

## Reference Projects [Partial List]

S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
1.	RUTEL	ABB Industry Norway - Oil India Limited	Pipeline SCADA for 1200km long crude oil pipeline, having nine pump stations and a tenth master control dispatch station feeding five refineries in North-East India. The System is based on DEC Alpha Station computers, ABB's SPIDER SCADA software and RTUs 200 and 210.	Participation in System Engineering, Design of Sequence Logic, conducting Internal acceptance Test & Factory Acceptance Test in Oslo, Customer Training, installation & commissioning, conducting Site Acceptance Tests, software warranty for 1 year, Y2K verification.	April 1997
2.	Chaksu- Panipat, Chaksu- Mathura pipeline Project	ABB Industry Norway - Indian Oil Corp. Ltd	Pipeline SCADA system for 600km. long crude oil pipeline, having two pumping and two delivery terminals (supervised and managed by a master control system), feeding two refineries in North India. The System is based on DEC Alpha Station computers, ABB's SPIDER SCADA software, LIC/ SSI's Pipeline Application Software, ABB Master Piece 200 PLC and ABB RTU 210.	Participation in system engineering of the project which was carried out in Oslo, conducting Internal Acceptance Tests (IAT) and Factory Acceptance Tests (FAT) of the SCADA system in Oslo, Installation and commissioning of SCADA system at all the pump stations and MCS, customer training at site, conducting site acceptance tests (SAT), software and control room hardware warranty of the total system for one year after completion of the project	December 1998
3.	Vijayawada & Rajahmundry Terminal Automation Project	ABB Industry Norway - Hindustan Petroleum Corp. Ltd	Terminal Automation Systems for Tank Truck loading Terminals at Vijayawada (36 loading points) and Rajahmundry (20 loading points) in India. The system is based on ABB's Advant Technology.	Assistance in procurement of field instrumentation and flow metering system Participation in system engineering of the project to be carried out in Oslo Programming of AC 450 PLCs, Software development on specific Load Rack Computer Modules Assistance in conducting Internal Acceptance Tests (IAT) and Factory Acceptance Tests (FAT) of the TAS system in Oslo Assistance in Installation and commissioning of Terminal Automation Systems at Vijayawada & Rajahmundry Terminals Customer training at site, Conducting integrated site acceptance tests (SAT).	March 1999

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4.	Manmad Terminal Automation Project	ABB Industry Norway - Bharat Petroleum Corporation Ltd	Terminal Automation Systems for Tank Truck loading and Wagon Loading Terminals at Manmad (32 truck loading & 304 wagon loading points) in India.	Participation in procurement of field instrumentation and metering system, system engineering of the project which was carried out in Oslo, Programming of AC 450 PLCs, Software development on specific Load Rack Computer Modules, conducting Internal Acceptance Tests (IAT) and Factory Acceptance Tests (FAT) of the SCADA system in Oslo, Assistance in Installation and commissioning of Terminal Automation System at Manmad Terminal.	May 1999
5.	STATOIL SCADA System	ABB Industry Norway - STATOIL	System engineering and software development services at ABB Industri, Norway for STATOIL SCADA project, power projects and core SCADA product development with their R&D department.	Participation in system engineering, Internal Acceptance Tests (IAT) and Factory Acceptance Tests (FAT) of the SCADA system in Oslo, participation in site commissioning of the project, development of MODBUS protocol for communicating with various RTUs and PLCs supplied by other vendors.	July 1999
6.	VCPL SCADA Spares	Indian Oil Corporation Limited, Pipelines Division	Supply and Commissioning of SCADA spares	Supply and Commissioning of DEC Alpha spares for SCADA system at Chaksu for VCPPL	April 2004
7.	VCPL SCADA Spares	Indian Oil Corporation Limited, Pipelines Division	Supply and Commissioning of SCADA spares	Repairing of DEC Alpha workstations for SCADA system at Panipat for VCPPL	December 2004
8.	VCPL SCADA Spares	Indian Oil Corporation Limited, Pipelines Division	Supply and Commissioning of SCADA spares	Supply and Commissioning of DEC Alpha spares for SCADA system at Chaksu for VCPPL	November 2005
9.	AMC of Alstom S900 RTUs	Power Grid Corporation of India Limited	Annual Maintenance Contract for preventive maintenance and attending of failures in Alstom S900 RTUs of ULDC Scheme for Northern Region – I, Northern Region - II	Maintenance of S900 RTUs working under the ULDC Scheme covering the entire Northern Region of India. Scope includes maintenance periodic maintenance and installation-cum-commissioning of additional/new requirements in the RTUs. The duration of the contract is for one year.	From October 2007

## Reference Projects with SIRIUS [Partial List]

S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
10.	Temperature & Humidity Control System	Unichem laboratories	This project included providing a SIRIUS SCADA based Control System for automatic temperature and humidity control of incubators for a Unichem laboratories plant in Baddi, Himachal Pradesh.	Supply Of SIRIUS SCADA.	March 2002
11.	RYNINH II Hydroelectric Power Plant	VATECH Escher Wyss Flovel Limited  - SONGDA Construction Corporation	SCADA System project for 3X2.7 MW Mini Hydroelectric in Vietnam. The scope included SIRIUS SCADA system. ABB PLC and interfacing to Governor Control System and Numerical Relays for Governor and Transformer Protection.	Design, Engineering, Supply, Testing, Installation & Commissioning at site, Customer Training and warranty.	June 2002
12.	Guwahati Siliguri Pipeline Tap-Off Point	Indian Oil Corporation Limited	Combined works contract comprising of Station Control System using SIRIUS SCADA, Instrumentation and Flow Computer for Hasimara Tap Off Point at Guwahati Siliguri Pipeline of IOCL.	Design, Engineering, Supply, Testing, Installation & Commissioning at site, Customer Training and warranty.	January 2003
13.	Retail Outlet Automation	Bharat Petroleum Corporation Ltd	Automation of Petrol Pump using SIRIUS SCADA. The scope includes Product Dispensing and Accounting, Online Tank Level Measurement, Product Loss/Gain Accounting, Automatic Billing and Automatic Order Booking to depots.	Design, Engineering, Supply, Testing, Installation & Commissioning at site, Customer Training and warranty.	December 2003
14.	Upgradation Of SCADA System For Dadri & Rihand HVDC Transmission.	Power Grid Corporation India Ltd.	SCADA System upgradation project for Power Grid Corporation of India Limited at their Dadri and Rihand High Voltage DC (HVDC) stations in Northern India.	The scope includes providing dual-redundant SCADA servers along with redundant Front-End processors, which will interface with the existing ABB RTUs. The scope also includes inter-center communication between the two stations. Engineering, Installation, Commissioning, Testing and Training.	August 2004

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S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
15.	Na-Loi Hydro Electric Power Plant	VATECH Escher Wyss Flovel Limited  - SONGDA Construction Corporation	SCADA System project for 3x3.1MW Mini Hydroelectric in Vietnam. The scope includes redundant SIRIUS SCADA system, ABB 800M PLC with OPC interface on Ethernet link, interfacing with ABB relays for protection, governor control system and temperature scanners	Design, Engineering, Supply of SIRIUS SCADA, Testing, Installation & Commissioning at site, Customer Training and warranty.	May 2003
16.	Chilime Hydro Electric Power Plant	VATECH Escher Wyss Flovel Limited  - Chilime Hydro Power Company Limited	SCADA System project for 2x11MW Hydroelectric in Nepal. The scope includes SIRIUS SCADA system, Redundant PLCs on Ethernet link, and interfacing with Sequence of Events Recorder, interfacing with governor control system.	Design, Engineering, Supply of SIRIUS SCADA, PLCs, Sequence of Events Recorder, Testing, Installation & Commissioning at site, Customer Training and Warranty.	November 2003
17.	Hemawathy Hydroelectric Power Plant	VATECH Escher Wyss Flovel limited  - Sandur Manganese & Iron Ores Limited	SCADA System project for 4x4 MW hydroelectric in Hemawathy, Karnataka. The scope includes SIRIUS SCADA system, interfacing with redundant PLCs on Ethernet link, temperature scanners.	Design, Engineering, Supply of SIRIUS SCADA, Redundant PLC CPUs, Testing, Installation & Commissioning at site, Customer Training and Warranty.	September 2003
18.	Pipeline Management System for VCPPL project	On behalf of ABB Norway, For, Indian Oil Corporation Limited	Pipeline Management System for leak detection and batch tracking on crude oil pipelines, Chaksu-Panipat and Chaksu-Mathura	Supply, Integration with SCADA, Testing, Installation, Commissioning at site, Customer Training.	Under Commissioning
19.	Dispensers for Petroleum Retail Outlets	Bharat Petroleum Corporation Ltd	Multi point Dispenser Electronics for 6nos. 2x2 dispensing units	Design, Engineering, Supply, Testing, Installation & Commissioning at site	June 2005
20.	Upgradation of SCADA System of Delhi-Ambala Cantt. Section	Northern Railway	Upgradation of SCADA System for Delhi –Ambala Cantt Section, New Delhi. The Scope includes SIRIUS SCADA interfacing with the existing Siemens RTUs.	The scope includes providing dual-redundant SCADA servers along with redundant Front-End processors, which will interface with the existing Siemens RTUs. The scope also includes Engineering, Installation, Commissioning, Testing and Training.	August 2004
21.	Protocol Converter for HPCL Manglore Terminal	Bharat Heavy Electricals Limited	Protocol Converter for HPCL Manglore Terminal. The Scope includes that the Data Transmitted by the CIU & DH + to the Computer System be Converted to MODBUS Protocol and vice-versa.	The scope includes design, development of both hardware & software and commissioning for Protocol converter	January 2005

S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
22.	Monitoring and Control of Sub-station at 400/220 KV Mandola Sub-station	Power Grid Corporation of India Ltd (PGCIL)	SCADA System project for monitoring and control of 400/220 KV sub-station at Mandola. The scope includes SIRIUS SCADA system and interfacing with existing ALSTOM S900 RTUs.	Design, Engineering, Supply of SIRIUS SCADA, Installation & Commissioning at site, Customer Training and Warranty.	January 2005
23.	Upgradation of SCADA System at Remote Control Centre for Ambala Cantt.	Northern Railway	SCADA system for monitoring and control of traction for Ambala Cantt – Ludhiana, Ambala Cantt – Saharanpur, Ambala Cantt – Kalka, Sarhind – Nangal Dam sections.	The scope includes providing dual-redundant SCADA servers along with redundant Front-End processors, which interface with the existing SANMAR RTUs. The scope also includes Engineering, Installation, Commissioning, Testing and Training.	March 2005
24.	1x15 MW Mukerian HEP	Bharat Heavy Electricals Limited, Noida	Computerised monitoring system for 15MW Mukerian HEP	Design, Engineering, Supply of SIRIUS SCADA, I/O Scanner, Transducers. Scope also includes Installation & Commissioning at site, Customer Training and Warranty.	July 2005
25.	Upgradation of Remote Control Centre, Allahabad.	North Central Railway	SCADA system for monitoring and control of traction for Kanpur - MughalSarai section.	The scope includes providing dual-redundant SCADA servers along with redundant Front-End processors, which interface with the existing SANMAR RTUs. The scope also includes Engineering, Installation, Commissioning, Testing, Training, and renovation of the Remote Control Centre room.	September 2005
26.	Upgradation of Remote Control Centre, Jabalpur.	West Central Railway	SCADA system for monitoring and control of traction for Bina – Katni section.	The scope includes providing dual-redundant SCADA servers along with redundant Front-End processors, which will interface with the existing Siemens RTUs and MDB. The scope also includes Engineering, Installation, Commissioning, Testing and Training.  The scope of supply also includes supply of Unix-based industrial servers.	March 2006
27.	Annual Maintenance Contract (AMC) for complete Remote Control System	Northern Railway	Annual Maintenance Contract (AMC) for complete Remote Control System of New Delhi – Ambala section of Northern Railways.	The scope includes maintenance of existing Siemens RTU hardware, modems, SIRIUS SCADA system for a period of 3 years	September 2005

S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
28.	Automatic Maximum Demand and Power Factor Controlller, Northern Railway, Ambala	Northern Railway	Supply, Installation, Commissioning of Automatic Maximum Demand and Power Factor Controlller over 5 nos. of Traction Sub-stations under Ambala Division	The scope includes design of maximum demand and power factor algorithms, communication with existing master station SCADA at Ambala RCC. The scope also includes modification to existing SCADA software.	March 2006
29.	Traction Energy Data Analyzer At 220 KV Dadri Grid Sub Station Of North Central Railway	Northern Central Railway	Supply, Installation, Commissioning of RTU at Dadri Substation to acquire energy parameters of the two 3 phase AC feeder lines to Sahibabad TSS. The RTU to communicate these parameters to the master stations at Tundla & Allahabad using GPRS communication	The scope includes design of RTU which shall be interfaced with the substation equipment communication equipment, power supply distribution boards. All the interface cables shall also be provided.	March 2006
30.	Annual Maintenance Contract (AMC) for complete Remote Control System	Northern Railways	Annual Maintenance Contract (AMC) for complete Remote Control System of New Delhi – Ambala section of Northern Railways.	The scope includes maintenance of existing Siemens RTU hardware, modems, SIRIUS SCADA system for a period of 3 years	June 2007
31.	Sirius SCADA Software	NELCO	Supply, & Support Of 104 numbers Sirius SCADA Software Licenses	Supply, & Support Of 104 numbers Sirius SCADA Software Licenses with IEC 870-5-101 Protocol	March 2006
32.	DG Set Automation System for SKODA DG, Synchronization System for 3 Nos. of DG Sets, Centralized SCADA System	RICO AUTO Ltd., Gurgaon	The project consists of three parts: a) Automation of a DG set using GE Fanuc PLC, including its start/stop sequence, safety logics etc. b) Auto/Manual Synchronization of three nos. of DGs over local bus c) Providing centralized monitoring and control of all the DGs by providing a centralized SCADA system communicating with the automation PLCs of each DG.	Design, engineering, supply of DG automation panel and the synchronization panel, PLC programming and graphics design on local data panel .  Integration of GE Fanuc and Telemecanique PLCs with SIRIUS SCADA system.	February 2007
33.	Control System for dock-line from IBP Narimanam terminal to CPCL Jetty terminal at Nagapattinam	Indian Oil Corporation Limited	Combined works contract comprising of Control System at IBP and CPCL ends using SIRIUS SCADA, Flow Computers, GE Fanuc PLCs.	Design, Engineering, Supply, Testing, Installation & Commissioning at site, Customer Training and warranty. The scope included supply, installation, commissioning of dual redundant SIRIUS SCADA servers, GE Fanuc PLCs in redundant configuration at IBP, CPCL terminals.	November 2007

S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
34.	Set up of Area Load Dispatch Centre (ALDC) at Hisar, Haryana	Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL)	The project consist of – a) Set up of ALDC with facilities for power drawl monitoring, load shedding. Remote monitoring and control of substations over GPRS communication network b) Monitoring and control of DHBVNL substations, integrating with ALDC, Hisar using Synergy Systems & Solutions' RTU 6047-E10 c) Monitoring of HVPNL substations using gateways for integrating with existing Alstom RTUs	Supply, Installation, Commissioning of Synergy Systems & Solutions' RTU 6047-E10 at DHBVNL substations, integrating with ALDC, Hisar Supply, Installation, Commissioning of Gateways at HVPNL substations, for integrating with Alstom RTUs Supply, Installation, Commissioning of computers, dual redundant SIRIUS SCADA at ALDC Hisar	January 2007
35.	SCADA System for AJJ-JTJ Section, Southern Railway	Southern Railway	SCADA system inclusive of Remote Terminal Units (RTU) for monitoring and control of traction for Arrakonam – Jolarpettai section as per RDSO specifications for Standard SCADA system and RTUs for Railway Traction (TI/SPC/RCC/SCADA/0988)	The scope includes providing dual-redundant SCADA servers along with redundant Front-End processors, and supply of 20 nos. of Synergy Systems & Solutions' RTU 6047-E10.  The scope includes supply of control room furniture, master/slave clocks, dual redundant UPS, diagnostic kits, test equipments.  Engineering, Installation, Commissioning, Testing and Training was also in the scope.	May 2007
36.	RTUs for Chandigarh-New Morinda Section, Northern Railway	Northern Railway	Remote Terminal Units (RTU) for monitoring and control of traction for Chandigarh –New Morenda section as per RDSO specifications for Standard SCADA system and RTUs for Railway Traction (TI/SPC/RCC/SCADA/0988)	The scope includes supply of 4 nos. of Synergy Systems & Solutions' RTU 6047-E10. Provision for alternative communication channel over GPRS was also included. RCC software modifications were part of the scope.  Engineering, Installation, Commissioning, Testing and Training was also in the scope.  Scope also includes supply, installation, commissioning of remote surveillance system over GPRS; fire alarm system at unmanned TSS locations, integrated with the RTUs; CAD drawings for layout plans and structural equipment designs.	Commissioned

S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
37.	4 x 10MW Tedzani Hydro-Electric Plant, Malawi,	Hydel Engineering and Construction Limited	SCADA System project for 4x10 MW Tedzani hydroelectric power plant in Malawi, Africa. The scope includes SIRIUS SCADA system, interfacing with GE Fanuc PLCs.	Design, Engineering, Supply of SIRIUS SCADA, GE Fanuc PLC, Testing, Installation & Commissioning at site, Customer Training and Warranty.	Commissioned
38.	Upgradation of SCADA System, Vijayawada.	South Central Railway	SCADA system for monitoring and control of traction for Vijayawada-Visakhapatnam section.	The scope includes providing dual-redundant SCADA servers along with redundant Front-End processors, which interface with the existing SANMAR RTUs. The scope also includes Engineering, Installation, Commissioning, Testing, and Training.  The scope also includes supply, installation of RTU power supply units.	February 2008
39.	Local Display and Monitoring System for Substations	Power Grid Corporation of India Limited	SCADA system for monitoring of substation parameters and sequence of events from event loggers and fault recorders, at Agra, Allahabad, Ballabgarh, Bassi, and Kanpur substations of Power Grid.	The scope includes providing dual-redundant SCADA servers for monitoring of substation parameters from local Alstom S900 RTUs, and logging and reporting of sequence of events from event loggers of various makes (ABB, English Electric, etc.)  The scope also includes Engineering, Installation, Commissioning, Testing, and Training.	January 2008
40.	GPRS-based alternate communication channel for Alstom S900 RTUs	Haryana Vidyut Prasaran Nigam Limited	GPRS gateways/routers for providing an alternate backup communication channel between the state load dispatch center (SLDC) at Panipat and three remote terminal units at Panchkula, Shahbad, Pinjore substations	Scope includes supply, installation, commissioning of GPRS routers and interfacing them with Alstom S900 RTUs at substation locations and with Alstom EMS/SCADA system at SLDC.	October 2007
41.	Special Protection Scheme (SPS) Logics	Power Grid Corporation of India Limited	Design, development of PLC-based logics for monitoring of EHV lines and generation of trip commands during (within 500ms of fault) faults in order to protect the regional grid from tripping Site locations: Rihand HVDC Terminal, Gorakhpur Substation	Scope includes supply of GE Fanuc PLCs, installation, commissioning of PLC and testing of logics at site.  Scope also includes supply, installation, commissioning of local SIRIUS SCADA for interfacing with PLC for monitoring of the SPS logic	Commissioned December 2007.

S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
42.	Remote Monitoring of event loggers and disturbance recorders at Mainpuri substation from Kanpur	Power Grid Corporation of India Limited	Remote Monitoring of event loggers and disturbance recorders at Mainpuri substation from Kanpur	Supply of computers for monitoring at Kanpur, PLCC modems and integration of remote equipment at Kanpur	Commissioning pending due to non readiness of site.
43.	Remote Terminal Units for Allahabad Division	North Central Railway	Provision of two nos. of RTUs for TSS/FP locations of Allahabad division, and integration of the same with existing RCC SCADA over RDSO's SPORT protocol	Scope includes supply, installation, commissioning of RTUs and integration with existing SCADA.  Scope also includes training of RTU functions.	31 March 2008
44.	Remote Terminal Units for Vijayawada Division	South Central Railway	Provision of one nos. of RTUs for TSS boundary post of Vijayawada division, and integration of the same with existing RCC SCADA (Nelco make) over existing protocol	Scope includes supply, installation, commissioning of RTUs and integration with existing SCADA.  Scope also includes training of RTU functions.	30 April 2008
45.	Repairs to existing NELCO make SCADA system of Igatpuri-Bhusawal section in Bhusawal division	Central Railway	Repairs to existing NELCO make SCADA system of Igatpuri-Bhusawal section in Bhusawal division and its comprehensive maintenance for a period of 5 years	The scope includes providing dual-redundant SCADA servers along with redundant Front-End processors, which interface with the existing Nelco RTUs. The scope also includes Engineering, Installation, Commissioning, Testing, and Training.  The scope also includes maintenance for the RTUs and RCC equipment for a period of 5 years.	Upgrade Commissioned in March 2008
46.	Maintenance Contract for RTUs installed under ULDC-NR project	Power Grid Corporation Of India Limited	Maintenance of Alstom RTUs in the all locations Northern States of Power Grid Corporation Of India Ltd	Scope includes Preventive and break down maintenance of RTUs in all substations in Northern States of Power Grid Corporation of India Ltd	Executing
47.	Up gradation of SCADA system at 2*500 MW HVDC Back to back Station Power Grid Bhadravati	Power Grid Corporation Of India Limited	Up gradation of SCADA system at 2*500 MW HVDC Back to back Station Bhadravati	Scope includes Supply Erection Commissioning of Hardware and Software and integrate with the existing F 900 Dual Bus network to which all the P320 Programmed logic controllers are connected	Commissioned in October 2008

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48.	Annual maintenance Contract for SCADA system for two years for Delhi Area Section	Northern railway	Supply Erection Testing & Commissioning of Hardware & Software for SCADA system and Comprehensive annual maintenance contract for 2 years for Computer Based SCADA system (RTU & RCC equipment) of Delhi Area section	Scope includes Supply Erection Testing & Commissioning of Hardware & Software for SCADA system integration with Nelco RTUs and Comprehensive annual maintenance contract for 2 years for Computer Based SCADA system (RTU & RCC equipment)	Executing
49.	Up gradation of Alarm monitoring & reporting system (AMRS) at HVDC BTB Vindychal station	Power Grid Corporation Of India Limited	Up gradation of Alarm monitoring & reporting system (AMRS) at HVDC BTB Vindychal station	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 12 months	Commissioned December 2008
50.	Provision of SCADA system at new switching post at Tiruvallur and Tiruvalangadu in connection with provision of 3 <sup>rd</sup> line between Tiruvallur and Arakkonam section	RVNL	Supply Erection Testing & Commissioning of Hardware & Software for SCADA system and Comprehensive annual maintenance contract for 5 years for Computer Based SCADA system (RTU & RCC equipment) of between Tiruvallur and Arakkonam section	Scope includes Supply Erection Testing & Commissioning of Hardware & Software for SCADA system integration with Sanmar RTUs and Comprehensive annual maintenance contract for 5 years for Computer Based SCADA system (RTU & RCC equipment)	Commissioned September 2009.
51.	SCADA system along with 12 years maintenance contract on Lingampalli – Wadi Section (Gr 132)	Core Allhabad/ RE Secunrabad	Design, supply, testing and commissioning of SCADA equipment with 12 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 12 years	Partially commissioned. Commissioning pending due to non-readiness of site
52.	SCADA system along with 12 years maintenance contract on Hajipur – Barauni via Muzaffarpur & chappra Kacheri – Bachhwara Section (Gr 140A & B)	Core Allhabad/ RE Luchnow	Design, supply, testing and commissioning of SCADA equipment with 12 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 12 years	Supplied / Commissioning pending as site not ready
53.	SCADA system along with 12 years maintenance contract on Ujjain Indore & Dewas Maksi Section (Gr 138)	Core Allhabad/ RE Kota	Design, supply, testing and commissioning of SCADA equipment with 12 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 12 years	Supplied / Commissioning pending as site not ready

S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
54.	Work of Replacement of existing ITI makes SCADA system for Bhusawal-Badnera & Bhusawal Khandwa Section of Central Railway	Sr DEE Bhusawal Division Central Railway	Design, supply, testing and commissioning of SCADA equipment with 4 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 4 years	Commissioned 16 June 2009
55.	PLC Based Control System for Mathura – Bharatpur Product Pipeline and modification in existing control system of Mathura Bharatpur Pipeline at Mathura	Indian Oil Corporation Ltd	Design, supply, testing and commissioning of Instrumentation, PLC Based Control System, Sirius SCADA software	Scope includes supply erection and commissioning of Instrumentation, hardware and SCADA software and modification of existing control system at Mathura	Supplied Final Stage of Commissioning
56.	SCADA system For Railway Electrification in Mugalsarai-Sultanpur – Utaratia section under Re Project Lucknow	Ircon International Limited	Design, supply, testing and commissioning of SCADA equipment	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years	Supplied / Site getting ready for Commissioning
57.	SCADA system along with 4 years maintenance contract on Tiruchchirapalli- Madurai Section (Gr. 144) under Chennai project	Core Allahabad/ RE Chennai	Design, supply, testing and commissioning of SCADA equipment with 4 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 4 years	Supplied / Site getting ready for Commissioning
58.	SCADA system along with 4 years maintenance contract on(i) Bina- Ruthiyai / Vijapur sectiona and (ii) replacement of Old SCADA system for Bhopal – Bina section ( Gr.133) under Kota Project	Core Allahabad/ RE Kota	Design, supply, testing and commissioning of SCADA equipment with 4 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 4 years	Supplied / Commissioned
59.	SCADA system along with 4 years maintenance contract on(i) Kota – Ruthiyai section and (ii) replacement of Old SCADA system for Mathura-Gangapur City Gangapur City – Kota & Kota – Nagda section ( Gr.134) under Kota Project	Core Allahabad/ RE Kota	Design, supply, testing and commissioning of SCADA equipment with 4 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 4 years	Supplied / Under Commissioning

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60.	Annual Maintenance Contract for SCADA system at Traction Power Control in Bilaspur for a period of three years	Sr DEE TRD SEC Railway Bilaspur	Routine schedule and breakdown maintenance of SCADA System and 63 Nelco Make RTUS	Scope includes Routine schedule and breakdown maintenance of SCADA system and 63 RTUS for a period of 3 years	Executing
61.	NamChien2 Hydro Electric Power Plant	Flovel Mecamidi Energy Private Limited	SCADA System project for 2x16MW Hydroelectric in Vietnam. The scope includes redundant SIRIUS SCADA system integrated with GE-Fanuc PLC, Areva's MICOM Relays, Governor controller and Energy Meters.	Design, Engineering, Supply of SIRIUS SCADA, Testing, Installation & Commissioning at site, Customer Training and warranty. The scope also includes interfacing with SLDC SCADA over IEC 60870-5-101.	Commissioned
62.	HaRao Quann Hydro Electric Power Plant	Flovel Mecamidi Energy Private Limited	SCADA System project for 2x3.2MW Hydroelectric in Vietnam. The scope includes redundant SIRIUS SCADA system integrated with GE-Fanuc PLC, Areva's MICOM Relays, Governor controller and Energy Meters.	Design, Engineering, Supply of SIRIUS SCADA, Testing, Installation & Commissioning at site, Customer Training and warranty.	Supplied / Under Commissioning
63.	Upgrading of Mumbai Sub-Urban Railway SCADA system	Central Railways	Upgrading of existing SCADA system of ABB make.	Supply, Installation and Commissioning of dual redundant SCADA system and integration with 60 nos. of ABB RTUs on Indactic protocol. The scope also includes supply of necessary software and hardware.	Executing
64.	Chandrapur-Padghe HVDC Bi-Pole Link SCADA System	MahaTransco	Design, Engineering and supply of necessary hardware and software for upgradation of existing SCADA system and system installation, testing and commissioning of same for HVDC Padghe , chadrapur and SLDC Kalwa.	The scope includes supply of dual redundant SCADA system along with necessary hardware to integrate existing ABB Local Alarm System (42 nos.) on BitBus protocol, Procontrol P13 system and other associated hardware.	Supplied / Under Commissioning
65.	SCADA System along with 4 years maintenance contract on Jakhapura-Tomaka-Jaroli section under East Coast Railway.	Rail Vikas Nigam Limited Bhubnehwar	Design, Supply, Erection, Testing and commissioning of SCADA equipment with 4 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 4 years	Executing

Reference Projects with SIRIUS

S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
66.	SCADA System along with 4 years maintenance contract on Krishna Canal-Guntur-Tenali section of Guntur Division.	South Central Railway Guntur	Design, Supply, Erection, Testing and commissioning of SCADA equipment with 4 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 4 years	Executing
67.	SCADA System at Vijayawada BZA Division	South Central Railway Vijayawada	Design, Supply, Erection, Testing and commissioning for Augmentation of standard SCADA.	Scope includes supply erection and commissioning of Hardware and modification of SCADA software	Executing
68.	Replacement of existing old SCADA system of STN-JAJ section by new at RCC Asansol	Eastern Railway Asansol	Replacement of old SCADA System	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 4 years	Executing
69.	SCADA System in between CNB-GZB section of Allahabad	Northern Central Railway Allahabad	Replacement of old Remote Terminal Unit of SCADA System.	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 4 years	Executing
70.	SCADA System along with 4 years maintenance contract on Suchipind-Jammu Taw i-Udhampur section under Ambala Project	CORE Allahabad RE Ambala	Design, Supply, Erection, Testing and commissioning of SCADA equipment with 4 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 4 years	Executing
71.	SCADA System along with 4 years maintenance contract on Saharanpur-Meerut City Ghaziabad section under Ambala Project	CORE Allahabad RE Ambala	Design, Supply, Erection, Testing and commissioning of SCADA equipment with 4 years comprehensive maintenance contract	Scope includes supply erection and commissioning of Hardware and SCADA software and warranty for a period of 3 years and there after comprehensive maintenance contract for 4 years	Executing

## Reference Projects with ITAS

S. No.	Project Name	Customer	Project Description	Scope Of Work	Date Of Commissioning
72.	Up-gradation of Terminal Automation System, Delhi Terminal	Indian Oil Corporation Limited, Delhi Terminal, Bijwasan	Up-gradation of existing terminal automation system, including truck filling sequence (Microcompt FCUs, Mitsubishi PLC), pump house automation (AB PLC5), tank farm management (SAAB) all integrated within a single automation system.	Design, Engineering, Supply of redundant ITAS System, Load Rack Computers, Operator Workstations, Installation, Commissioning and warranty support services.	September 2006
73.	Maintenance of Terminal Automation System, Delhi Terminal	Indian Oil Corporation Limited, Delhi Terminal, Bijwasan	Maintenance of terminal automation system	Maintenance of terminal automation system inclusive of field equipments (Batch Controllers, Card Readers, Metering Units, Loading Arms) and LRC software	Executing
74.	Up-gradation of Terminal Automation System, Loni Terminal	Indian Oil Corporation Limited, Delhi Terminal, Loni	Up-gradation of existing terminal automation system, including truck filling sequence (Microcompt FCUs), tank farm management (Rosemount) all integrated within a single automation system.	Design, Engineering, Supply of redundant ITAS System, Load Rack Computers, Operator Workstations, Installation, Commissioning and warranty support services.	31 March 2008