalda	Oil & Gas	Egypt	In Progress	1) Collect data from all the three system (ESD, PCS, F&G) panels {Terminal blocks data, Modules data, Groups of modules data}. 2) Collect data from SCADA and PLC {Addresses, Tags, Screens}. 3) Collect data from junction boxes and field devices. 4) Verify and trace the wrong labeled signals. 5) Change all wrong labels at the Panels of all systems and junction boxes 6) Created Loop Diagrams via AutoCAD program and issued them.
	Installation& commissioning	Installation, Pre-commissioning& commissioning	Installing new flame detectors, new xp-10 card and relocate the old one at Port Said Power Plant	GE Power	EEHC	Electrical Power Plant	Egypt	0.5	1. Install new flame detector and change the old flame detector to new position. 2. Add the new XP-10 card and rearrange the panel. 3. Modify the programming of Notifier 3030 system to add the logic of two flame detectors. 4. Clear all troubles from Notifier 3030 control panel. 5. Issue Loop Diagrams for the flame detectors. 6. Issue As-built wiring diagrams.
	System Integration	PCS	commissioning & Start up	EI SEWEDY T&D	Ministry of Energy and water	POWER SECTOR	Angola	In Progress	* The Project contains Three (3) typical PLC panels each panel to be located in a power plant (Two (2) in CAMAMA site and One (1) in Morro Pento site). Each of the Three (3) systems consists of * 404 I/O signals . * Cimplicity SCADA sytem with 25 HMI screens. * IEC 61850 Communication. * Modbus RTU and Modbus TCP with 3rd party controllers.
	Services	Field services	ZOHR Carry out instrumentation Pre-Commissioning & Commissioning activities for Early Production Facilities as well as for permanant facilities	Petrojet	Petrobel	Oil & Gas	Egypt	In Progress	1. Performing site inspection for installed junction boxes, termination, instruments, (Control values & shutdown values, transmitters, fire & gas servies) 2. Performing cold loop test for ready loops 3. Creating loop folders for loops passed cold loop test. 4. Conducting hot loop test for loops. 5. During Hot loop test if required we perform calibration to instruments. 6. Submit the complete loop dossier to the client.

Year	Category	Sub-Category	Job description	Client's Name	End User	Industry	Country	Duration (Months)	Remarks
2016	Services	Installation Supervision	1) Installing EQP Control Panel and Supervise the Cable termination inside the cabinet. 2) Supervise on installing the (30) Flame Detector(X3301), (35) Pointwatch Gas Detector and (13) Manual Call points.	GUPCO	GUPCO	OIL&GAS	Egypt	0.75	1) Installing EQP Control Panel and installing multicore cables with glands on the gland plate. 2) Powering up the cabinet to check for any errors.
	Services	Pre-commission & commissioning	Commission & Full system start-up.	GUPCO	GUPCO	OIL&GAS	Egypt	0.25	<ul style="list-style-type: none"> <li>• Testing and powering up all installed Detectors in phase 1.</li> <li>• Testing and powering up all installed Detectors in phase 2.</li> <li>• Commissioning and Starting up phase 1&amp;2.</li> </ul>
	System Integration	PCS	Building and Programing GE RX3i PLC and Cimplicity SCADA systems for the Three (3) Balance of Plant Control System.	EI SEWEDY T&D	Ministry of Energy and water	POWER SECTOR	Angola	1	<ul style="list-style-type: none"> <li>* The Project contains Three (3) typical PLC panels each panel to be located in a power plant (Two (2) in CAMAMA site and One (1) in Morro Pento site).</li> <li>Each of the Three (3) systems consists of</li> <li>* 404 I/O signals .</li> <li>* Cimplicity SCADA sytem with 25 HMI screens.</li> <li>* IEC 61850 Communication.</li> <li>* Modbus RTU and Modbus TCP with 3rd party controllers.</li> </ul>
	System Integration	ESD	Building and Programing new GE PAC8000 SaftyNet PLC SIL 2 and Cimplicity SCADA systems for IPS in HYDRA site. And extend the existing PCS system at shams site.	Apache	KHALDA	Oil& Gas	Egypt	1	<ul style="list-style-type: none"> <li>* The Project contains the following:</li> <li>- One (1) New PLC panel for HIPPS system (IPS system ) at hydra site.</li> <li>- One (1) New Extension Marshalling panel for the extra I/O's added to the existing CCSS at hydra site with total (35 I/O).</li> <li>- One (1) New Extension Wall mounted panel for the extra I/O added to the exsiting PCS at shams site with total (14 I/O)</li> <li>* New Cimplicity SCADA sytem for the IPS with 7 HMI screens and modification in the existing SCADA system in existing hydra and shams sites.</li> <li>* Modbus TCP with 3rd party controllers.</li> </ul>
	Engineering	Develop engineering documents	Design and Issue engineering documents for Hydra gas field phase IIID PCS/ ESD/ F&G systems.	Apache	KHALDA	Oil& Gas	Egypt	1	Issue Engineering drawings, up to 40 different documents as Panel Arrangement, wiring diagram, FDS, System Block Diagram and Operations & maintenance manual.
	Services	Pre-commission & commissioning	Commission & Full system start-up.	Apache	KHALDA	Oil& Gas	Egypt	1	Testing the integration between the field instruments and PLC panel and SCADA system
	Services	Installation	Filed devices & junction boxes termination	Apache	KHALDA	Oil& Gas	Egypt	1	<ul style="list-style-type: none"> <li>* Installation of F&amp;G devices QTY of ( 9 Flame detectors, 6 Line of Sight Gas detectors, 3 Point watch Gas detectors, 4 Manual Call point, 2 Sounders and 3 Beacons).</li> <li>* Junction Boxes Glanding &amp; termination.</li> </ul>
	System Integration	ESD	Building and Programing new GE PAC8000 SaftyNet PLC SIL 2 system for ESD in HYDRA site and convert HYDRA site from unmanned to manned partially by adding two new workstations.	Apache	KHALDA	Oil& Gas	Egypt	0.5	<ul style="list-style-type: none"> <li>* The Project contains the following:</li> <li>- One (1) New PLC panel for ESD system at hydra site, Panel is designed to accomodate all ESD signals at HYDRA site (105 signals) but remaining signals will be trnasfered from old panel to the new ESD panel later.</li> <li>* Ttwo workstations including Cimplicity SCADA sytem for the HYDRA SITE with modification in the existing SCADA system at existing hydra.</li> </ul>
	Engineering	Develop engineering documents	Design and Issue engineering documents for Hydra gas field phase IIID Manned operation (ESD )system.	Apache	KHALDA	Oil& Gas	Egypt	0.5	Issue Engineering drawings, up to 40 different documents as Panel Arrangement, wiring diagram, FDS, System Block Diagram and Operations & maintenance manual.
	Services	Pre-commission & commissioning	Commission & Full system start-up.	Apache	KHALDA	Oil& Gas	Egypt	1	Testing the integration between the field instruments and PLC panel and SCADA system
	System Integration	PCS	System Integration for Sewage Plant - STEP is one of the largest Pumping station in the world it is designed to be able to push 30m <sup>3</sup> /S of sewage. The Scope include Main PLC to control the plant, Remote I/O stations, Packages PLCs (Chiller, Ventilation, Potable Water, Treated sewage Effluent and power monitor). Main SCADA system, Historian server and Local display panels.	GE-IP	Abu Dhabi Sewerage Services Company (ADSSC)	Infra-Structure	U.A.E	In Progress	It contain EGD, Profinet communication with the I/O stations and Modbus TCP communication with 3rd parties. A Dual Fiber optic synchronization link between each redundant CPU's. All CPU's, Power supplies, SCADA and Historian Servers are redundant. More than 4300 Physical I/O signals to our PLC's Plus the Modbus Data.

Year	Category	Sub-Category	Job description	Client's Name	End User	Industry	Country	Duration (Months)	Remarks
2016	Commissioning Services	PCS / ESD	Technical support during commissioning of three boilers systems	AVANCEON LTD	Attock Refinery Limited (ARL)	Oil and Gas	Pakistan	0.25	The Project consists of three boilers, each system contains PCS and ESD system with standalone SCADA. PAC8000 Hybrid controller was used for PCS and PAC8000 SafetyNet was used for ESD SIL 2 system
	Services	Installation, Pre-commissioning & commissioning	Fire & Gas Detection system modification - gas compressor area at Hurgada Power Plant	GE Power	EEHC	Electrical Power Plant	Egypt	0.5	1. install 4 new flame detectors. 2. change the position of 4 old flame detectors to new position. 3. commissioning all 8 flame detectors. 4. start-up the Notifier 3030 system. 5. on Job Training. 6. Issue As-built wiring diagrams
	Services	Installation, Pre-commissioning & commissioning	Fire & Gas Detection system modification - water treatment area at Hurgada Power Plant	GE Power	EEHC	Electrical Power Plant	Egypt	0.5	1. install 6 new Smoke detectors 2. install manual call point and its mini-monitor module 3. install sounder and its control module 4. Modify the program of Notifier 3030 System. 5. start-up the Notifier 3030 system. 6. Issue As-built wiring diagrams.
	Installation & commissioning	Installation, Pre-commissioning & commissioning	Fire & Gas Detection system - gas compressor area at Sharm Elshiekh power plant	GE Power	EEHC	Electrical Power Plant	Egypt	0.5	1. Installed 8 supports for flame detectors. 2. Routed new conduits and cables for each flame detector. 3. Modified the programming of Notifier 3030 system to add the logic of new 8 flame detectors. 4. Fixed the panel and rearranged it to add two new XP-10 cards. 5. Added the two new XP-10 to the panel and connected them to the terminals. 6. Install new 8 flame detectors. 7. Issue Loop Diagrams for the flame detectors. 8. Issue As-built wiring diagrams. 9. Issue Panel Layout.

Year	Category	Sub-Category	Job description	Client's Name	End User	Industry	Country	Duration (Months)	Remarks
2015	System Integration	PCS	Building and Program (PLC & SCADA) the full redundant GE RX3i PLC system for the Demineralized Water Package	GE Water	MIDOR	OIL & GAS	EGYPT	1	Four IP66 Cabinets & Seven IP66 JBs are used. The IO count is 480 signals , Full redundant Solution. Develop about 25 HMI screens.
	Services	Pre-commissioning& commissioning	Conduct the pre-commissioning & commissioning activities for the Demineralized Water Package new PLC system	GE Water	MIDOR	OIL & GAS	EGYPT	0.5	Dismantling the old system cabinets, install the new system cabinets & JBs. Conduct the IO loop testing, system functional testing and startup. Testing the serial communication link with Honeywell DCS.
	Engineering	Detailed Engineering	detailed engineering for U-104 gas plant, including: which will be as following: 1) Final EQP Program. 2) Detailed HMI Pages. 3) Equipment list and specification. 4) Detailed Installation drawing. 5) Power Distribution and wire sizing. 6) Material Specifications. 7) Wiring Diagrams.	GUPCO	GUPCO	OIL&GAS	Egypt	3 month	1) Preparation and design the Wiring diagram, Panels layout, Loop diagram, C&E diagram, System architecture, FAT/SAT documents, Commissioning /Startup procedure, EQP Programming and HMI Pages. 2) All Drawings & Documents issued by Electrical AutoCAD 2012, MS office and MS project.
		Develop Engineering Documents	Development the entire project needed documents for U-104 gas plant: 1) Function Design System (FDS). 2) Panel layout & Detailed wiring Diagrams. 3) Training Materials. 4) Factory Acceptance Test (FAT). 5) Site Commissioning , Start-up and Site Acceptance Test (SAT).	GUPCO	GUPCO	OIL&GAS	Egypt		Site Commissioning Plan includes: 1) Loop integrity Checking. 2) Functional Checks. 3) Sequence Checks. 4) Simulation of Faults. 5) Communcation Checks. 6) Installation Supervision.
	System Integration	F&G	Fire & Gas Detection System is the Eagle Quantum Premier System From <del>Det-Tronics</del> Connected to Flame and Gas Detectors through analog input modules(AIM) while Manual call points (MCP) & the Free Contact to the ESD System is Connected Through Discrete Input Output Modules(DCIO), the System will be Connected via serial Communication to HMI Loaded with S3 Software for Monitoring, Configuration and Programming.	GUPCO	GUPCO	OIL&GAS	Egypt	1 month	1) Eagle Quantum Premier Controller (EQ3016 Controller) with total 16 nodes: 10 nodes are used for AIM , 5 nodes are used for DCIO while the last node are used for Power Supply Monitor(PSM). 2) Install Industrial computer 19".
	Engineering	Develop Engineering Documents	Issuing the engineering documents for Balance of Plant Control System	GE IP	EEHC	POWER SECTOR	EGYPT		* Issue PLC panel wiring diagram documents. * Issue system architecture. * Issue Panel General Arrangement and Layout drawings * Issue the M & O manual.
	System Integration	PCS	Building and Programing GE RX3i PLC and IFIX SCADA systems for the Ten (10) Balance of Plant Control System	GE IP	EEHC	POWER SECTOR	EGYPT	0.5	* The Project contains Ten (10) typical PLC panels each panel to be located in a power plant (three (3) in cairo and seven (7) in upper egypt). Each of the 10 systems consists of * 336 I/O signals . * Ifix SCADA sytem with 25 HMI screens. * Modbus RTU and Modbus TCP with 3rd party controllers
	Services	Pre-commissioning& commissioning	Conduct the pre-commissioning & commissioning activities for Ten (10) Balance of Plant Control System	GE IP	EEHC	POWER SECTOR	EGYPT		* Powering Up each system. * Conduct the Site acceptance Test according to our previously issued SAT procedures. * Hot loops check for all system signals
	Services	Pre-Commissioning and Commissioning	Commissioning and Start-up technical support for 3 Electrical power plants	GE-IP / TSK	EEHC	Power Sector	Egypt	3 Months	Three Power Plant located in Port Said, Sharm El-Sheikh and Hurghada. have 14 turbine each of 50 MW. Rx3i PLC with PPS SCADA, about 300 I/O
	Services	Pre-Commissioning and Commissioning	Commissioning and Start-up for Nitrogen Skid Panel	AL-Taysear Trading & Contracting	QP (Qatar Petroleum)	Oil & Gas	Qatar		Site acceptance test (SAT), Hot-loop check, start-up.
	Services	Pre-commission& commissioning.	Cold loop, hot loop, commissioning & startup for TPS new wells at guebiba cluster.	Thyna Petroleum services	Thyna Petroleum services	Oil & Gas	Tunisia	1	* Cold loop, hot loop check for all system signals. * Logic & SCADA verification which achieve the project (control philosophy and Cause & Effect).

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2014	Consultation	HAZOP	Hazop study for LPG Booster Pumps replacement.	Petroceltic El Mansoura	Petroceltic El Mansoura	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Consultation	HAZOP	Hazop study for the West Khilala Safety system upgrade, phase I.	Petroceltic El Mansoura	Petroceltic El Mansoura	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Consultation	HAZOP	HAZOP session for UM-Baraka control system upgrading.	KHALDA	KHALDA	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Engineering	Develop engineering documents	Issue engineering documents for Hydra gas field phase I&II PCS/ ESD/ F&G systems.	Apache	KHALDA	Oil& Gas	Egypt	1	Issue AS-BUILT drawings, SPIR, and Operations & maintenance manual.
	Services	Installation	Installation of PCS/ ESD/ F&G systems Hydra gas field phase I&II.	Apache	KHALDA	Oil& Gas	Egypt	1	Install two control panels, field instruments and F&G detectors. Field cables' termination.
	Services	Pre-commission& commissioning	Conduct the pre-commissioning& commissioning for Hydra gas field phase I&II (PCS/ ESD/ F&G) systems.	Apache	KHALDA	Oil& Gas	Egypt	In progress	<b>For Phase I (Completely Finished):</b> * Conduct system powering up, cold & hot loop check, F&G detectors calibration, system functionality verification. which is already finished. * Install, junction box wiring, cold loop test, hot loop test for new PCS, ESD,F&G devices in HYDRA gas plant phase II packages ( Chemical Skid, fuel gas preheater, fuel gas superheater, main generator)
	Services	Field support	Provide field support at Kalabsha site, including modifying and troubleshooting PLC/ SCADA system.	Khalda	Khalda	Oil & Gas	Egypt	12	Provide 2 back to back field engineers, modify PLC application program& SCADA graphics/reports after finalize field installations.
	Services	Field support	System troubleshooting, On call Support, adding New I/O Devices , PLC logic Modifications, and SCADA System Modifications.	Khalda	Khalda	Oil& Gas	Egypt	0.25	Modify PLC Logic After low pressure system demolishing, mody SCADA System (Screens, Alarms, Points), provide engineers for 24-Hour on Call Support. Fault Investigation, Analysis, And providing Solutions.
	Engineering	PLC/SCADA	Redundant SIL3 F& G System for QASR compression station." project.	ENPPI	KHALDA	Oil& Gas	Egypt	3.5	Issue Panel layout, Power wiring, System architecture, Wiring diagrams, Loop diagrams, Pre-Commissioning / Commissioning Procedures, FAT/ SAT procedures, Power consumption, Block diagrams, Shipping procedure, an dmaintenance& operations manuals, etc. Design battery backup system for 24 hrs include (QTY 13 sealed Lead acid battries with cloriod battary charger). Design MoziC MIMIC Panel.
	System integration	F&G	Redundant SIL3 F& G System for QASR compression station." project.	ENPPI	KHALDA	Oil& Gas	Egypt	2	Built 6 panels to accommodate PLC, redundant I/O genuis modules and HART interface modules. Developed application program for used GMR 90-70 PLC (75AI, 150DI, 144DO). Create 30 HMI SCADA Screens. HMI Communication protocol (Modbus TCP/IP) with hanywell fire alarm Panel (Notifier)
	Engineering	PLC / SCADA	Redundant PCS system for QASR compression station.	ENPPI	KHALDA	Oil & Gas	Egypt	3	Issue Panel layout, Power wiring, System architecture, Wiring diagrams, Loop diagrams, Pre-Commissioning / Commissioning Procedures, FAT/ SAT procedures, Power consumption, Block diagrams, Shipping procedure, an dmaintenance& operations manuals, etc.
	System integration	PCS	Redundant PCS system for QASR compression station.	ENPPI	KHALDA	Oil & Gas	Egypt	2	Built 7 panels to accommodate PLC, remote I/O racks and HART interface modules. Developed application program for used RX3I PLC (176AI, 80AO, 464DI, 240DO, 41 PID), create 150 graphic displays. Establish communication protocol (ModBus TCP/IP) with Allen Bradley PLC and Honeywell DCS.
	Engineering	PLC / SCADA	Redundant SIL3 ESD System for QASR compression station." project.	ENPPI	KHALDA	Oil & Gas	Egypt	3	Issue Panel layout, Power wiring, System architecture, Wiring diagrams, Loop diagrams, Pre-Commissioning / Commissioning Procedures, FAT/ SAT procedures, Power consumption, Block diagrams, Shipping procedure, an dmaintenance& operations manuals, etc.

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2014	System integration	ESD	Redundant SIL3 ESD System for QASR compression station." project.	ENPPI	KHALDA	Oil & Gas	Egypt	2	Built 6 panels to accommodate PLC, redundant I/O genius modules and HART interface modules. Developed application program for used GMR 90-70 PLC (180AI, 1054DI, 240DO), create 200 graphic screens. Built 1 ESD Matrix Panel.
	Services	Pre-commission& commissioning	Commission, start-up assistance for PCS/ ESD/ F& G systems at QASR compression station project.	ENPPI	KHALDA	Oil & Gas	Egypt	12	Power up the new systems, conduct SAT, share in hot loop checking.
	Engineering	PLC / SCADA	Development all the required designs and documents for PCS/ESD systems for TPS new wells at GUEBIBA cluster.	Thyna Petroleum Services	Thyna Petroleum Services	Oil & Gas	Tunisia	2	Issue Panel layout, Power wiring, System architecture, Wiring diagrams, Loop diagrams, Pre-Commissioning/ Commissioning Procedures, FAT/ SAT procedures, Power consumption, etc.
	System integration	PCS/ESD	Build ICSS System for TPS new wells at guebiba cluster.	Thyna Petroleum services	Thyna Petroleum services	Oil & Gas	Tunisia	6	Engineering, Configuration & Assembly of PLC / SCADA system, FAT test was held in Target Engineering then Panel shipped to Tunisia for SAT/Commissioning & startup. using Pack 8000 Safety Net Controller SIL2 Redundant System . ESD I/O: (35AI, 32DI, 38DO) PCS I/O: (16AI, 40DI)
	System Integration	Detailed Engineering	Ras Bakr Fire Alarm Control Panel	GUPCO	GUPCO	Oil& Gas	Egypt	4	Issue documents to replace the existing panel by upgraded one. The panel is networking wih about 1,000 devices. Issue As-Built loop diagrams and wiring diagrams.
	System Integration	F&G	Ras Bakr Fire Alarm Control Panel	GUPCO	GUPCO	Oil& Gas	Egypt	2	Assemble the new system in the existing cabinets.
	Services	Installation	Ras Bakr Fire Alarm Control Panel	GUPCO	GUPCO	Oil& Gas	Egypt	2	Rectify the ground fault of field loops, install the new system, UPS, HMI system amd commission the whole system
	System Integration	PLC & SCADA	PLC Units Installed for D.F.F. Pumps & E.D.G'S At Sinal Fields (Offshore Platforms)	Petrobrel	Petrobrel	Oil& Gas	Egypt	12	PLC that controls two Diesel Fire Pumps and one Generator for two offshore platforms.
	System Integration	PLC & SCADA	Kalabsha Brown Field Upgrade (Extra hardware and software to the new I/O's)	KHALDA	KHALDA	Oil& Gas	Egypt	2	Add I/O hardware to the system and make all required configuration.
	Engineering	Develop Engineering Documents	Issuing Demineralized wiring documents (As it is) for the Demineralized Water Package before upgrading steps.	GE Water	MIDOR	OIL & GAS	EGYPT	1	Issuing the As-built internal panel wiring and the loop diagrams for the field instruments
			Issuing the engineering documents for building the Demineralized Water Package new PLC system	GE Water	MIDOR	OIL & GAS	EGYPT	0.5	Issuing the new panels' layout drawings, wiring diagrams , power calculation and heat dissipation.
			Issuing As-built documents for the Demineralized Water Package new PLC system	GE Water	MIDOR	OIL & GAS	EGYPT	1	Issuing the As-built documents for panel internal wiring and the loop diagrams in the first quarter of the 2015.

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2013	System Integration	ESD and F&G	Upgrading the ESD and F&G systems of the salam base	KHALDA	KHALDA	Oil & Gas	Egypt	4	1- Design & Supply of PLC & Matrix Panels. 2- Supply of Gas Detectors & Manual Call Points. 3- Installation & testing of field gas detectors & manual call points 4-Connecting the new PLC system to the existing PAGA. 5-Connecting the new PLC system to Notifier Fire system.
	Services	Maintenance & troubleshooting	on-site support services for Rx3i in Honeywell VHF_R Gateway system at Petrofac El Merk Central processing facility	GE-IP	Petrofac	Oil & Gas	Algeria	0.25	troubleshooting Rx3i communication. Rx3i works as a modbus Gateway (Modbus RTU communication with Honeywell F&G panel and modbus TCP communication with Yokogawa)
	System Integration	PCS	Upgrade the Existing N2 Panel controlling Nitrogen package with a new PAC8000 SafetyNet SIL II controller	AL-Taysear Trading & Contracting	QP (Qatar Petroleum)	Oil & Gas	Qatar	6 Month	SIL II safety system, Redundant CPUs, Redundant Power supplies, Redundant I/O. About 80 Physical I/O all are I.S signals.
	System integration	F&G	Integrate full system of "1" PLC panel for "ONSHORE F&G EXPANDING AMER-8 STORAGE AREA PROJECT" project.	ENPPI	GPC	Oil& Gas	Egypt	0.5	Using IP54 PLC cabinet accommodate 2 expanding I/O racks communication with the existing PLC over control net redundant network
	Service	Pre-commissioning & commissioning	Commissioning the system integration to operate efficiently for "ONSHORE F&G EXPANDING AMER-8 STORAGE AREA PROJECT" project.	ENPPI	GPC	Oil& Gas	Egypt	0.3	Perform Hot loop testing and verifying C&E.
	Engineering	PLC & SCADA	PCS system for potable water lifting station.	GEDAC	SEC	Electromechanical	K.S.A.	3	Issue Wiring diagrams, Loop diagrams, Logic diagrams, power calculation, System architecture, FAT/SAT/ Commissioning / Startup procedures. Developed application program Using GE-IP redundant PLC (RX3i), (204 I/O). Design HMI (Quick panel) and create 14 screens.
	System integration	PCS	Attend FAT of PCS system for potable water lifting station.	GEDAC	SEC	Electromechanical	K.S.A.	1	Supervision on the assembly completion, perform FAT for the assembled system.
	Service	Pre-SAT, SAT, Pre-commissioning and Commissioning	Performing SAT and Commissioning for HEET PLC project	GEDAC	SEC/Worley Parson	Electrical	Saudi Arabia	1	* Powering Up each system. * Conduct the Site acceptance Test according to our previously issued SAT procedures. * Hot loops check for all system signals
	Engineering	PLC & SCADA	Design PLC panel for "ONSHORE F&G EXPANDING AMER-8 STORAGE AREA PROJECT" project. Programming PLC for "ONSHORE F&G EXPANDING AMER-8 STORAGE AREA PROJECT" project. Design MIMIC. Design SCADA system for "ONSHORE F&G EXPANDING AMER-8 STORAGE AREA PROJECT" project.	ENPPI	GPC	Oil& Gas	Egypt	2	Upgrade AB PLC controllogix5000 as redundant PLC Qty of the I/Os to this application is 176 I/Os Design MIMIC Upgrading the existing SCADA system (RSVIEW32) by 12 Screens and newer alarm summary.



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2013	System Integration	Detailed Engineering	Ras Bakr Fire Alarm Control Panel	GUPCO	GUPCO	Oil& Gas	Egypt	4	Issue documents to replace the existing panel by upgraded one. The panel is networking with about 1,000 devices. Issue As-Built loop diagrams and wiring diagrams.
	System Integration	F&G	Ras Bakr Fire Alarm Control Panel	GUPCO	GUPCO	Oil& Gas	Egypt	2	Assemble the new system in the existing cabinets.
	Services	Installation	Ras Bakr Fire Alarm Control Panel	GUPCO	GUPCO	Oil& Gas	Egypt	2	Rectify the ground fault of field loops, install the new system, UPS, HMI system and commission the whole system
	System Integration	PLC & SCADA	PLC Units Installed for D.F.F. Pumps & E.D.G'S At Sinai Fields (Offshore Platforms)	Petrobel	Petrobel	Oil& Gas	Egypt	12	PLC that controls two Diesel Fire Pumps and one Generator for two offshore platforms.
	System Integration	PLC & SCADA	Kalabsha Brown Field Upgrade (Extra hardware and software to the new I/O's)	KHALDA	KHALDA	Oil& Gas	Egypt	2	Add I/O hardware to the system and make all required configuration.
	Services	Maintenance & troubleshooting	Abu El Ghradig (Stabilizer Reboiler + Uniflux Heater )	KHALDA	KHALDA	Oil& Gas	Egypt	1	Install new UV Scanners. Cold loop check, hot loop check, testing and calibration all heater devices and instruments. Adjusting the Air to Fuel ratio. Start Up the Heater.
	Services	Pre-commissioning & commissioning	EDOP Platform (90-70 PLC Program Modification)	GE-IP	Exxon Mobil	Oil& Gas	Nigeria	1	Modify the PLC logic and HMI to implement the new signals added to the GE 90-70 PLC system, these signals for the new PipeLine. Commission and startup the system.
	System Integration	PLC & SCADA	West Kalabsha Gas Facilities Upgrade (Maintenance Service)	KHALDA	KHALDA	Oil& Gas	Egypt	12	Provide 2 engineers back-to-back.
	Engineering	PLC & SCADA	Razak Control System Upgrading for RAZAK field.	KHALDA	KHALDA	Oil& Gas	Egypt	2	Issue Loop diagrams, panel wiring diagrams, power wiring, Cable routing, system architecture, J.Boxes block& wiring diagrams, etc. Modify C&E chart.
	System Integration	PCS	Razak Control System Upgrading for RAZAK field.	KHALDA	KHALDA	Oil& Gas	Egypt	2	Extend the existing PLC and develop the new application program. Create 11 HMI screens.
	Services	Installation	Razak Control System Upgrading for RAZAK field.	KHALDA	KHALDA	Oil& Gas	Egypt	1	Lay and check primary and secondary cables, cold and hot loop checking, etc.
	System Integration	PCS	Built a PCS system for Hydra gas field phase I&II	Apache	KHALDA	Oil& Gas	Egypt	1.5	The PCS system has been built with total N.O of IOs "197" (AI= 49, AO= 16, DI=88, DO= 44)
	System Integration	ESD	Built an ESD system for Hydra gas field phase I&II	Apache	KHALDA	Oil& Gas	Egypt	1.5	The ESD system has been built with total N.O of IOs "96" (AI= 47, DI=9, DO= 40)
	System Integration	F&G	Built a F&G system for Hydra gas field phase I&II	Apache	KHALDA	Oil& Gas	Egypt	1.5	The F&G system has been built with total N.O of IOs "28" (AI= 16, DI=4, DO= 8)
	Engineering	PLC/SCADA	Upgrading & Transferring Salam base control systems to new process control room	KHALDA	KHALDA	Oil & Gas	Egypt	5	1- Transferring old systems from old to new control room, which included laying interconnecting cables and moving the servers & viewers. 2- Glandring & Termination 3- Modifications in the old application programs 4- Adding & Modifying HMI screens 5- Commissioning

Year	Category	Sub-Category	Job description	Client's Name	End User	Industry	Country	Duration (Months)	Remarks
2012	Engineering	Develop engineering documents	As-Built Drawings for KHALDA , Kahraman Tut, Umbarka & Khepri plants.	KHALDA	KHALDA	Oil& Gas	Egypt	12	Issue As-Built P&ID, plot plan, Pipeline Isometric, wirin diagrams, C&E chart, etc.
	Services	Calibration	PSV s calibration.	PICO	PICO	Oil& Gas	Egypt	0.25	Calibrate 2 PSVs in our workshop.
	Services	Installation	GE SCADA Servers Replacement at KPC sites.	KHALDA	KHALDA	Oil& Gas	Egypt	1	The servers were installed 6 years ago, so the client asked to replace them as a matter of prevention action.
	Services	Maintenance& troubleshooting	NPCP Barrier Replacement & validation.	KHALDA	KHALDA	Oil& Gas	Egypt	1	Replace the installed barrier based on the request of the client, they need to duplicate the signals to third party devices.
	Consultation	HAZOP	HAZOP study for sales gas chiller.	MELROSE	Mansoura	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Engineering	Detailed Engineering	Cause & Effect review and update for (Salam & Tarek ) gas planet.	KHALDA	KHALDA	Oil& Gas	Egypt	0.5	Implement operations modifications.
	Consultation	HAZOP	HAZOP study for the west khilala Gas Plant.	MELROSE	Mansoura	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Engineering	PLC & SCADA	Kurdistan Gas & Crude Oil Pipeline communication & SCADA system.	GE-IP	KAR for Construction & Engineering	Oil& Gas	IRAQ	3	Issue engineering documents such as C&E chart, wiring diagrams, panel layout, application program, SCADA graphics, etc.
	System Integration	PLC & SCADA	Kurdistan Gas & Crude Oil Pipeline communication & SCADA system.	GE-IP	KAR for Construction & Engineering	Oil& Gas	IRAQ	0.5	Cnduct FAT.
	Engineering	PLC & SCADA	Alameen Shipping Pumps control system, PLC-based system.	KHALDA	KHALDA	Oil& Gas	Egypt	1	Issue the engineering documents such as c&E chart, wiring diagrams, application program, etc.
	System Integration	PCS	Alameen Shipping Pumps control system, PLC-based system.	KHALDA	KHALDA	Oil& Gas	Egypt	1	Assemble the new system. Use 90-30 redundant PLC (15AI, 12AO, 24DI, 40DO).
	Services	Installation	Alameen Shipping Pumps control system, PLC-based system.	KHALDA	KHALDA	Oil& Gas	Egypt	0.5	Install and commission the new system.
	Services	Maintenance& troubleshooting	Revamp Akik make-up propane tank instruments.	KHALDA	KHALDA	Oil& Gas	Egypt	1	Install and calibrate new instruments.
	Engineering	PLC & SCADA	Kalabsha (Pico) Gas Facility Upgrade	KHALDA	KHALDA	Oil& Gas	Egypt	2	Develop all related Engineering documentation f such as (P&ID, Cables schedule, Junction Boxes wiring/ Boxes block diagrams, Instrumentation data sheet, instrument index, etc.)
	System Integration	PLC & SCADA	Kalabsha(Pico) Gas Facility Upgrade	KHALDA	KHALDA	Oil& Gas	Egypt	4	Provide ESD, PCS and fire and gas system to control the Existing and new facilities for PICO facilities.
	Installation & Commissioning	PLC & SCADA	Kalabsha (Pico) Gas Facility Upgrade	KHALDA	KHALDA	Oil& Gas	Egypt	12	Replace pneumatic instruments by electrical devices, laid cables and install glands, junction box installation and termination, instrument installation and control panel cable entry termination.

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2012	Installation & Commissioning	PLC & SCADA	Upgrading & Transferring Salam Control system to new process control room.	KHALDA	KHALDA	Oil& Gas	Egypt	8	Supply of PLC & Matrix Panels, Gas detectors & Manual Call Points.
	System Integration	F&G	H2S Detection System for offshore platforms (P-A,P-PP/B,P-C) plus solar system at platforms (P-A and P-C)	SUCO	SUCO	Oil& Gas	Egypt	4	1- The H2S detection system has been built for three offshore platforms including three control panels and with total N.o of IOs "67" (AI=26, AO=9, DI=13, DO=19). 2- The solar system is to power the control panels at platforms (P-A, P-C) and continue supplying the power to the panel when the sunlight absence for four days
	Services	Pre-commissioning& commissioning	H2S Detection System for offshore platforms (P-A,P-PP/B,P-C) plus solar system at platforms (P-A and P-C)	SUCO	SUCO	Oil& Gas	Egypt	1	1- Cold loop check 2- System powering up 3- Hot loop check 4- H2S detectors calibration 5- System functional testing
	Engineering	PLC & SCADA	H2S Detection System for offshore platforms (P-A,P-PP/B,P-C) plus solar system at platforms (P-A and P-C)	SUCO	SUCO	Oil& Gas	Egypt	1	1- AS-BUILT drawings 2- loop diagrams 3- SPIR 4- Operations & maintenance manual
	System integration	F&G	Integrate the PLC F&G system with the SCADA and MIMIC and communication required	ENPPI	KHALDA	Oil& Gas	Egypt	2	conduct of "4" PLC panels & "2" MIMIC panels and SCADA system.
	Engineering	Basic Engineering	Design level measuring system for highly corrosive application "Upgrading RAS BAKR Skimmovex treatment station" project.	GPC	GPC	Oil& Gas	Egypt	1	Issue BOM to get proper instruments for harsh application.
	Engineering	Detailed Engineering	Design MCC panel for "Upgrading RAS BAKR Skimmovex treatment station" project. Design/Preparation Power/Signal Cables "Upgrading RAS BAKR Skimmovex treatment station" project to power the area pumps and conduct the transmitters signals.	GPC	GPC	Oil& Gas	Egypt	2	Issue Wiring diagram, Loop diagram, Logic diagram, SLD, System architecture, FAT/ SAT documents, Commissioning, Startup procedures.
	Engineering	PLC/SCADA	Design PLC panel for "Upgrading RAS BAKR Skimmovex treatment station" project. Programming PLC for "Upgrading RAS BAKR Skimmovex treatment station" project. Design HMI screen for "Upgrading RAS BAKR Skimmovex treatment station" project. Design SCADA system for "Upgrading RAS BAKR Skimmovex treatment station" project.	GPC	GPC	Oil& Gas	Egypt	2	Using GE-IP PLC {RX3i} and interface HMI {Quick panel}. Qty of the I/Os to this application is 112 I/Os. Design SCADA system consists 15 Screens, Auto reporting
	System integration	PCS	Integrate full system of one PLC panel C/W HMI and one MCC panel C/W all V/A/Watt monitoring and 9 Level/ flow transmitters to achieve efficient oily water treatment for "Upgrading RAS BAKR Skimmovex treatment station" project.	GPC	GPC	Oil& Gas	Egypt	3	Using one IP65 PLC cabinet and one IP 54 MCC panel painted with anti corrosive painting.
	Service	Installation	Installation /recalibrating total field transmitters. Cable routing/Testing and conducting to low voltage pumps and field transmitters and control valves for "Upgrading RAS BAKR Skimmovex treatment station" project.	GPC	GPC	Oil& Gas	Egypt	0.25	Install of 8 level transmitters " RADAR type". Install power cables and signal cables of 3,000 meters.
	Service	Pre-commissioning and commissioning	Commissioning the system integration to operate efficiently for "Upgrading RAS BAKR Skimmovex treatment station" project.	GPC	GPC	Oil& Gas	Egypt	0.75	Perform cold/ hot loop testing and verify C&E and operating philosophy.

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2011	Consultation	HAZOP	HAZOP for west KALABSHA, phase I.	Precision Consult	KHALDA	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Consultation	HAZOP	HAZOP for west KALABSHA, phase II.	Precision Consult	KHALDA	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Consultation	HAZOP	HAZOP study for west Dikimis refrigeration plant.	Melrose	Mansoura	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Services	Field support	Salam Gas Plant, Technical Support	KHALDA	KHALDA	Oil& Gas	Egypt	18	Provide 2 senior engineers, back-to-back to support field staff and carry troubleshooting for all installed PLC-based systems.
	Engineering	Detailed Engineering	ONSHORE F&G EXPANDING AMER-8 STORAGE AREA PROJECT.	ENPPI	GPC	Oil& Gas	Egypt	2	Issue C&E chart, wiring diagrams, MRQ, etc.
	Engineering	Detailed Engineering	Fire Alarm System for different buildings, control room, warehouse at DAHSHOUR gas plant.	GUPCO	GUPCO	Oil& Gas	Egypt	2	Issue C&E chart, Panels layout, wiring diagrams, cable schedule, cable routing drawings, MRQ, etc.
	System Integration	F&G	Fire Alarm System for different buildings, control room, warehouse at DAHSHOUR gas plant.	GUPCO	GUPCO	Oil& Gas	Egypt	4	Configur 16 NOTIFRE addressable panels, and create HMI displays. The new system includes 330 smoke detectors, 25 heat detectors, 30 Horns, 30 MCP, 30 Strobe
	Services	Maintenance& troubleshooting	Annual maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	1	One monthly visit
	Services	Installation	Fire Alarm System for different buildings, control room, warehouse at DAHSHOUR gas plant.	GUPCO	GUPCO	Oil& Gas	Egypt	6	Install detectors, field devices, cables conduts& trays, dig cables trenches, lay cables, and commission the system.
	Engineering	PLC & SCADA	HMI for GTG's gas turbine	SEGAS	SEGAS	Oil& Gas	Egypt	1	Upgrade HMI software version, create the new HMI graphics.
	Services	Pre-commissioning and commissioning	HMI for GTG's gas turbine	SEGAS	SEGAS	Oil& Gas	Egypt	0.5	Download the new software version, and commission the HMI.
	Engineering	PLC & SCADA	Modifying the link 200 system of 18" pipeline at Salam gas plant metering system.	KHALDA	KHALDA	Oil& Gas	Egypt	1	Co-ordinate with the packager to modify the communication protocol of the package to communicate with the PCDA.
	Engineering	PLC & SCADA	Upgrade the Control system of 18" pipeline station at Salam gas plant.	KHALDA	KHALDA	Oil& Gas	Egypt	2	Issue detailed engineering to upgrade hardware and software of the installed PLC.
	Engineering	PLC & SCADA	Upgrade the Control system of 18" pipeline station at Abu El GHARADQ plant.	KHALDA	KHALDA	Oil& Gas	Egypt	2	Issue detailed engineering to upgrade hardware and software of the installed PLC.

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2011	Engineering	PLC & SCADA	Adding HMI for the control & monitoring system of the 18" pipeline station at Abu Al Gharadig.	KHALDA	KHALDA	Oil & Gas	Egypt	1	Issue HMI graphics, MRQ, etc.
	Services	Installation	Connect F&G Detection alarm signals to DCS.	KHALDA	KHALDA	Oil & Gas	Egypt	1	Connect the F&G alarms of the metering package to the DCS of Abu El GHARADQ plant.
	Engineering	Basic Engineering	H2S Detection System for offshore platforms (P-A,P-PP/B, P-C) plus solar system at platforms (P-A and P-C).	SUCO	SUCO	Oil & Gas	Egypt	1	Issue the following documents: 1- C&E chart 2- Control philosophy

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2010	Engineering	PLC & SCADA	F&G detection and alarm system for Al Hamad plant.	GPC	GPC	Oil& Gas	Egypt	4	Issue C&E chart, wiring diagrams, panel lay out, MRQ for detectors and NOTIFIRE logic solver (NFS2-3030).
	Engineering	PLC & SCADA	Detailed engineering for a SIL-2 F&G system for KALABSHA oil facilities.	ENPPI	KHALDA	Oil& Gas	Egypt	6	Issue wiring diagrams, panel layout, C&E chart, hook-up drawings, design Matrix and Mimic panels. In addition to field and buildings F&G detectors.
	Engineering	Detailed engineering	F&G system for ZETICO	ZETICO	ZETICO	Oil& Gas	Egypt	1	Issue C&E chart, panel wiring diagrams, etc.
	System Integration	F&G	F&G detection and alarm system for Al Hamad plant.	GPC	GPC	Oil& Gas	Egypt	2	Assemble the new system, configure the logic solver, and create graphic displays Oof HM.
	Services	Installation	F&G detection and alarm system for Al Hamad plant.	GPC	GPC	Oil& Gas	Egypt	3	Install 13 H2S detectors, 4 open path gas detectors, 6 UV/IR, linear heat detectors for 6 tanks, 12 multi sensors, 4 smoke detectors, 4 manual call points, 7 bells, and 22 KM of cables.
	Consultation	Turbines & Engines	Provide field engineering study for upgrading four gas turbines at ZADCO	Turner	ZADCO	Oil& Gas	UAE	3	Issue junction boxes wiring diagrams, review the existing field devices and recommend the replacement.
	Engineering	Detailed engineering	Upgrading of 18" P/L metering skid at SALAM gas plant.	KHALDA	KHALDA	Oil& Gas	Egypt	4	Including recalculations for the new orifice plates to match the new flow rates.
	System Integration	F&G	SIL-2 F&G system for KALABSHA oil facilities.	ENPPI	KHALDA	Oil& Gas	Egypt	4	Assemble, and program the new system, Matrix and Mimic panels. Create the graphics displays.
	System Integration	F&G	F&G system for ZETICO	ZETICO	ZETICO	Oil& Gas	Egypt	1	Assemble the new system, configure the logic solver, and conduct FAT. The system include 16 point watch gas detectors, 24 AI / 8 DI / 8 DO.
	Service	Pre-commission& commission	SIL-2 F&G system for KALABSHA oil facilities.	ENPPI	KHALDA	Oil& Gas	Egypt	2	Assist in pre-commission and commission the new system.

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2009	Engineering	PLC & SCADA	Re-location of AKIK Gas Plant.	EMC	KHALDA	Oil & Gas	Egypt	4	Issue all engineering documents for a process control system, SIL-3 ESD/ F&G system. SCADA System.
	System Integration	PCS/ESD/F&G	Re-location of AKIK Gas Plant.	EMC	KHALDA	Oil & Gas	Egypt	6	Assemble the new systems, and conduct FAT. Used RX3i redundant PLC for PCS (128AI, 64AO, 32DI, 8DO), and 90-70 GMR for ESD/ F&G (48AI, 32DI, 48DO).
	Services	Pre-commission& commission	Pre-commissioning and commissioning for F&G detectors of the Permanent Slug catcher at SALAM gas plant.	ITP	KHALDA	Oil & Gas	Egypt	2	Including installation, calibration and alignment of F& G system.
	Consultant	HAZOP	HAZOP study for using a test separator as a temporary storage tank.	Melrose	Mansoura	Oil & Gas	Egypt	0.5	Chair HAZOP session.
	Consultant	HAZOP	HAZOP study for tie-in of 16" pipeline with GUPCO U-104	Al-Amal	Al-Amal	Oil & Gas	Egypt	0.5	Chair HAZOP session.
	Services	Calibration	Pre-commissioning and commissioning of a new gas plant.	EXTRRAN	South DABAA	Oil & Gas	Egypt	3	calibration and function test for instruments, PSV's in South DABAA gas plant, Assist in commission and start up for the plant.
	Services	Maintenance& troubleshooting	Annual maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	12	One monthly visit
	Engineering	Develop engineering documents	Issue AS-BUILT drawings for 2 sites.	UGDC	UGDC	Oil & Gas	Egypt	4	Conduct site survey and issue the As-Built drawings.
	System Integration	PLC & SCADA	Re-location of AKIK Gas Plant.	EMC	KHALDA	Oil & Gas	Egypt	8	Install the new system, conduct SAT, commission and start-up, then provide field support to end user for 2 weeks.

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2008	Engineering	PLC & SCADA	QASR phase II process control system, SIL-3 ESD, SIL-3 F&G systems for QASR site extension.	PETROJET	KHALDA	Oil& Gas	Egypt	2	Issue engineering documents to build new remote I/O's marshalling cabinets, and to extend the existing Ethernet Network by using the fiber optical cable.
	Engineering	Detailed engineering	Early Phase Control System for QASR site extension.	PETROJET	KHALDA	Oil& Gas	Egypt	2	Issue wiring diagrams, cable schedule, cable routing, and modify the application programs.
	Consultant	HAZOP	HAZOP study for Kahrman new facilities.	KHALDA	KHALDA	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Engineering	PLC & SCADA	Process control system, SIL-3 ESD system and SIL-3 F&G system for Northern Pipeline Compressors.	Apache	KHALDA	Oil& Gas	Egypt	4	Issue C&E chart, wiring diagrams, panels layout, and design the communication protocol,
	System Integration	PCS/ESD/F&G	Process control system, SIL-3 ESD system and SIL-3 F&G system for Northern Pipeline Compressors.	Apache	KHALDA	Oil& Gas	Egypt	6	Assemble the new systems, develop the application programs, and create SCADA graphics. Used 90-30 redundant PLC for PCS (112AI, 40AO, 144DO, 160DO), and 90-70 GMR for
	Services	Maintenance& troubleshooting	Annual maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	12	One monthly visit
	System Integration	PCS/ESD/F&G	QASR phase II process control system, SIL-3, ESD, SIL-3 F&G systems for QASR site extension.	PETROJET	KHALDA	Oil& Gas	Egypt	2	Assemble new remote I/O's marshalling cabinets, and modify the application programs.
	Services	Calibration	OBAYIED trains # 1,2,3,4 & 5 conversions to permanent control system.	KHALDA	KHALDA	Oil& Gas	Egypt	12	Including recalibration for all trains instruments and PSV's, and modify the application programs of the process control, ESD and F&G systems.
	Services	Installation	Process control system, SIL-3 ESD system and SIL-3 F&G system for Northern Pipeline Compressors.	Apache	KHALDA	Oil& Gas	Egypt	2	Install, commission and start-up of the field instruments and systems.
	Services	Installation	QASR phase II process control system, SIL-3, ESD, SIL-3 F&G systems for QASR site extension.	PETROJET	KHALDA	Oil& Gas	Egypt	4	Install 15 IR flam detectors,17 gas detectors, 1 open path gas detector, 4 rate of rise heat detectors, 6 MCP, 2 siren, 26 smoke detectors, 2 linear heat detectors, 1 H2S, 20 Junction boxes, and 12 KM of cables.
	Services	Installation	Early Phase Control System for QASR site extension.	PETROJET	KHALDA	Oil& Gas	Egypt	2	Conduct all field modifications that allow early schemes for the required extension.



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2007	Engineering	Detailed engineering	Basic and detailed instrumentation and control engineering for Port Said BUNKER TERMINAL.	PACER	MASHRQ	Oil& Gas	Egypt	4	Issue control philosophy, data sheets, P&ID, Cable routing, cables schedule, hook-up drawings, MRQ, etc.
	Engineering	Detailed engineering	Fire and gas system for 2 gas compressors.	AGIBA	AGIBA	Oil& Gas	Egypt	2	Issue C&E chart, loop diagram, wiring diagrams, cable schedule, hook-up drawings, etc.
	System Integration	F&G	Fire and gas system for 2 gas compressors.	AGIBA	AGIBA	Oil& Gas	Egypt	2	Assemble the new EQP control system, and conduct FAT.
	Services	Installation	Fire and gas system for 2 gas compressors.	AGIBA	AGIBA	Oil& Gas	Egypt	2	Install the detectors (4 IR flam detectors, 4 open path gas detectors, 1 conined strobe and flasher), the system, cable trays, laying the cables,and replace 3 ESD valves.
	Engineering	Detailed engineering	Upgrade SCADA system at ZAAFRANA site.	GEMSA	GEMSA	Oil& Gas	Egypt	6	Issue new wiring diagrams, loop diagrams, develop new application program after change the system from simplex to redundant, and create SCADA graphics. The system use wireless communications.
	Services	Installation supervision	Supervise the commissioning and start-up of in KAHRMAN new facilities.	KHALDA	KHALDA	Oil& Gas	Egypt	5	Review the engineering documents and drawings. Installation supervision of all field instruments
	Engineering	Develop engineering documents	Issue As-built E&I drawings for OBAYIED gas plant.	KHALDA	KHALDA	Oil& Gas	Egypt	6	Issue AS-Built drawings for early production facilities.
	Services	Installation	Re-wiring field junction boxes in OBAYIED gas plant.	KHALDA	KHALDA	Oil& Gas	Egypt	1.5	The client was not satisfied with wiring quality of the construction contractor.
	Engineering	PLC & SCADA	PLC-based control system.	JUTON	JUTON	Chemical	Egypt	2	Issue wiring diagrams, panel lay out, develop application program, etc.
	Engineering	PLC & SCADA	Provide HMI for water treatment plant.	PETROBEL	PETROBEL	Oil& Gas	Egypt	1	Develop the new graphics.
	Engineering	PLC & SCADA	Detailed engineering of process control systems for three platforms and one central plant, in addition to SCADA and wireless communication.	PIRECO	EI-BIBANE	Oil& Gas	Tunisia	3	Issue wiring diagrams, C&E chart, develop application program, create the new graphics.
	System Integration	PCS	Process control systems for three platforms and one central plant, in addition to SCADA and wireless communication.	PIRECO	EI-BIBANE	Oil& Gas	Tunisia	2	Assemble the control system and conduct FAT.
	Services	Pre-commission& commission	Pre-commissioning and commissioning of a new gas plant.	Hanover	South DABAA	Oil& Gas	Egypt	4	Cold and hot loop checks, including field instruments calibration.

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2007	Services	Field support	Provide field engineers to supervise pre- commissioning, commissioning, and start-up activities in four (4) gas processing plants.	KHALDA	KHALDA	Oil& Gas	Egypt	12	Based on the long term agreement with the client, we provide engineers to follow up commission and start-up activities.
	Services	Maintenance& troubleshooting	Annual maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	12	One monthly visit
	System Integration	ESD	Upgrade SCADA system at ZAAFRANA site.	GEMSA	GEMSA	Oil& Gas	Egypt	3	Assemble the system and develop the application program and SCADA graphics. The installed systems are 2 redundant 90-70 PLC (48AI, 24AO, 564DI, 282DO), RF communication is used fro data transfer.
	Services	Field support	Providing technical support during the engineering and construction of trains 3&4 of Salam gas plant.	KHALDA	KHALDA	Oil& Gas	Egypt	12	Based on the long term agreement with the client, we provide engineers to be part of the client team in this project
	Services	Installation	Upgrade SCADA system at ZAAFRANA site.	GEMSA	GEMSA	Oil& Gas	Egypt	1	Install the system, commission, start-up and train the field staff.
	Engineering	PLC & SCADA	SIL-2 Emergency shutdown system for RAS BADRAN platform.	ENPPI	SUCO	Oil& Gas	Egypt	2	Issue the wiring diagrams, panel layout, the final C&E chart, etc.
	System Integration	ESD	SIL-2 Emergency shutdown system for RAS BADRAN platform.	ENPPI	SUCO	Oil& Gas	Egypt	3	Assemble the new system and develop the application program.
	Services	Installation	SIL-2 Emergency shutdown system for RAS BADRAN platform.	ENPPI	SUCO	Oil& Gas	Egypt	2	Install, commission, and start-up of the system.
	Services	Calibration	Calibration of recorders and PSVs.	POWERWELL	POWERWELL	Oil& Gas	Egypt	12	Annual contract to calibrate and certify instruments and PSVs.
	Services	Maintenance& troubleshooting	Maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	12	one monthly visit
	Services	Installation	Installation, pre-commissioning, commissioning of F&G detection system in QASR project.	KHALDA	KHALDA	Oil& Gas	Egypt	4	Target Supplied the detectors, so the client decided to give us installation and commissioning instead of the construction contractor.
	System Integration	PCS	PLC-based control system.	JUTON	JUTON	Chemical	Egypt	4	Assemble the system, conduct FAT.

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2007	Consultation	HAZOP	HAZOP study for modifaction on the first stage of export gas compressors.	KHALDA	KHALDA	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Consultation	HAZOP	HAZOP study for gas plant stabilizer by-pass flow line.	KHALDA	KHALDA	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Engineering	Detailed engineering	Fire and gas system for LTS project.	GUPCO	GUPCO	Oil& Gas	Egypt	2	The new system is an extension for the existing F&G system of the gas compressor. Issue the loop diagrams, C&E chart.
	Services	Installation	Fire and gas system for LTS project.	GUPCO	GUPCO	Oil& Gas	Egypt	1	Install 4 gas detectors, 2 open path gas detectors, 6 UV/IR flam detectros, 1 MCP, 2 Sounders, 2 Beacons, and 3 Km of cables.
	Services	Installation	Process control systems for three platforms and one central plant, in addition to SCADA and wireless communication.	PIRECO	EI-BIBANE	Oil& Gas	Tunisia	1	Install and commission the system, and then train the field staff.
	Consultation	HAZOP	HAZOP study for NGV refueling station.	CTIP	CTIP	Oil& Gas	Egypt	0.25	Chair HAZOP session.
	Services	Installation	PLC-based control system.	JUTON	JUTON	Chemical	Egypt	1	Install, commission and start-up the new system.
	Engineering	Turbines & Engines	Upgrade control system of emergency generator to allow automatic start.	BG	BG	Oil& Gas	Tunisia	1	Analize and modify the PLC program to solve existing problems and add more options.
	Services	Maintenance& troubleshooting	Upgrade control system of emergency generator to allow automatic start.	BG	BG	Oil& Gas	Tunisia	0.5	Download the new application program, commission, and start up.

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2006	Services	Maintenance& troubleshooting	Annual maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	12	One monthly visit
	Services	Maintenance& troubleshooting	Troubleshooting engine control system,2301A and EPG-3	MARADIVE	MARADIVE	Marine	Egypt	0.5	Fixed the existing problems and review the wiring of the control system. Recommend new digital system.
	Engineering	PLC & SCADA	Upgrading control system of two propane compressors.	GPC	GPC	Oil& Gas	Egypt	2	Issue detailed engineering documents, develop the application program.
	Engineering	Detailed engineering	Basic and detailed engineering for instrumentation in KAHRMAN new facilities.	KHALDA	KHALDA	Oil& Gas	Egypt	3	Issue data sheets, specifications, loop diagrams, MRQ, etc.
	System Integration	PCS	Upgrading control system of two propane compressors.	GPC	GPC	Oil& Gas	Egypt	3	Assemble the new system and conduct FAT. The system is 90-30 redundant PLC with 16AI, 8AO, 64DI, and 24DO, The system has a quick panel as HMI.
	Services	Calibration	Calibration of recorders and PSVs.	POWERWELL	POWERWELL	Oil& Gas	Egypt	12	Annual contract to calibrate and certify instruments and PSVs.
	Engineering	PLC & SCADA	PLC-based system for oil tanks firefighting system.	KHALDA	KHALDA	Oil& Gas	Egypt	1	Issue loop diagrams, C&E, develop the application program .
	Engineering	Turbines & Engines	Upgrading governor of 2 SKL Diesel engines.	MORGANTI	Water treatment Authority	Utilities	Egypt	6	Propose Woodward 2301D and ProAct II to replace the installed mechanical governor, design the required linkage.
	Services	installation	Upgrading governor of 2 SKL Diesel engines.	MORGANTI	Water treatment Authority	Utilities	Egypt	0.5	Install and commission the new system.
	Engineering	Detailed engineering	Fire & gas system for gas compressor in Happy gas plant.	GUPCO	GUPCO	Oil& Gas	Egypt	4	Issue loop diagrams, hook-up drawings, panel layout, wiring diagrams, and develop the application program.
	System Integration	F&G	Fire & gas system for gas compressor in Happy gas plant.	MORGANTI	Water treatment Authority	Utilities	Egypt	0.5	Assemble the new EQP with the power supply and power supply monitor units.
	Services	installation	Fire & gas system for gas compressor in Happy gas plant.	GUPCO	GUPCO	Oil& Gas	Egypt	2	Install, commission, and train the end user staff. The system include EQP controller, 4 UV/IR flam detectors, 2 open path gas detectors, 2 point watch gas detectors, 2 MCP, and 3 Km of cables.
	Engineering	PLC & SCADA	SIL-3 PLC- based fire detection system.	PETROJET	KHALDA	Oil& Gas	Egypt	3	Issue the loop diagrams, C&E chart, cable schedule, and develop the application program.

Year	Category	Sub-Category	Job description	Client's Name	End User	Industry	Country	Duration (Months)	Remarks
2006	System Integration	F&G	SIL-3 PLC- based fire detection system.	PETROJET	KHALDA	Oil& Gas	Egypt	6	Assemble the new system, conduct FAT.
	Consultation	HR	Prepare job profiles, assess job holders, and issue individual career development plan for process engineers, shift supervisors, field operators, lab chemist and lab technician.	PROMARK	GUPCO/ BP	Oil& Gas	Egypt	8	Covered Happy plant, Port Saied
	System Integration	F&G	PLC-based system for oil tanks firefighting system.	KHALDA	KHALDA	Oil& Gas	Egypt	1	Assemble a small wall mound panel, including 90-30 PLC.
	Consultation	HAZOP	HAZOP study for West DIKIRNIS field development.	MERLON	Mansoura	Oil& Gas	Egypt	0.5	Chair HAZOP session.
	Services	Installation	SIL-3 PLC- based fire detection system.	PETROJET	KHALDA	Oil& Gas	Egypt	2	Install the system, commission, and start-up.
	Services	installation	Upgrading control system of two propane compressors.	GPC	GPC	Oil& Gas	Egypt	1	Install and commission the new system, then provide field support for 2 weeks after start up.
	Services	Installation	PLC-based system for oil tanks firefighting system.	KHALDA	KHALDA	Oil& Gas	Egypt	1	Install the system, the detectors, and the fiber optics cable.
	Services	Inspection	Carry out expediting and inspection as a third party for all E&I local purchase orders, QASR project.	KHALDA	KHALDA	Oil& Gas	Egypt	18	Represent the client in the cables inspection and expediting the shipping.

Year	Category	Sub-Category	Job description	Client's Name	End User	Industry	Country	Duration (Months)	Remarks
2005	Services	Maintenance& troubleshooting	Annual maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	12	One monthly visit
	Services	Pre-Commissioning, commissioning	Pre-commissioning and commissioning of a new gas plant.	HANOVER	WASTANI	Oil& Gas	Egypt	3	Calibrate field instruments, loop checking, and start-up assistance for WASTANI plant.
	Services	Calibration	Calibration of Recorders and PSVs.	POWERWELL	POWERWELL	Oil& Gas	Egypt	12	Annual contract to calibrate and certify instruments and PSVs.
	Engineering	Detailed engineering	Detailed engineering for instrumentation in Morgan-8 platform reinstatement project.	KBR	GUPCO	Oil& Gas	Egypt	8	Issue data sheets, specifications, loop diagrams, cause& effects, etc.
	Engineering	PLC & SCADA	Process control systems, SIL- 3 ESD system and SIL-3 F&G system for 4 sites, QASR project.	KHALDA	KHALDA	Oil& Gas	Egypt	4	Issue panels layout, wiring diagrams, loop diagrams, FDS, final C&E chart, FAT/SAT procedures, etc. The data of the 4 sites had been transferred via fiber optic cables and VSAT as a backup link to Honeywell TDC 3000 at Salam site.
	System Integration	PCS/ESD/F&G	Process control systems, SIL- 3 ESD system and SIL-3 F&G system for 4 sites, QASR project.	KHALDA	KHALDA	Oil& Gas	Egypt	6	Assemble the 3 systems, conduct FAT. PCS used 90-30 (1,868 I/Os, 168 closed loops). ESD, F&G systems used 90-70 GMR (I/Os for ESD is 871, I/Os for F&G 545). The graphics screens for these systems are 565.
	Consultation	HR	Prepare job profiles, assess job holders, and issue individual carrier development plan for electrical supervisors and technicians.	PROMARK	GUPCO/ BP	Oil& Gas	Egypt	6	Covered WD & GOS
	Maintenance	Maintenance& troubleshooting	Maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	12	one monthly visit
	Engineering	PLC & SCADA	Upgrade control system of the shipping pumps.	AGIBA	AGIBA	Oil& Gas	Egypt	1	Issue C&E chart, wiring diagrams, and integrate new vibration detection system.
	Services	Installation	Process control systems, SIL- 3 ESD system and SIL-3 F&G system for 4 sites, QASR project.	KHALDA	KHALDA	Oil& Gas	Egypt	3	Install the 3 systems, conduct SAT, and commission the systems.
	System Integration	PCS	Upgrading control system of the shipping pumps.	AGIBA	AGIBA	Oil& Gas	Egypt	4	Assemble the new system
	Services	installation	Upgrading control system of the shipping pumps.	AGIBA	AGIBA	Oil& Gas	Egypt	2	Install the new control system

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2004	Engineering	Detailed engineering	Basic and detailed engineering for instrumentation in Hap'y offshore new production lines.	KBR	GUPCO	Oil& Gas	Egypt	0.5	Issue data sheets, loop diagrams, and MRQ.
	Services	Maintenance& troubleshooting	Annual maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	12	One monthly visit
	System Integration	F&G	A/G gas detection system for oil process and gas plants.	GUPCO	GUPCO	Oil & Gas	Egypt	1	Assemble the new system using EQP logic solver and HMI.
	Services	installation	A/G gas detection system for oil process and gas plants.	GUPCO	GUPCO	Oil & Gas	Egypt	2	Install cable trays, lay cables, and gas detectors.
	Engineering	Detailed engineering	Gas detection system for RAZZAQ gas plant.	GUPCO	GUPCO	Oil & Gas	Egypt	1	Issue cause& effects chart, determine detectors location, cable schedule, and loop diagrams.
	Engineering	Basic engineering	FEED for instrumentation, SAQARA project.	KBR	GUPCO	Oil& Gas	Egypt	1	Issue control philosophy.
	Services	Installation	Fire alarm system (installation, commissioning & start-up).	SUMED	SUMED	Oil& Gas	Egypt	2	Install new fire detection system for control room, sub-stations, warehouse, and administration buildings. Train end user staff.
	Engineering	Turbines & Engines	Reconfigure steam turbines control system and provide load sharing system.	Alexandria Carbon Black	Alexandria Carbon Black	Petro-chemicals	Egypt	3	Issue the new configuration parameters, new panel wiring diagrams, MRQ, loop diagrams.
	Maintenance	Maintenance& troubleshooting	Maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	12	one monthly visit
	Consultation	HR	Prepare job profiles, assess job holders, and issue individual carrier development plan for a pilot team.	PROMARK	GUPCO/ BP	Oil& Gas	Egypt	10	Covered Head quarter & WD & GOS
	System Integration	F&G	Gas detection system for RAZZAQ gas plant.	GUPCO	GUPCO	Oil & Gas	Egypt	1	Assemble the new system using EQP logic solver and HMI.
	Services	installation	Gas detection system for RAZZAQ gas plant.	GUPCO	GUPCO	Oil & Gas	Egypt	2	Install cable trays, lay cables, and gas detectors.

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2003	Engineering	Detailed engineering	Basic and detailed engineering for new EDFU Platform.	KBR	GUPCO	Oil& Gas	Egypt	7	Issue control philosophy, data sheets, specifications, loop diagrams, cable schedules, MRQs, etc.
	Consultation	Audit	West Bakr fire fighting,	PETROSAFE	GPC	Oil & Gas	Egypt	3	Prepare tender documents including review FEED, evaluating received tenders, Phase 1&2.
	Services	Maintenance& troubleshooting	Annual maintenance contract for installed gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	12	One monthly visit.
	Engineering	Detailed engineering	Fire detection system for safe areas and buildings.	SUMED	SUMED	Oil& Gas	Egypt	4	New fire detection system for control room, sub-stations, warehouse, and administration buildings.
	Consultation	HR	Sharing in recruitment campaign.	PROMARK	SEGAS	Oil& Gas	Egypt	1	Interview candidates of different disciplines, cover technical aspects.
	Engineering	Detailed engineering	Upgrading the process control system for oil processing plants using PLC, SCADA system and wireless communication link.	KHALDA	KHALDA	Oil & Gas	Egypt	3	Issue new wiring diagrams, loop diagrams, panels/ console drawings, procedures to minimize the down time. The old series 6 PLC had been replaced by 90-30 PLC. The relay-based control systems of the process package had been replaced by 90-30 PLC.
	System Integration	PCS	Upgrading the process control system for oil processing plants using PLC, SCADA systems.	KHALDA	KHALDA	Oil & Gas	Egypt	3	Assemble PLC/ SCADA system, 2 GE 90-30 PLC, redundant CPUs, Redundant fiber optics network, redundant HMI server, 350 graphics, and 1,250 I/Os
	Engineering	Detailed engineering	Install gas detection system at A/G plant.	GUPCO	GUPCO	Oil & Gas	Egypt	1	Issue cause& effects chart, determine detectors location, cable schedule, and loop diagrams.
	Services	Calibration	Popping test for PSVs at A/G plant.	GUPCO	GUPCO	Oil & Gas	Egypt	1	Calibrate and certify 75 PSVs.
	Engineering	PLC & SCADA	Detailed engineering to upgrade the control system and wireless& leased line communication system for 3 plants.	GE-Fanuc	TPS	Oil & Gas	Tunisia	4	Issue all engineering documents, develop the application programs, and develop the communication protocols.
	Services	Installation	Upgrading the process control system for oil processing plants using PLC, SCADA system and wireless communication link.	KHALDA	KHALDA	Oil & Gas	Egypt	8	Install, commission the new systems (Hot-transfer)



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2003	System Integration	F&G	Fire detection system for safe areas and buildings. Fire detection system for safe areas and buildings.	SUMED	SUMED	Oil& Gas	Egypt	6	Install new fire detection system for control room, sub-stations, warehouse, and administration buildings. Train end user staff.
	System Integration	ESD	Detailed engineering to upgrade the control system and wireless& leased line communication system for 3 plants.	GE-Fanuc	TPS	Oil & Gas	Tunisia	3	Assemble the PLC and SCADA systems and conduct the FAT in Target Engineering facilities, before shipping the system to Tunisia. Used 3 90-70 redundant PLC (200AI, 70AO, 700DI, 800DO). The data had been transferred via RF communication.
	Services	Installation	Install the control system and wireless& leased line communication system for 3 plants.	GE-Fanuc	TPS	Oil & Gas	Tunisia	1	Install, commission the new system, and train the end user staff.

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2002	Engineering	PLC & SCADA	SCADA system for a large food processing plant, and interface between the SCADA and existing Siemens PLC.	ARMA	ARMA	Food	Egypt	3	Issue detailed engineering documents including memory mapping, design of new reports, and new graphics pages.
	Services	Pre-Commissioning, commissioning	SCADA system for a large food processing plant, and interface between the SCADA and existing Siemens PLC.	ARMA	ARMA	Food	Egypt	1	Commission the new system, and train the end user operations& maintenance staff.
	Engineering	Develop engineering documents	Develop the insurance, 2-year operation and overhauling spare part database for new on- shore and off-shore plants.	BURULLUS	BURULLUS	Oil & Gas	Egypt	6	Issue SPIR for new on-shore and off-shore plants.
	Engineering	PLC & SCADA	Basic and detailed engineering for PLC-based of gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	1	Issue control philosophy, determine the detectors location, panel wiring diagrams, BOM, etc.
	System Integration	F& G	Assemble the control panel for the new gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	1	Use 90-30 PLC to build the new gas detection system. The system includes 16 gas detectors
	Service	Installation	PLC- based gas detection system.	EIPECO	EIPECO	Pharmaceutical	Egypt	0.5	Install, commission, and start-up the new system, in addition to train the end user staff.
	Consultation	Audit	Fire and gas systems auditing.	PETROSAFE	ASSUIT Refinery	Oil & Gas	Egypt	0.5	To review the condition of installed F&G system and issue recommendations for upgrading.
	Engineering	Detailed engineering	Field instruments for 2 storage tanks.	PETROZIET	PETROZIET	Oil & Gas	Egypt	1	Issue data sheets, loop diagrams, hook-up drawings, BOM, etc.
	Engineering	Turbines & Engines	Upgrade speed controller of 350 KW gas engine to be a digital controller.	AMAPETCO	AMAPETCO	Oil & Gas	Egypt	2	Study the required upgrading and issue new wiring diagrams, in addition to program the new controller.
	Services	Pre-Commissioning, commissioning	Upgrade speed controller of 350 KW gas engine to be a digital controller.	AMAPETCO	AMAPETCO	Oil & Gas	Egypt	0.75	Install, commissioning and start-up the engine.
	Services	Installation	Field instruments for 2 storage tanks.	PETROZIET	PETROZIET	Oil & Gas	Egypt	1	Install and calibrate the field instruments.
	Services	Maintenance& troubleshooting	Power management and control system.	Optimum	NFB	Wood	Egypt	0.25	Conduct troubleshooting for installed Woodward governors.
	Consultation	Audit	Audit the existing fire detection and fire Fighting systems.	PETROSAFE	EPC	Petrochemicals	Egypt	2	Review the condition of installed fire and gas detection and issue recommendations to upgrade the obsolete detectors/ systems.

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2001	Engineering	PLC & SCADA	Study and modify the program of GE-Fanuc PLC.	HP	ARENTO	Telecommunication	Egypt	0.5	Modification of the control system of emergency generators.
	Engineering	Detailed engineering	Conduct detailed engineering of the new de-hydration unit on October platform.	KBR	GUPCO	Oil & Gas	Egypt	2	October platform de-hydration unit was damaged due to a fire
	Services	Maintenance& troubleshooting	Technical support for the control system of two generators and ATS.	HP	ARENTO	Telecommunication	Egypt	6	Different visits during a period of 6 months
	Engineering	PLC & SCADA	Upgrading Process Control & Data	KHALDA	KHALDA	Oil & Gas	Egypt	1	Issue all required engineering documents, including BOM.
	Services	Calibration	Conduct Popping test for PSVs.	KHALDA	KHALDA	Oil & Gas	Egypt	0.5	Calibrate and certify 25 PSVs.
	Services	PLC & SCADA	Installation, start-up of PLC-based control system.	ELECTRO GORGE	MIDDOR	Oil & Gas	Egypt	1	Supervise the system installation and carryout commissioning.
	Services	Installation Supervision	F&G system supplied by others for Ras-Gharb plant.	PETROSAFE	GPC	Oil & Gas	Egypt	18	Review data sheet &submitted catalogs, spot check during installation and attend system commission & system handling.
	Engineering	Develop engineering documents	Develop the insurance spare part lists for SALAM, TAREK, and UMBARAKA new gas plants.	KHALDA	KHALDA	Oil & Gas	Egypt	6	Issue SPIR sheets for all instruments/ equipment of the new gas plants.
	Service	Installation	Upgrading Process Control & Data	KHALDA	KHALDA	Oil & Gas	Egypt	1	Install and commission the new system.
	Services	Pre-Commissioning, commissioning	Provide required support during commissioning and start-up of Process Control & Data Acquisition "PCDA" system.	Apache	Apache	Oil & Gas	Egypt	4	Target team co-operate with metering skid packager to commission the skid.
	Engineering	PLC & SCADA	Basic engineering for the plant and remote areas control systems upgrading.	GE-Fanuc	TPS	Oil & Gas	Tunisia	0.5	Issue the system new architecture, and the tender documents.
	Engineering	Detailed engineering	Piping, electrical, and instrumentation detailed engineering for small gas plant, AKIK.	Apache	Apache	Oil & Gas	Egypt	3	Target Engineering accepts the complete task and issued all engineering documents including BOM.
	Engineering	Develop engineering documents	Develop the complete documentation of the upgraded control system for two gas turbines (GEC, cooper).	Woodward	KOC	Oil & Gas	Kuwait	3	Issue full documentation including operating & maintenance manuals, loop diagrams, cable schedule, and C&E chart, etc.

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2000	Services	Pre-Commissioning, commissioning	Commission of a water injection plant, Modicon PLC-based control system at Ashrafi platform.	Al-AHLIA	AGIBA	Oil & Gas	Egypt	0.5	The system includes 2 generators, 2 electrical driven lift pumps, gas engines driven 2 injection pumps and the different process equipment.
	System Integration	F&G	F& G system for metering skids at Salam and A/G.	KHALDA	KHALDA	Oil & Gas	Egypt	6	Integrate controllers in a panel with an annunciator.
	Engineering	Develop Engineering documents	Develop "As-Built" loop diagrams for SALAM, TAREK, and UMBARAKA new gas plants.	KHALDA	KHALDA	Oil & Gas	Egypt	3	Issue As-Built loop diagrams and provide hardware and software copies.
	Services	Field support	Provide on-site technical support, in Salam site.	KHALDA	KHALDA	Oil & Gas	Egypt	12	Provide 2 back-to-back engineers to support maintenance team in oil facilities.
	Engineering	Detailed engineering	F& G system for metering skids at Salam and A/G.	KHALDA	KHALDA	Oil & Gas	Egypt	6	Issue cause& effects chart, loop diagrams for field sensors, panel wiring diagrams, and BOM.
	Services	Installation	F& G system for metering skids at Salam and A/G.	KHALDA	KHALDA	Oil & Gas	Egypt	1	Install the new F&G detectors, lay required cables, and complete field and panel wiring.
	Engineering	PLC & SCDA	Design, program, and configure PLC-based control system.	ELECTRO GEORGE	MIDDOR	Oil & Gas	Egypt	3	Two GE-Fanuc 90-70 PLC's with 300 I/O's and Quick Panels touch screens as HMI's.
	Engineering	Turbines & Engines	Upgrading the control system for power station of a barge.	ASRY	Aramco	Ship repair yard	Bahrain	1.5	Issue required engineering documents to upgrade the speed control systems of existing engines to be digital systems.
	Engineering	Turbines & Engines	Review engineering documents to upgrade 16 Ruston turbines control systems.	Woodward	KOC	Oil & Gas	Kuwait	0.5	Send one engineer to the site to verify that issued documents are match with existing wiring.

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1999	System Integration	ESD	Provide control system for metering skid (PLC + SCADA), at SALAM and A/ G plants.	KHALDA	KHALDA	Oil & Gas	Egypt	4	Assemble redundant GE-Fanuc 90-30 PLC's with 160 I/O's and several HMI graphics.
	Services	Pre-Commissioning, commissioning	Loop checking for un-commissioned loops.	Samsung	KHALDA	Oil & Gas	Egypt	2	Take over the task as Samsung was not satisfied with the main contractor work quality.
	Engineering	Turbines & Engines	Develop updated loop diagrams for GE turbines.	Woodward	SCECO	Utilities	Saudi Arabia	0.25	Issue As-Built loop diagrams.
	Services	Field support	Completion of instruments outstanding jobs (Punch- list) after start-up of SALAM, TAREK, and UMBARAKA new gas plants.	KHALDA	KHALDA	Oil & Gas	Egypt	9	Send a complete team (6 persons /each plant), the teams worked on shifts to ensure continuous activities.
	Services	Pre-Commissioning, commissioning	Commissioning of water injection plant instrumentation, at Faras plant.	TECHNOMARE	AGIBA	Oil & Gas	Egypt	0.3	Cold& hot loop check.
	Consultation	Client representation	Engineering Review for 18" pipeline Metering skids at Salam and A/G.	KHALDA	KHALDA	Oil & Gas	Egypt	2	Attend meetings, review engineering documents, and proposed modifications.
	Services	Calibration	Popping test for PSVs of SALAM, TAREK, and UMBARAKA new gas plants.	Samsung	KHALDA	Oil & Gas	Egypt	2	Calibrate and certify about 250 PSVs before plants start-up.
	Engineering	PLC & SCADA	Conduct basic and detailed engineering.	KHALDA	KHALDA	Oil & Gas	Egypt	2	Issue panel wiring diagrams, final cause& effect charts.
	Services	Installation	Install the new control systems.	KHALDA	KHALDA	Oil & Gas	Egypt	1	Install the panel of each plant and connect all field wiring.
	Services	Field support	Supervising the installation. Pre-commissioning, commissioning and startup of new turbines control systems and instruments.	Woodward	KOC	Oil & Gas	Kuwait	12	Provide two engineers for one year to follow all activities of the project.
	Services	Installation supervision	Installation supervision, Pre-commissioning, commissioning and start-up of train speed control system.	Woodward	IIRR	Railway	Iran	1	Installation supervision, Pre-commissioning, commissioning and start-up of two locomotive control systems.
	Engineering	Turbines & Engines	Detailed engineering for locomotive control system.	Woodward	IIRR	Railway	Iran	1	Engineering and configuration for two Locomotive control systems using Woodward CLC.
	Services	Pre-Commissioning, commissioning	On-line loop checking of SALAM, TAREK, and UMBARAKA new gas plants.	KHALDA	KHALDA	Oil & Gas	Egypt	10	More than 2,000 loops have been checked on line with <b>only 2 false trips</b> .

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1998	Services	Pre-Commissioning, commissioning	Cold& hot loop checking and start-up revamped units.	SIIC	SIIC	Sugar mill	Egypt	0.5	Foxboro field instruments including pressure, temperature, level transmitters.
	Engineering	Turbines & Engines	Detailed engineering for upgrading (2) gas turbines (GEC, cooper) control system.	Woodward	KOC	Oil & Gas	Kuwait	4	Issue MTO's, logic diagrams, C&E, panel wiring diagrams and construction drawings.
	Engineering	Turbines & Engines	Upgrading of power management system.	Woodward	BUNDUQ	Oil & Gas	UAE, Abu Dhabi	0.5	Issue new wiring diagrams.
	Services	Maintenance& troubleshooting	Troubleshooting to solve the unbalanced loads between 3 Solar turbines.	Woodward	AGIBA	Oil & Gas	Egypt	0.25	Calibrate and adjust speed governors for Solar turbines.
	Services	Installation Supervision	Upgrading of power management system.	Woodward	BUNDUQ	Oil & Gas	UAE, Abu Dhabi	0.5	Supervise the installation of the new load sharing/ shedding module.
	Services	Installation Supervision	Supervision of the installation for new governors on (8) GE gas turbines, replace Mark-3 system by Netcon system.	Woodward	ADMA	Oil & Gas	UAE, Abu Dhabi	8	Provide supervision on the installation of the new control system, field instruments and assist in turbines start-up.

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1997	Services	Installation	Supply and installation of flow meter, in juice factory at 6 October city.	JUHAINA	JUHAINA	Food	Egypt	0.5	Install turbine flow meter on the water supply.
	Engineering	PLC & SCADA	Detailed engineering for PLC-based control system for water injection project.	KHALDA	KHALDA	Oil & Gas	Egypt	1	Redundant PLC.
	System Integration	PCS	PLC-based control system for water injection project.	KHALDA	KHALDA	Oil & Gas	Egypt	2	Assemble redundant GE-Fanuc 90-30 PLC's with 60 I/O's.

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1996	Engineering	Develop engineering documents	As-Built drawings for existing control system. In SALAM GAS PLANT.	KHALDA	KHALDA	Oil & Gas	Egypt	2	As- Built loop diagrams from the field instruments up to control system.
	Consultation	HR	Arrange for recruitment campaign to hire engineers and technicians.	GASCO	GASCO	Oil & Gas	UAE, Abu Dhabi	1	Initial screening for received C.V. and arrange for interviews and medical check-up for selected staff.
	Engineering	Develop engineering documents	Develop the commissioning and 2-year operation spare part lists.	QARUN	QARUN	Oil & Gas	Egypt	12	Issue SPIR for the new plant equipment.



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1995	Engineering	Detailed engineering	Conduct detailed engineering for early- start facilities in the first plant of QARUN/ Apache.	QARUN	QARUN	Oil & Gas	Egypt	4	Engineering, procurement services for required field instruments.
	Services	Installation	Installation and start-up instruments and control for early-start facilities in the first plant of QARUN/ Apache.	QARUN	QARUN	Oil & Gas	Egypt	4	Installation & commissioning for field instruments of oil tanks, shipping pumps, and local control panel.
	Engineering	Turbines/ Engines	Upgrade software for (14) gas turbines control system. in BU-HASA, ASAB, and BAB, Ruwais plants.	Woodward	GASCO	Oil & Gas	UAE, Abu Dhabi	6	Convert the application programs from OS2 based platform to Windows platform.
	Consultation	Client representation	Provide technical support during the engineering and construction of the first plant of QARUN/ Apache.	QARUN	QARUN	Oil & Gas	Egypt	24	Assign group of engineers to review and approve the work of the engineering firm (ENPPI), deal with different vendors, recruitment assistance.

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1994	System Integration	ESD	ESD control system upgrading in SALAM GAS PLANT. Target Engineering had conducted detailed engineering in 1993.	KHALDA	KHALDA	Oil & Gas	Egypt	1	Assemble a new panel with new backup PLC System.
	Engineering	Turbines/ Engines	Detailed engineering to upgrade control system of (6) gas turbines, [(2) Solar + (4) Copper]. Turbines installed in BU-HASA, ASAB, and BAB plants.	Woodward	ADNOC	Oil & Gas	UAE, Abu Dhabi	12	Develop program logic, cause& effects, FAT/ SAT procedures, and operations & maintenance manuals.
	Services	Installation	Upgraded ESD control system in SALAM GAS PLANT.	KHALDA	KHALDA	Oil & Gas	Egypt	1	Install a new panel with new backup PLC in oil processing plant.
	Services	Installation supervision	Supervision on installation and start up the two Ruston turbines new control systems, in DAHSHOUR GAS PLANT.	Woodward	GUPCO	Oil & Gas	Egypt	2	Installation, pre-commissioning and commissioning supervision for two Ruston turbines new control systems.

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1993	Engineering	Develop Software	Develop 3 software programs for operations and maintenance division in SALAM GAS PLANT.	KHALDA	KHALDA	Oil & Gas	Egypt	2	Instrument index and maintenance records Database.
	Engineering	Turbines/ Engines	Detailed Engineering of two Ruston turbines control system Upgrading, in DAHSHOUR GAS PLANT.	Woodward	GUPCO	Oil & Gas	Egypt	5	Replacing old hydraulic governors by Microprocessor based governor with HMI.
	Engineering	PLC & SCADA	Conduct detailed engineering to upgrade control system in SALAM GAS PLANT.	KHALDA	KHALDA	Oil & Gas	Egypt	1	To upgrade GE-FANUC, PLC-based ESD system to be redundant, in oil processing plant.